VERBS AND COMMUNITY: TOPICS IN TUTELO REVITALIZATION

by

Corey Roberts

A Dissertation Submitted to the Faculty of the

DEPARTMENT OF LINGUISTICS

In Partial Fulfillment of the Requirements

For the Degree of

DOCTOR OF PHILOSOPHY

In the Graduate College

THE UNIVERSITY OF ARIZONA

2025

THE UNIVERSITY OF ARIZONA
GRADUATE COLLEGE

As members of the Dissertation Committee, we certify that we have read the dissertation prepared by: Corey Roberts, titled *Verbs and community: Topics in Tutelo revitalization* and recommend that it be accepted as fulfilling the dissertation requirement for the Degree of Doctor of Philosophy.

Natasha Warner — Date: 04/28/2025

Ofelia Zepeda — Date: 04/28/2025

Diana Archangeli — Date: 04/28/2025

Amy Fountain (Apr 28, 2025 06:05 PDT) — Date: 04/28/2025

Amy Fountain

Final approval and acceptance of this dissertation is contingent upon the candidate's submission of the final copies of the dissertation to the Graduate College.

I hereby certify that I have read this dissertation prepared under my direction and recommend that it be accepted as fulfilling the dissertation requirement.

Natasha Warner — Date: 04/28/2025

Natasha Warner
Dissertation Committee Chair
Department of Linguistics

ACKNOWLEDGMENTS

As the title of this document would suggest, this research has been based in, informed by, and designed for community. This is true not only for the dissertation, but also for my entire trajectory in the field of language revitalization and graduate study at the University of Arizona. This process has expanded my understanding of what constitutes community, and the importance and impact of this can hardly be expressed here in words.

To the nations and the individuals of the Yesáh people, your engagement with, questions about, teaching of, and learning of the Yesa:sahį language and associated culture has driven me to go deeper into the work of language revitalization than I could have ever conceived. You have been so gracious in sharing your time, energy, and experience with me and with each other, and I consider myself fortunate to have been connected to you since I came to community in 2018. I am eternally grateful for the lessons you have brought me, for what I have been able to learn with your help has been invaluable.

I have had the best fortune in being able to work with the members of my dissertation committee. Whether in the classroom, in independent study, or in interactions with language communities, Drs. Archangeli, Fountain, Warner, and Zepeda, it has been inspiring to watch and experience your pedagogy, research, and presence—and all this before you even became members of my committee! Your patience, generosity, and rigor have been incredibly formative for me, and I owe so much of my ability to be of linguistic service to you and what you have taught me.

To the members of the Yesa:sahį Language Project, I thank you for taking the work of revitalization in the communities to a higher level. The intertribal engagement to the ends of increased language use among the Yesáh has been moving, and I am grateful for the energy you have devoted to the language in multiple contexts both online and in person.

To my family and friends all over, you have really challenged me by blurring the lines between “family” and “friends.” Whether the faculty, staff, and colleagues at the University of Arizona, the College of William & Mary, the University of Virginia, and Elon University, or relatives and people that I have known within the span of over 45 years now, I hold your kinship close to heart. And I frankly can’t escape your support! Washington, California, Arizona, Texas, Oklahoma, Michigan, Florida, the Carolinas, Virginia, Maryland, Pennsylvania, Ohio, New Jersey, New York, Brazil, and beyond—your support covers the map. You are my friends. You are my family. You are my community, and I am thankful for you all.

LAND ACKNOWLEDGEMENT

We respectfully acknowledge the University of Arizona is on the land and territories of Indigenous peoples. Today, Arizona is home to 22 federally recognized tribes, with Tucson being home to the O'odham and the Yaqui. Committed to diversity and inclusion, the University strives to build sustainable relationships with sovereign Native Nations and Indigenous communities through education offerings, partnerships, and community service.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ABSTRACT

Tutelo is the commonly known name of the ancestral language belonging to the Yesáh people, comprising seven contemporary Southeastern Siouan tribal communities located across the eastern United States. The antecedents of these communities were confederated in southern Virginia in the early 18th century; however, they underwent several migrations that caused their geographic separation. Some of the Yesáh were later adopted into the Six Nations of the Haudenosaunee located in Ontario, where the largest body of Tutelo documentation was gathered between 1877 and 1883. By that time, the language was limited to very few fluent speakers. The contemporary corpus of the language (pre-revitalization) is also limited: namely, a small number of lexical data (less than 800 words) and phrases compiled by explorers and researchers between 1671 and 1981. This study focuses in part on phenomena that occur in the verbal data of the pre-revitalization Tutelo corpus.

The first dissertation chapter introduces the Yesáh community, the historical use and attrition of the Tutelo language within its tribes, and the preservation and revitalization efforts of the last 30 years. Tutelo revitalization has emphasized the creation of new nouns for which there had been no attested data, whereas less attention has been given to the complexities of Tutelo verbal phonology and morphology, the subjects of the second, third, and fourth chapters of this study.

The second chapter introduces basic facets of Tutelo verbs, including the split intransitive system and the affixes of person, number, tense, aspect, and mood that attach to verb stems. It goes on to distinguish between verbs that end in consonants and those that end in vowels. Of the

latter, it identifies non-abluating verbs as those with stem-final vowels that remain unchanged in every suffixal and other post-verb environment.

The third and fourth chapters explore a group of Tutelo verbs that undergo a final vowel change in a process called ablaut. The final vowels in these ablauting verbs change depending on the suffixal and environmental triggers that follow them. The patterns of vowel alternations in these verbs appear to be both morphologically and phonologically conditioned. They are also highly variable, with some suffixes and environments singularly triggering one, two, or even three different final-vowel possibilities. Chapter 3 analyzes all the suffixes and environments that trigger one final vowel variant exclusively. Chapter 4 continues the analysis of chapter 3, focusing on those suffixes and environments that trigger two or more final-vowel variants in ablauting verbs.

The fifth chapter explores how Tutelo verbs and other constituents in the language have been applied in the domain of land acknowledgments. An acknowledgment written by the author in 2021 is utilized to analyze and correct previous understanding of the language's grammar before offering an updated version of the original. The chapter then goes on to illustrate a different type of land acknowledgment written by the author in Tutelo in 2024, one with stronger emphasis on the relationality of land and people than the 2021 text.

The final chapter presents concluding thoughts about the material covered in the first five chapters, as well as the approach taken in the presentation of data and its ramifications for the Tutelo language community.

i. Abbreviations and symbols

1	first person
2	second person
3	third person
A	actor
ABS	absolutive
ANIM.POSS	animate possessive
ASSERT	assertive
ASSERT.M	masculine assertive
CAUS	causitive
COORD	coordinative
DAT	dative
DEM	demonstrative
DESID	desiderative
DISJ	disjunctive
DUR	durative
EMPH	emphatic
EP	epenthetical morpheme
HORT	hortative
IMPER	imperative
INDEF	indefinite
INSTR	instrumental
INTER	interrogative
IRR	irrealis
NEG	negative
NEG.IMP	negative imperative
P	patient
PL	plural
POT	potential
PROG	progressive
PST	past
PST;DUR	past durative
REAL	realis
REDUP	reduplication
RST	restrictive
SG	singular
SG.IMPER	plural imperative
STEM	(verb) stem
UNK	unknown

§ indicates the chapter and section of this dissertation in the number that follows it

1. INTRODUCTION

Tutelo is a Siouan language and a member of the larger Siouan-Catawba family (see Figure 1 below) (Voeglein 1941, Rankin 2009).[1] The language and, at times, its speakers have also been assumed extinct (Mooney 1894:50, Frachtenberg 1913:477, Sapir 1913:295, Oliverio 1996:i), however this is not the case. Despite an extensive history of contact with and influence from Algonquian, European, Iroquoian, and other Siouan languages, Tutelo has continued to be spoken, albeit in small pockets of its greater language community, until the current day. There has been documentation of language speakers, often framed as the last speakers of Tutelo, in the 1870s (Hale 1883a:9-11), the 1910s (Frachtenberg 1913:477, Sapir 1913:295), the 1940s (Speck 2001:4), and the 1980s (Oliverio 1996:18-19). There additionally have been reports of Tutelo being spoken in the various tribes that comprise the language community: among the Occaneechi until 1991 and the Monacan until 2007 (Dunmore and Tyree respectively, personal communications).

[1] Tutelo has been previously misidentified as Algonquian. See Gallatin 1826: 1.

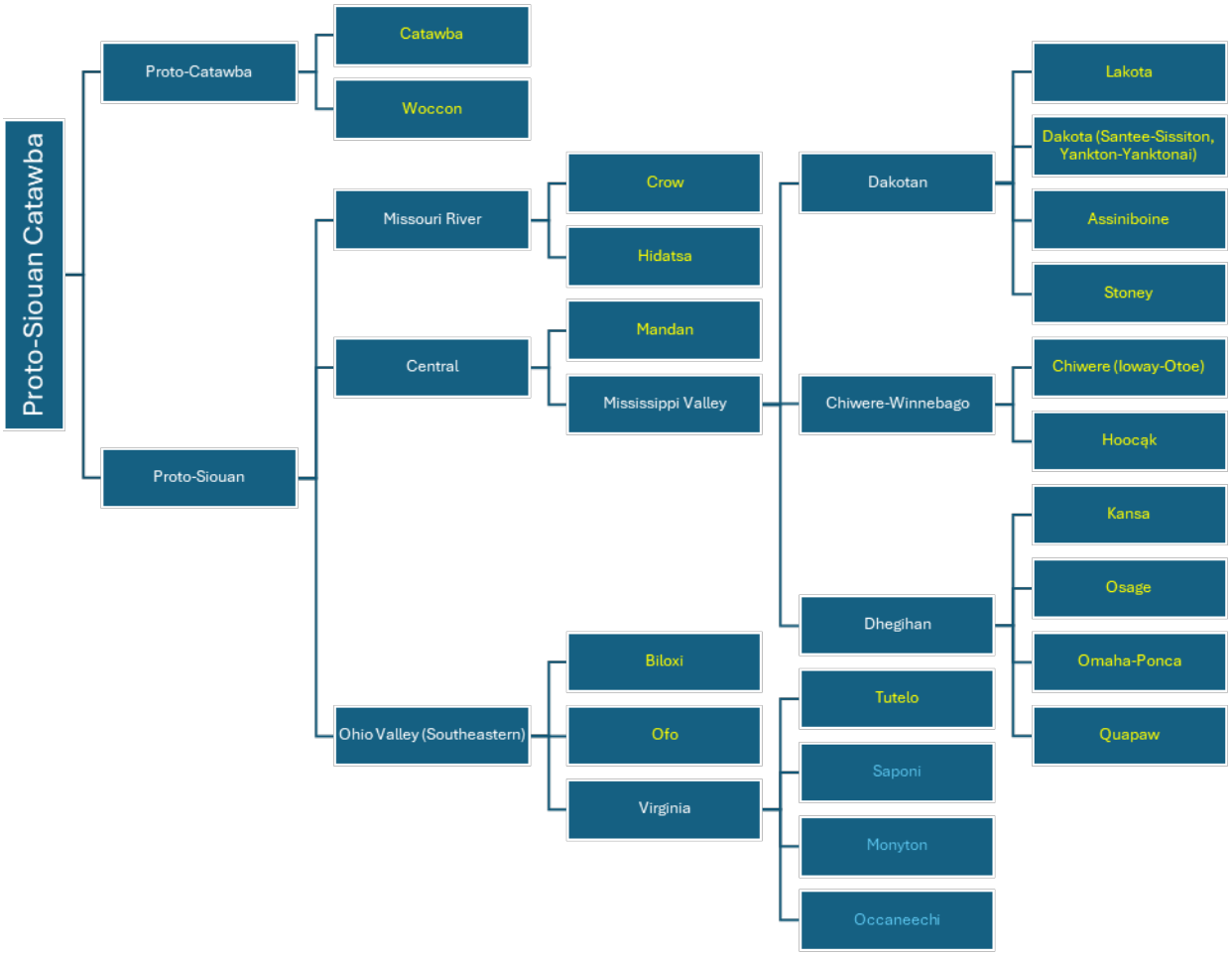

Figure 1: Siouan-Catawba Language Family Tree Modeled on Rankin 2009 and the Comparative Siouan Dictionary[2]

1.1 The Tutelo Language, its Speakers, and Revitalization

Tutelo is one of three languages of the Southeastern branch[3] of the Siouan family with extant documentation. It is the name most known to linguists of the ancestral language belonging

[2] White text represents branches of the tree, yellow text shows individual languages, and light blue text shows languages from the Virginia branch either lacking documentation or having remnants that have been incorporated into the revitalization of Tutelo.
[3] This part of the language family is also referred to as the Ohio Valley branch of Siouan.

to the Yesáh people, comprising several contemporary Southeastern Siouan tribal communities located primarily across the eastern United States. Of these communities, I have worked closely with members of five, listed below in order from northern- to southernmost: in Ohio, the Saponi Nation of Ohio; in Virginia, the Monacan Indian Nation; and, in North Carolina, the Haliwa-Saponi Indian Tribe, the Sappony, and the Occaneechi Band of the Saponi Nation (See Figure 2 below). The ancestors of these tribes were once confederated as one nation of related peoples in the early 18th century. In their treaty with the British colony of Virginia in 1713 they were known as the Saponi Nation (named after one of the signatory tribes (Salvucci 2001:1). The six tribes and bands of American Indians who were protected in association with this treaty spoke mutually intelligible dialects while residing together near the historic Fort Christanna in the vicinity of what is today Lawrenceville, Virginia. Due to largely to Haudenosaunee aggression and negative interactions with the British, the Yesáh peoples later experienced geographic separation, undergoing several migrations from the Fort Christanna that eventually landed them in the states and regions they currently occupy. Some of the people formerly under the treaty remained in the vicinity of what is now Lawrenceville, Virginia (in red in the figure below), and they are working towards state recognition.[4]

[4] Language community members have spoken about additional relatives, most notably in Kansas (mixed among the Haudenosaunee there) and California (relatives of some of the North Carolina tribes) (Dunmore, personal comm). To my knowledge there has historically been little if any Tutelo language engagement in these locales.

Figure 2: Current Distribution of Tutelo Learner/Speaker Communities[5]

In 1753, a relatively small number of Yesáh from these migrations were adopted into the Six Nations of the Haudenosaunee located in Ontario, and this proximity to the Iroquois peoples led to the largest body of the language's documentation (gathered under the name Tutelo language by Horatio Hale in Canada between 1877 and 1883) (Salvucci 2001:1). It has been speculated that much of Hale's original documentation was destroyed in a fire that swept through his house sometime after his death (Gruber 1967:11). Between what remains of his documents and other records from explorers, researchers, and linguists between the early 17th century and 1981, what constitutes the pre-revitalization corpus of the language is a small number of lexical data (less than 800 lexemes) and phrases. In any case, the language was limited to very few fluent speakers even at the time of Hale's research in the late 19th century.

The use of Tutelo was sparse even at the time of its most extensive documentation. Hale's research in the late 19th century and most of the documentation thereafter was gathered

[5] Blue dots show the current tribal communities. The red dot shows where these communities were confederated at Fort Christanna.

from a very few fluent or passively fluent speakers and semi-speakers living among the Cayuga (one of the Six Nations of the Grand River, comprising the Haudenosaunee peoples) in Canada and New York. However, the Yesáh I have worked with in revitalization efforts have reported the language being used sparingly for public and ceremonial prayers, as well as for greetings and kinship terms consistently throughout the 20th and early 21st centuries (Jeffries, personal communication). Tribal communities in North Carolina and Virginia have been revitalizing the language since the early 1990s, with renewed interest in language often coinciding with tribal petitions for state and federal recognition. These revitalization efforts have focused primarily on textual resources, as there is a paucity of audio recordings available in Tutelo.

Since the mid-2010s, there has been even more increased interest in and activity surrounding the revitalization of Tutelo. Community members have compiled an online dictionary (Richardson 2021), written a children's book (Jeffries 2019), and created several prayers and songs in the language. In-person and online language classes have been held on a regular basis[6], and an intertribal nonprofit has grown out of these educational efforts to service the language needs of the various tribal communities with uniformity (Yesa:sahį Language Project 2024). Many of the language community efforts have focused on creating new nouns for which there were no attested Tutelo data, whereas less attention has been given to the complexities of Tutelo verbal phonology and morphology, the intersection of which is the subject of more detailed analysis in this study.

While referred to as Tutelo in this document for the sake of continuity with past linguistic research, this represents only one of the historical names of the language. Tutelo is the recorded

[6] Between October 2020 and February 2024, I hosted a monthly online language class for tribal communities and linguists interested in Siouan languages.

name of one of the signatory tribes at Fort Christanna, and it was derived from an Iroquoian word used throughout the 17th century for the Siouan people of the Southeast, Tedarighroones (or some variant thereof) (Mooney 1894: 24-5; Salvucci 2001:1). Another one of the tribes who lent their name to the confederation at Fort Christanna, the Saponi, furnished Europeans with part of the early word lists that contributed to the language's lexicon (Sapir et al 2002). This contribution is noted in a name of the language that started being used in the 2010s, Tutelo-Saponi. An etymological lexicon of the language published in 2010 refers to the language as Yesanechi, a neologism combining *Yesa*, a variant of 'the people', with *nechi*, 'tongue' (Meuse 2010). This name was often used until the early 2020s, when the most contemporary name of the language was created from forms of the words for 'the people', *Yesáh*, and 'speak', *sahę́*:— Yesa:sahį. This latter term has become the most utilized name in the greater language community at the time of writing this dissertation, yet all the above-mentioned names are in use. Tutelo is also primarily used to refer to the language in this document in acknowledgement that Yesa:sahį is a term reserved primarily for members and close allies of the revitalizing language community.

At the time of this study, all community members engaging with the Tutelo language would best be classified as learner speakers. While there may be a few people who grew up hearing more of the language spoken, it is doubtful that their mastery of the language has risen to the level of passive fluency. Using a criterion of 10 or more years of consecutive language study, 10-20 people would approximate a liberal estimate of what I will refer to as long-term learner speakers from across the language community. These are likely all L1 English speakers, and it is

not fully known to what extent they speak additional languages. To my knowledge, at the time of writing there are no fluent Tutelo speakers.

My engagement with the language community at the time of writing spanned the years between 2019 and 2025. In this time, I have supported different parts of the community (at varying times individual learner speakers, tribal nations, and intertribal groups of Yesáh people) both directly and indirectly in language study. I began by facilitating a monthly online forum for people wishing to discuss matters pertaining to the Southeastern branch of the Siouan language family (consisting of Tutelo, Ofo, and Biloxi). This was a forum that inspired the sharing of much cultural and linguistic knowledge between members of the language community as well as linguists and language workers connected to other Siouan and North American languages. After a few months, however, members of the Yesáh tribes asked when I would start teaching them their language. Soon thereafter, the forum turned into a monthly online class for the study and exploration of Tutelo, and it ran in this mode between October of 2020 and February of 2024.

The monthly class led to other opportunities to work with community members. Between 2020 and 2024 I was a regular participant in three different Facebook groups devoted to the language, history, and ancestry of the various Yesáh nations and their people, sometimes composing written lessons for interested members of one forum centered around members and friends of the Saponi Nation of Ohio. Also between 2020 and 2024, I wrote a monthly language lesson for the Occanneechi Band of the Saponi Nation's electronic newsletter. I offered five-day language and cultural meetings hosted at the College of William & Mary for members and relatives of the Yesáh tribes in 2022 and 2023, and I supported a Yesáh intertribal culture and language conference held in the summer of 2023 at Virginia Polytechnic University. I offered a

virtual language lesson for the Sappony's 2023 summer youth camp, and I supported additional language instruction with pedagogical materials and word creation for that community's 2024 camp. There additionally have been many opportunities to help members of the Yesáh intertribal community with translations for ceremonial introductions, prayers, naming ceremonies, and daily use in families.

More recently, I have been offered the opportunity to teach the language of the Yesáh people alongside language revitalization over the course of two terms at Elon University. This was done in hybrid format, with both students from the university and members of the language community located around the United States being able to participate either in person or over Zoom. These classes have had a service component, allowing university students to learn from and teach members of the community on their tribal grounds both in North Carolina and Virginia.

Throughout these numerous opportunities the Yesáh intertribal community has afforded me to do language work, the members I have taught and learned from have typically been between four and 75 years of age. Women have been much more present in the various language learning environments over the course of the last six years, and the largest age group represented was between 30 and 40 years of age. People between the ages of 20 and 30 as well as 60 and 70 were the next most represented, followed by teenagers and children below 10. The amount of intergenerational transmission of even the bit of Tutelo that the community is reclaiming has been consistently low during this time, and I would estimate that the language has been used regularly in the home among two or more generations of people in about 10 families across the various tribal communities. Though these numbers are somewhat low, this does not accurately

represent the language community's interest and excitement about having greater access to the Tutelo language at the time of writing and into the future.

While my efforts since 2019 have been focused largely on engaging with the Tutelo language community, this revitalization work has not occurred in a vacuum. Indeed, many of the circumstances and challenges I have encountered in my work on Tutelo have also been faced in other communities taking on the work of language reawakening and revitalization. As Tutelo had previously gone dormant, members of the language community have had to work on relearning their language from archival texts, much like the central Californian Amah Mutsun people. The corpora of both languages are similar in that they have little data above the sentence level, leaving the current language communities with tremendous gaps in lexical semantics and discourse structure (Warner et al. 2007:60). Despite this and other challenges, the Mutsun language community and outside linguist colleagues have been able to create a database, a dictionary, and partial textbook among other teaching materials based on the documentation available to them (Warner et al. 2007:59). Though the amount of early documentation available on the Mutsun language is much more extensive than on Tutelo, this language community's accomplishments are examples of aspirational goals for many of the Yesáh people.

Cornish, a Celtic language that thrived in part of the United Kingdom until the 17th century, has also shared some similarities with Tutelo's language context over the past few centuries. Both languages began declining in usage in the 17th century as a result of increasing interaction and trade with the English. Additionally, the last native speaker of each language passed away in the late 19th century. More recently, most engaged members of both communities have had to start learning the language in adulthood as instruction has been largely unavailable in

schools connected to where the language is or would have been spoken. Unlike Tutelo, however, Cornish language preservation and revitalization efforts were initiated even prior to the passing of the last native speaker in the late 19th century. This resulted in an extensive body of Cornish texts the likes of which are nonexistent in Tutelo (Hinton 2001a:416).

The Southern Ute language community also shares some characteristics with the language context I have worked in for the past several years. Like Tutelo, Southern Ute has been the subject of linguistic research in the late 20th century, yielding texts designed for academics rather than tribal community members (namely, three dictionaries, a reference grammar, and a dissertation) (Oberly et al 2015:325).[7] Also similar to the Tutelo, differing dialects from separate bands of the Ute people have also provided challenges to revitalization efforts (Oberly et al 2015:328-9). As for the Tutelo language context, the 18th-century portion of the pre-revitalization corpus contains strong evidence of dialectal differences with lexemes notably distinct from the bulk of Tutelo vocabulary; and yet, these very lexemes are some of the most important in contemporary community usage. Finally, conflicting language ideologies within the tribal Southern Ute context provide additional nuance and challenges to the work of revitalization. A key difference in the language contexts, however, lies in the scope of the container for these ideological differences. The differences in language ideologies described by Oberly and colleagues have been contained largely within the one Southern Ute community (Oberly et al 2015:337). Though describing the Tutelo analogue in any detail is beyond the

[7] Additional academic research was conducted in the 21st century as well, yielding a second reference grammar and dissertation on the language, again geared towards an academic audience.

purview of this study, I have engaged with a range of sometimes conflicting ideologies as they are found throughout a five-nation intertribal language community.[8]

My efforts in Tutelo language revitalization are perhaps most strongly analogous to the efforts facilitated for the over 20 California tribes that participated in the early years of "The Breath of Life—Silent No More Native California Languages Restoration Workshop." This program has been hosted at the University of California, Berkeley, and has been designed for inheritors of Indigenous California languages mostly without living speakers. The program has aimed to introduce its participants to university-held archives, to teach the linguistic tools necessary to work with the contents of the archives and produce workable materials for use in community revitalization efforts (Hinton 2001b:419-20). This is quite similar to what I have been working on with Tutelo, though most of the pre-revitalization corpus has already been extracted from university and other archives due to the efforts and research of Oliverio (1996).

As for languages both related to and near the tribes of the Tutelo language community, the language in closest geographic proximity to Tutelo is Catawba. The Catawba people are located in the northern central part of South Carolina, and historically they were people who interacted with, conducted business with, and even offered refuge to some bands of Tutelo speakers after their departure from Fort Christanna in the 18th century (Mooney 1894:39, 44, 49-50). While Catawba is the closest member of the language family to Tutelo geographically, it is one of two languages (along with Woccon) that were the earliest to branch off from the Siouan-Catawba family, and therefore less likely than the remaining members of the language family to bear strong grammatical similarities to Tutelo.

---

[8] See Karenne Wood's *The language ghost: Linguistic heritage and collective identity among the Monacan Indians of Central Virginia* for examples of different ideologies surrounding Tutelo language and revitalization.

There are two languages most closely related to Tutelo with extant data from the Southeastern branch of the language family. One of them is Ofo, which was only clearly understood to be Siouan upon the discovery of its last speaker, Rosa Pierrette, already an elder in 1908 (Swanton 1909:482-3). The other is Biloxi, a critically endangered language whose last purported semi-speaker, Emma Jackson, was 87 at the time she provided language data to researchers in 1934 (Haas 1968:77).

1.2 Data, topics, and methods

The data in this paper are collected from James Dorsey (1882), Leo Frachtenberg (1913), Horatio Hale (1878, 1879, 1880a, 1880b, 1883a, and 1883b), John Hewitt (1888), and Edward Sapir (1913). This dissertation will have four chapters that present grammatical phenomena in Tutelo. The first (Chapter 2) comprises basic features of Tutelo verbs, namely the split-intransitive system and markers of person, number, tense, aspect, and mood that attach to verbs as affixes. The chapter then distinguishes between consonant- and vowel-final verbs, identifying what are considered non-ablauting verbs in the language based on how they interact with the aforementioned suffixes and other post-verbal environments.

Chapters 3 and 4 involve a linguistic analysis of morphophonological changes to the end of ablauting verbs: an idiosyncratic class of verb stems and suffixes dependent upon what follows them (either the aforementioned suffixes, additional constituents, or a lack thereof). The analysis in these chapters uses a different approach to describe of this class of verbs and suffixes, presenting surface forms rather than underlying representations (see section 1.3 for more detail) and thereby revealing a wider range of morphophonological change than in previous analysis.

Chapters 2 through 4 required extensive analysis of the Tutelo pre-revitalization corpus, with particular emphasis on the frequency of consonant-final, ablauting, and non-ablauting verbs, as well as the collocation of ablauting verbs and post-verb stem environments.

The final observation chapter (Chapter 5) will operationalize the verbs and verb patterns explored in §2-§4. Using the domain of land acknowledgments as a tool to illustrate the Tutelo language in daily use, this chapter identifies, examines, and corrects mistakes that were made in a previous acknowledgment composed by the author in 2021. It then positions this corrected land acknowledgment in contrast to a more recent text written again by the author in Tutelo in 2024, identifying the relationship between people and land contained in both.

1.3 Underlying representation and the Tutelo data

The most extensive volume of research available on the Tutelo language to date is a dissertation written by Giulia Oliverio in 1996. Her work is a thorough description of the limited data available from the early 17th to the late 20th century, and it is arguably written for an audience of linguists rather than language community members. This is evident in her use of underlying phonological representation both in analysis and lexicography, i.e. the structuring of the dictionary, in the latter half of the dissertation.

In phonology, the sounds we hear in speech are often called surface forms. Underlying representation assumes that these surface forms are expressions of deeper, abstract ideas about the sounds of a speaker's language. These abstract ideas, called underlying representations or underlying forms, may or may not directly align with the surface forms that speakers produce.

English provides a simple example of this with the third-person singular form of regular verbs in the present tense.[9]

(1) **Underlying vs. surface forms of 'walk' and 'sow' in the English present tense**

Verbs	Inflection	Suffix	Surface Form
walk sow	1SG, 1PL 2SG, 2PL, 3SG	/Ø/	[wɔ:k] walk, [səʊ] sow
	3SG	/s/	[wɔ:ks] walks, [səʊz] sows

In 1, underlying forms of suffixes are shown in slashes, //, and surface forms are shown in the International Phonetic Alphabet (IPA) in square brackets, []. Most forms (including those that are conjugated for all first-person and second-person pronouns—I, we, and you respectively—and the third-person plural pronoun—they) do not produce any kind of change at the end of a verb stem. They acquire no suffixes, as shown by the null symbol Ø in the third column. The third-person singular form (reflected by the pronouns he, she, and it), however, cause these verbs to acquire a suffix. This suffix is represented by an underlying form /s/ that may or may not be the same as what is pronounced. This is the same [s] sound as the surface from for the third-person singular of walk, 'walks'. This differs from the [z] in what is pronounced for the third-person singular of sow, 'sows'.

Underlying representation is a necessary tool for conducting analysis in a Generative phonological framework, and it could be useful in some revitalization situations depending on the structure of the language. In the Tutelo language community, however, its utility is outweighed by the amount of confusion it has caused in the gap between the abstract

[9] By "English regular verbs," I mean those verbs in the present tense that only acquire a suffix in their conjugation rather than undergoing any other kind of change. Compare what I would call the regular verb walk (which acquires the suffix –s for third person singular subjects) with the irregular verb be (which has highly varying surface forms in the present tense: am, are, and is).

phonological forms that it posits and the language data as it is documented to have been pronounced. For this dissertation, I have chosen to present data with a tool that foregoes reliance upon abstract underlying forms: the morph set.

1.4 THE MORPH SET: A TOOL FOR ACCURACY IN COMMUNITY LANGUAGE REVITALIZATION

Some of the data in this dissertation will consist of morphemes that instantiate as more than one phonological shape, including with a change in or a deletion of vowels, as well as the absence or presence of vowel length or tone. To avoid misunderstanding the data and fomenting mispronunciation of words in the language community, this study presents the data using a convention from Archangeli and Pulleyblank's *Emergent Phonology* (2022) called the morph set. Rather than selecting an underlying form to represent all the possible phonological shapes of morphemes (as seen with the third-person singular suffix in the previous example), the morph set shows all the phonological forms present in the attested documentation. Revisiting 'walk' and 'sow' from 1, 2 shows how the data from the previous example would appear if listed with morph sets:

(2) **Morph sets and 'walk' and 'sow' in the English present tense**

Verbs	Inflection	Suffix	Pronouced Form
walk, sow	1SG, 1PL 2SG, 2PL, 3SG	Ø	[wɔ:k] walk, [səʊ] sow
	3SG	{s, z}$_{3SG}$	[wɔ:ks] walks, [səʊz] sows

The slashes have been removed from the suffixes in 2 as underlying and surface representations are not part of the Emergent framework (hence the renaming of the last column). Rather, the third-person suffix variants here are offset in curly brackets with the gloss located to the right in subscripted small capital letters.

Morph sets do not only apply to suffixes and bound morphemes (word parts that only have meaning when combined with other units of meaning), but they are also used for free morphemes (words that can stand alone) and combinations thereof. The examples in 3 show both possibilities with the Tutelo words for ‘two’ and ‘only two’:

(3) **Morph sets for ‘two’ and ‘only two’ in Tutelo**

a. {nomp, nomba:i no:mba:h, nómba}$_{\text{TWO}}$

b. {ikanomba}$_{\text{RST–TWO}}$

c. {ika–nomba}$_{\text{RST–TWO}}$

Similar to third-person singular suffix in 2, all the examples in 3 are offset in curly brackets with glosses located to the right in small capital letters. Example 3a shows four ways that the free morpheme ‘two’ appears in the Tutelo pre-revitalization data. Example 3b shows a combination of morphemes, the restrictive prefix *ika–* and one of the variants of ‘two’ from 3a. These are written as one word within the curly brackets to show that speakers may have the concept of ‘only two’ stored in their minds as one word. Example 3c shows the word in curly brackets also separated by an en dash, an indication that the word may be stored in speakers’ minds as having

two morphemes that can combine in ways beyond the scope of 'only two'.[10] Data throughout this study may be presented using any one of the methods in 3a-c.

In the example above, only the free morpheme for 'two' in 3a appears as more than one variant in the Tutelo pre-revitalization data. There are instances of bound morphemes appearing with more than one variant in the data as well, as in the second-person plural suffix (i.e. you plural) in 4.

(4) **Morph set for the second-person plural suffix in Tutelo**

{bo, bu, bu:, p, po, pu, pu:}$_{2PL}$

The choice of morph sets to represent data shows lexical variation with transparency to reader-learners to prevent the assumption of primary word forms to be used for all utterances. While this will help to preserve variation in Tutelo lexemes, it does present a challenge for pedagogy that the language community may have to address as it develops curricula for instruction.

1.5 PRELIMINARIES

This section begins with orthographic observations and recommendations for the contemporary Tutelo alphabet considering both attestations from the language's pre-revitalization corpus and current community discussions about the future of the language's writing system. This is offered not only to add to community conversation about a rapidly evolving orthography, but also to render the data in this study more accessible to Yesáh language

[10] Examples include the restrictive prefix in *ikana:nix*, 'only three', and 'two' combined with the ordinal number prefix in *einombai*, 'twice' (Hale 1879).

workers. This is followed by a phonemic inventory of Tutelo (Tables 2 and 3), as well as some general information about the language's morphosyntax.

When discussing the sounds of languages, this study engages with two types of inventories. The first, the phonetic inventory, includes all the sounds that can be produced within speech. The second, the phonemic inventory, includes those smallest units of sound that are recognized as distinct from all other sounds in a particular language (also known as phonemes). Linguists often use phonemic inventories when describing and analyzing specific languages. These inventories do not include allophones, variants of a phoneme that are not recognized as distinct in the language (e.g. the sounds associated with phoneme /t/ in the American English words 'bat', 'tap', and 'battle' are different phonetically yet are associated with the same sound and letter used to represent them). The community orthography used to present the data in the chapters that follow reflects a blend of phonetic and phonemic inventories, representing both phonemes and allophones found in Tutelo.

The presentation of data in this document uses the conventions outlined in 5.

(5) **Conventions for presentation of data**

Convention	Use
slashes / /	underlying and phonemic representations
brackets [ ]	surface forms and phonetic representations
italics	orthography of the Tutelo-language (Yesa:sahį́) community
single quotes ' '	a gloss or word being discussed in the prose of this study

The Tutelo language community has experienced a relatively rapid change in preference of writing systems over the course of the last decade, shifting away from late 19th-century writing conventions of British Canadian researcher Horatio Hale to various practical orthographies. Some salient features considered during this decade of orthographic shift have included how to represent aspiration on unvoiced stops, whether to include the nasal mid vowel represented in the current alphabet as ę, and whether to include the voiced affricate known in the English alphabet as the letter j. Ultimately, all sounds that were being questioned for inclusion were kept in the most current alphabet at the time this dissertation was written. Most recently, leaders in the language community have implemented the Yesa:sahį writing system or alphabet, and it is based largely on Americanist Phonetic Notation (APN). The ordering of the letters in this alphabet is as follows:

a ą p pʰ b č čʰ ts t tʰ th d e ę k kʰ g h i į l m n o ǫ r s š u ų w x y ˈ

Despite all the recent orthographic transitions, the community has little experience with the IPA used widely by academic linguists today. To clarify the correlation between the current Yesa:sahį alphabet and the IPA, Table 1 offers a comparison of graphemes (letters) used to represent the Tutelo phonemes and allophones. They are presented in four categories: vowels, stops and affricates, fricatives, and finally, taps, laterals, and glides. Within each category the phonemes appear listed in the order of the current Yesa:sahį alphabet with its corresponding graphemes in the IPA, each followed by the same example word spelled accordingly. The final column contains the word's English gloss. Five of the sounds below have been previously analyzed as allophones of underlying phonemes: *ts* (as a surface form of the underlying /č/), *th* (/l/), *ę* (/ą/), *š* (/s/), and *ų* (/ǫ/). To preserve all the documented sounds of the language for current

pedagogy, all the above forms are included in the table below. Observations and suggestions about specific sounds appear after each category block. Part a shows the Tutelo vowels, those phonemes which do not obstruct but rather shape the flow of air through the vocal tract when they are produced.

Table 1: Tutelo/IPA corresponding graphemes

(a) Vowels

Yesa:sahį́	Example	IPA	Example	Gloss
a	*aso:ti*	a	aso:ti	blue
ą	*ąkta:ka*	ã	ãkta:ka	weave
e	*ehį́*	e	ehį̃́	now
ę	*a:kę*	ẽ	a:kẽ[11]	what
i	*isi:*	i	isi:	foot
į	*įkte:*	ĩ	ĩkte:	near
o	*oki*	o	oki	meet
ǫ	*ǫšpé*	õ	õʃpé	know
u	*ugré*	u	ugɾé	float
ų	*sų:gitę́*	ũ	sũ:gitẽ́	horse

In some languages long and short vowels are phonemic, i.e. they can produce a difference in meaning. There is, however, no strong claim for this in Tutelo.[12] The second and final vowels

[11] There are not sufficient data available to determine whether this phoneme is [ẽ] or [ɛ̃]. I have elected to use the ɛ̃ here as it is closer to how we have pronounced this sound in community in recent years.
[12] This in contrast to earlier work by Roberts (2020).

in *ąkta:ka*, ‘weave’, are distinguishable by vowel length *a:*, *a*. There are, however, no true minimal pairs (two words that have the exact same phonological shape with the exception of one sound) or near minimal pairs (two words that differ only by two sounds) in the pre-revitalization data that confirm a difference in meaning connected to Tutelo vowel length. Additionally, the phenomenon marked by the acute accent (´) in *ehį́*, ‘now’, and other words in the list above cannot be clearly connected to a phonemic distinction. This diacritic may variously suggest vowel length and/or tone, and similar to *a:*, *a*, the data do not support a difference in meaning connected to *į́* and *į* or any vowel with and without an acute accent. The next portion of the table lists stops (also known as plosives) and affricates, phonemes that at some point in their production completely stop the flow of air through the vocal tract.

(b) Stops (plosives) and affricates

Yesa:sahį́	Example	IPA	Example	Gloss
p	*aluptése*	p	aluptése	go across
p^{h}	*p^{h}asu:i*	p^{h}	p^{h}asu:i	head
b	*bi:*	b	bi:	good
č	*wąčék*	t͡ʃ, d͡ʒ	wãd͡ʒék	stick
č^{h}	*č^{h}ųki*	t͡ʃ	t͡ʃũki	dog
ts	*tsutsaki*	t͡s	t͡sut͡saki	fingernail
t	*to:p*	t	to:p	four
t^{h}	*at^{h}i:*	t^{h}	at^{h}i:	house
d	*emidǫt*	d	emidõt	my father-in-law
k	*wakle:ta*	k	wakle:ta	I am coming from

Yesa:sahį	Example	IPA	Example	Gloss
k^{h}	*kak^{h}ek*	k^{h}	kak^{h}ek	inclined
g	*higu:n*	g	higu:n	my grandmother
m	*moka*	m	moka	snake
n	*no:na*	n	no:na	man
ˈ	*mi:hę*ˈ	ʔ	mi:hɛ̃ʔ	woman[13]

Table 1b includes both nasal and oral stop consonants. As regards the latter, there has been some discussion in the language community as to whether aspiration should be written as a superscripted or regular-sized h following the consonant (e.g. *p^{h}*, as in Table 1a above, or *ph*). Here I suggest that the h remain superscripted so as not to be confused by community members as the [f] sound recognizable in the English spelling of 'Philadelphia'. The same suggestion applies for Tutelo's unvoiced aspirated alveolar and velar stops, *t* and *k*, to avoid confusing these sounds with the interdental and velar fricatives sometimes associated with th and kh in English orthography.

The lack of Tutelo audio recordings of sufficient quality for close phonetic analysis makes it impossible at this time to determine whether the affricate represented by the language community's current grapheme *č* is voiced or unvoiced. James Dorsey's 1882 attestation of the word *wąčék* ('stick') utilized the grapheme j, indicating voicing. In words like *lučkįk*, ('wrench') however, the phoneme being adjacent to an unvoiced consonant supports it being the voiceless

[13] Speck documented 'woman' both with and without a glottal stop at the end of the word. The glottal stop appears rarely in the Tutelo pre-revitalization documentation, and when it does it is located at the end of words. This is presumably to distinguish between the words found before and after the glottal stop.

palato-alveolar affricate pronounced as the ch in the English word ‘matched’. This is additionally supported by John Hewitt’s 1888 attestation of the word utilizing tc, a commonly used orthographic sequence at the time to indicate the voiceless palato-alveolar affricate (Oliverio 1996:13). Table 1c below lists fricatives, those phonemes that create friction in the vocal tract when produced by a speaker.

(c) Fricatives

Yesa:sahį́	Example	IPA	Example	Gloss
th	*iwaǫ́tha*	ð	iwaǫ́ða	I use
h	*hé:mǫ:*	h	hé:mõ:	frog
s	*sani:*	s	sani:	cold
š	*buš*	ʃ	buš	globluar
x	*xa:xi*	x	xa:xi	cry

From the fricatives above, *th* stands apart as an unclear phoneme. Dorsey was the only documenter who recorded this as a sound of the language (1882). Oliverio pointed to his past work in the Dhegiha languages[14] of the Siouan family to indicate his difficulty in distinguishing *l* from *th*, suggesting that all instances of *th* in his Tutelo documentation were actually *l* (1996:13). I believe this requires additional investigation and have therefore opted to leave *th* in the alphabet at this time. The final category of Tutelo phonemes includes a tap (below, a sound produced when the tongue in a single contractions makes contact with the front of the upper

[14] These languages include Kansa (or Kaw), Osage, Omaha-Ponca, and Quapaw.

palate), a lateral (a phoneme that allows for air to flow), and two semivowels (phonemes that do not constrict the flow of air yet function as consonants).

(d) Taps, laterals, and semivowels

Yesa:sahį	Example	IPA	Example	Gloss
l	*lu:pét*	l	lu:pét	open
r	*eruta:ǫe*	ɾ	eɾuta:õe	warrior
w	*wahu:*	w	wahu:	bone
y	*Yesáh*	j	jesáh	the people

The distinction between the lateral and tap consonants, *l* and *r* respectively, is minor as evidenced by *walu:ti* and *wa:ru:ti*, both forms of 'I eat' attested by Horatio Hale (1878 and 1879 respectively). As mentioned previously, however, I present both sounds above to preserve everything that was originally documented to the best of my ability.

Given the information in Table 1, Tables 2 and 3 show my current understanding of Tutelo consonants and vowels (respectively) organized according to phonological features. These tables are written using the orthography of the Yesa:sahį alphabet. Those sounds which occur as allophones (similar variants of a phoneme that either occur randomly or in predictable patterns in a language) appear in the tables in parentheses:

Table 2: Tutelo consonants

Place and Manner of Artciulation		Labial	Dental	Alveolar	Post-Alveolar	Palatal	Velar	Glottal
Stop								
	Voiced	(b)		(d)			(g)	
	Aspirated	p^h		t^h			k^h	
	Unaspirated	(p)		(t)			(k)	'
	Nasal	(m)		(n)				
Tap				(r)				
Fricative			th	(s)	(š)		(x)	(h)
Affricate				(ts)	($č^h$) č			
Laterals				(l)				
Glides		(w)				y		

Table 3: Tutelo vowels

TYPE	HEIGHT	FRONT	CENTRAL	BACK
ORAL	High	(i/i:)		(u/u:)
	Mid	(e/e:)		(o/o:)
	Low		a/a:	
NASAL	High	į/į:		(ų/ų:)
	Mid	ę/ę:		(ǫ/ǫ:)
	Low		ą/ą:	

There are several sets of allophones in Tables 2 and 3. Stops sometimes appear as voiced between vowels. In many instances, the stop consonants can appear in free variation (i.e. occurring in the same position without any apparent predictability). Examples of both can be seen in 6.

(6) **Allophones of Tutelo stop consonants**

(a) **p~b**

Tutelo	Gloss
pu:s	‘cat’
lu**b**u:s	‘hat’

Tutelo	Gloss
piwa	‘good’
bi:wa	‘good’
biso:ka	‘fish’

(b) **t~d**

o:**t**apaí	‘up river’
u:**d**ap^{h}ái	‘up river’

(c) **k~g**

mukta:**g**i	‘grass’
tsutsa:**k**i	‘fingernails’
giko:ha	‘he calls to him’
kiko:ha	‘he calls to him’

The first two words in 6a exemplify the voiced stop appearing between vowels (***p****u:s* compared to *lu****b****u:s*), however there does not appear to be a predictable rule governing the occurrence of [p] and [b] in the remaining words in this part of the example. The words in 6b and c show examples of both free variation and voiced stop consonants [d] and [g] occurring between vowels.

Allophones in free variation also occur in affricate and fricative consonants. Example 7a-c shows instances of free variation occurring in the sounds ts~č^{h}, s~š, and x~h.

(7) **Affricate and fricative allophones in free variation**

(a) **ts~čʰ**

Tutelo	Gloss
tsu**ts**a:ki	‘fingernails’
čʰu**čʰ**a:g	‘fingernails’

(b) **s~š**

į**ks**e:ha	‘he laughs’
į:k**š**e:	‘laugh!’

(c) **x~h**

xawo:**x**a	‘rain’
hawo:**h**a	‘rain’

In all three example sets above, the words have identical or near identical glosses, yet the affricate and fricative consonants are different in each. The greatest difference in meaning is found in 7b, where [s] occurs in the third-person singular ‘he laughs’ and [š] in the imperative form ‘laugh!’ It is currently unknown whether the change of fricative here is connected to the present tense and imperative inflections of ‘laugh’.

Additional sets of allophones can be found among the nasal, tap, lateral, and glide consonants of Tutelo.

(8) **Nasal, tap, lateral, and glide allophones in free variation**

(a) **w~m**

Tutelo	Gloss
wiᵩ	‘tree’
mi:ᵩ	‘tree’

(b) **l~n**

la:**l**i	‘three’
la:**n**i	‘three’
na:**n**i	‘three’

(c) **l~r**

wa**l**u:ti	‘I eat (something)’
wa**r**u:tita	‘I (will) eat (something)’

As seen in 8b and c, the lateral [l] is involved in two sets of allophones, l~n and l~r. Similar to the stop consonant allophones, all three sets above comprise sounds made with some contact of articulators at similar places of articulation (the lips for w~m and the front of the tongue making contact at or near the alveolar ridge for l~n and l~r).

In addition to consonants, three sets of Tutelo vowels occur as allophones in free variation: e~i, o~u, and ǫ~ų, as can be seen in 9.

(9) **Tutelo vowels in free variation**

(a) **e~i**

Tutelo	Gloss
ịgi:tow**e**	‘his, it is his’
ịgi:tow**i**	‘his, it is his’

(b) **o~u**

o:tapaí	‘up river’
u:dap^{h}ái	‘up river’

(c) **ǫ~ų**

m**ǫ:**ti	‘bear’
m**ų**:ti	‘bear’

Vowel length is not a consideration in any of the examples above. The vowel sets in 9 show vowels of free variation in initial, medial, and final positions (at the beginning, middle, and end of the words in which they occur). The examples in each set have the same gloss for the Tutelo words with little to no difference in their phonological shapes aside from the vowels being observed. The greatest difference lies in the set for ‘upriver’, though 6b showed that the stop consonants [t] and [d] are themselves in free variation. Overall, the amount of free variation that occurs in Tutelo presents a challenge for learner speakers and teachers alike. When presented with two very similar forms, e.g. *mǫ:ti* and *mų:ti* for ‘bear’, invariably the question arises of which one to use, which one is the “right” or “correct” form. In my own teaching I have tried to emphasize that both forms are correct and quite acceptable, yet I also share with students the one that I use more often. My habitual use of lexemes is not a sound approach to

standardizing the lexicon of the Tutelo language, however. It is my hope that the intertribal language nonprofit (the Yesa:sahį language project) will have the opportunity to review the data with instances of free variation like the examples above in 6-9 and make a determination if standardization should occur (and if so, which forms would be selected for presentation in a more digestible format to the intertribal language community).

While the pre-revitalization Tutelo documentation lacks minimal or near minimal pairs, there is still evidence that suggests vowel length as a meaningful distinction. This evidence comes from context pairs, i.e. words containing the sounds being observed in the same position adjacent to identical sounds. The examples in 10 suggest a meaning difference connected to length for vowels located in various positions in Tutelo words. Most graphemes (letters) in the words below are shaded to highlight the sounds being observed for contrast, represented in boldface black font.

(10) **Context pairs for vowel length in Tutelo**

(a)

Tutelo	Gloss
istagonį	‘pocket’
i:stablaksi:k	‘lip’

(b)

Tutelo	Gloss
mąd**a**maį	‘pumpkin’
mą:d**a:**hkai	‘turkey’

Both the initial phonemes in 10a precede [s], and the high vowel at the start of ‘pocket’ is short. The initial high vowel is long, however, at the start of ‘lip’, contributing to the difference in meaning between both words. Part of the distinction between the words in 10b lies in the vowels found in the second syllables. The phoneme [d] initiates this syllable in each word, yet the low vowel that follows is short in ‘turkey’ and long in ‘good’. As these are context pairs, data like those found in 10 cannot prove, but rather only suggest that vowel length is a meaningful distinction in Tutelo.

Tutelo is an agglutinating, head-marking language. It is considered to have an SOV (subject object verb) constituent order (Oliverio 1996:165), though this is mostly found in data where subjects and objects are pronominal, as in 11. The sentences below are presented in four-line glosses (also known as interlinear glosses). The first line is added to what would otherwise be a three-line gloss more commonly utilized in linguistics. This is done to show how sentences would normally be written in the language community.[15]

(11) **Subject object verb order in Tutelo**

a. *íma nątkúša*
íma Ø–nątkúša
3SG.DISJ 3SG.P.break.with.the.foot
‘he breaks it with the foot’ (Dorsey 1882)

b. *wigiko:ha*
wi–Ø–giko:ha
1SG.P–3SG.DAT–call
‘I call to him’ (Hale 1883a)

[15] Three-line glosses could lead language community members to incorrectly believe that the en-dashes used to separate morphemes for linguistic analysis are a regular feature of the language’s writing system.

The first lines of 11a and 11b above show the words as they would be written commonly in the language community today. The second lines add en dashes to the text to show the boundaries between morphemes (units of meaning that can either be entire words or parts of words). The third line has the same amount of en dashes as the line above it, and its text describes the morphemes in line two. This is done using a combination of words from the original text and linguistic abbreviations that you can find listed on page 10. The final line places in single quotations an English translation of the original text followed by the source of the original documentation in parentheses.

The SOV word order in 11a shows two of the various types of pronouns found in Tutelo. Singular pronouns generally appear as verbal prefixes or infixes, however there are exceptions. The third-person singular pronoun is usually an unmarked part of verbs, yet there are also disjunctive pronouns that can occur as subjects separate from and preceding Tutelo verbs. Both types of third-person singular pronouns occur in 11a, with the subject occurring as the disjunctive *ima*, followed by the unmarked third-person object (represented by the null symbol)[16], and finally the verb *nątkúša*. There are no disjunctive pronouns in 11b, yet still the constituent order is SOV, with the first-person subject *wi–*, followed by the unmarked third-person dative object (‘to him’), and finally the verb *giko:ha*.

Beyond the aforementioned constituent order, a few sentences found in the extant documentation would indicate that instances of SVO (subject verb object) order are also common in Tutelo. As seen in 12, SVO constituent order occurs more commonly in sentences where the objects are separate words rather than pronouns:

[16] While I am showing the unmarked third-person singular pronouns in (6a) and (6b) for emphasis, I will not be showing these pronouns in the morpheme-by-morpheme second lines of glosses for the remainder of this study.

(12) **Subject verb object sentences in Tutelo**

a. *waklumi:ha lubu:s nigás masę́*
wa–klumi:ha lubu:s nigás masę́
1SG.A–buy hat COORD knife
'I bought a hat and a knife' (Hale 1883a)

b. *owakio:ka wakta:ka nigás mihę́ nomba lek*
o–wa–ki–o:ka wakta:ka nigás mihę́ nomba lek
STEM–1SG.A–meet–PST man COORD woman two here
'I met a man and two women' (Hale 1883a)

In both the above examples the subject *wa–* is attached to the verb (as a prefix in 12a and an infix in 12b). Counter to the typical SOV constituent order of Siouan languages, the objects 'hat, knife, man, and women' are located after the verbs. The result is SVO, a divergent order that could represent added emphasis to one of the constituents. Alternatively, the constituent order in these examples could be the product of contact with the English language.

Transitive and intransitive verbs (i.e. that do and do not take direct objects respectively) fall largely into two classes—active and stative. These classes are marked with different sets of pronouns (called actor, patient, and dative pronouns). The constituent categorized as adjective in English is realized by Tutelo stative verbs, and the other constituents in the language include noun, verb, postposition, adverb, and conjunctions. Like other Siouan languages, Tutelo has rudimentary nominal morphology compared to a rich verbal morphology replete with tense, aspect, person, number, negation, valence, illocutionary force, and reflexivity among other grammatical functions marked primarily or exclusively on verbs. The next section provides a rudimentary background of Tutelo verbs and explores the endings of ones considered "non-ablauting" for the purposes of a later study in §3 and §4.

2. VERBS AND NON-ABLAUTING VERBS IN TUTELO

Verbs in Tutelo offer rich possibilities for inflection, with no fewer than 38 documented affixes (a category that includes prefixes, suffixes, infixes, and circumfixes) able to attach to and modify verb stems.[17] This chapter briefly provides information about verb types in the Tutelo split intransitive system and those categories of person, number, tense, aspect, and mood that attach to verb stems. It then focuses on verbs that do not undergo phonological changes to final vowels due to the presence or absence of suffixes. These verbs are referred to as "non-ablauting" for the sake of the later study on ablaut in chapters three and four.

2.1 VERB STEMS AND AFFIXES

The Tutelo verb is built upon a central core of meaning, what is referred to in this study as a verb stem. By itself, that verb stem can convey the infinitive meaning of the word (i.e. the verb not associated with a particular subject or object), as can be seen with the word for 'steal'.

(13) **Tutelo verb stem 'steal'**

manǫ
manǫ
steal
'steal' (Hale 1883a)

[17] I use the term verb stem in distinction from verb root. Roots contain the kernel of meaning at the core of verbs, and sometimes they may also be stems. Stems can have added affixes to give a more nuanced meaning to verbs, and with the addition of affixes they are no longer considered roots. If a verb can be conjugated in Tutelo, I consider it a stem. Compare *lakpé* and *olakpé*, both meaning 'drink'. Both can be conjugated and are therefore stems. Only *lakpé* is a root however, as *olakpé* has a locative prefix *o–* ('inside') added to the root.

There is only one morpheme present in 13, and it conveys the meaning of the infinitive ‘steal’. As there is just a single morpheme here, the first line showing how the data would be written in the language today and the second line showing a breakdown of morphemes look identical. Also due to the presence of only one morpheme above, the third line describing all the morphemes present and the fourth line showing an English translation are also identical.[18] More often in Tutelo, however, verbs appear with some type of suffix, as seen with the same verb stem in 14.

(14) **Suffixed Tutelo verb ‘steal’**

mano:ma
mano:–ma
steal–REAL
‘steal’ (Hale 1883a)

The Tutelo word for ‘steal’ is different in 14 in that it has an added suffix *–ma*, a realis marker that suggests evidence of the activity taking place. The translation is not different however, with the final gloss also being ‘steal’ as in 13. (It is important to note here that the identical gloss for both 13 and 14 does not necessarily mean that both forms of the verb are interchangeable.) Another difference in the verbs in 13 and 14 is found in the second vowel, [ǫ] and [o:] respectively. The nasality on this final vowel in *manǫ* is not lost in the word *mano:ma*, however, as it is absorbed into the nasal consonant [m] at the start of the realis suffix. A final difference is the added length indicated by the colon in [o]. While it likely appears in *mano:ma* to emphasize the natural stress in Tutelo falling on the second syllable, this vowel length does not appear to impact the translation in any way.

[18] Refer to example 11 for a description of each of the four lines of an interlinear gloss.

More than just the realis marker, Tutelo has numerous suffixes. This chapter details suffixes described in previous literature including those representing person (second- and third-person plural), tense (past), aspect (markers denoting realis, progressive, progressive, and potential), and mood (including markers of masculine and general assertion, imperative, hortative, desiderative, and causative). These, along with an additional suffix that I posit in §3.4 and a lesser understood tense suffix, account for 16 possible suffixes that can attach to the end of Tutelo verb stems. Moreover, many of these suffixes can stack upon each other and yield verbs with two or even more following suffixes.

Either with or without a suffix, Tutelo verb stems can convey both the infinitive and the third-person singular meanings of the same word. This can be seen both in ‘steal’ and another Tutelo verb, ‘die’.

(15) **Similar infinitive and 3SG forms of ‘steal’ and ‘die’**

mano:ma
mano:–ma
steal–REAL
‘he steals’ or ‘steal’ (Hale 1883a)

te:ola:ha
te:ola:ha
die
‘he dies’ (Hale 1879) or ‘die’ (Hale 1883a)

In 15, *mano:ma* is an example of a verb stem with a suffix meaning both the infinitive ‘steal’ and ‘he steals’. The second verb in this example, *te:ola:ha*, has no suffix, yet it also has an infinitive and a third-person translation, ‘die’ and ‘he dies’.

In addition to suffixes, Tutelo verb stems can also have prefixes attached to them. For the sake of the study that follows in §3 and §4, I separate the Tutelo verbal prefixes into two categories: prefixes that become incorporated into the verb stem and pronominal prefixes. The former category includes prefixes that slightly alter the meaning of the verbs they attach to, as can be seen in 16.

(16) **Tutelo 'break off by pushing' and 'bite off'**

tikusisel
tikusi–se–l
break.by.pushing–ASSERT–ASSERT.M
'he breaks it off by pushing' (Hale 1883a)

latku:sisel
la–tkusi–se–l
INSTR–break.off–ASSERT–ASSERT.M
'he bites it off' (Hale 1883a)

Both verbs above have two suffixes, the assertive marker followed by the assertive masculine markers. More importantly, however, the first verb is not prefixed and conveys the meaning 'break off' (specifically 'break off by pushing'). The second verb above adds the instrumental prefix *la–* ('by mouth'), changing the meaning of the verb to 'bite off'. Though *la–* adds the mouth as a feature of breaking contained in the verb *tikusisel*, it has become integrated into the meaning of 'bite off' such that analyzing the prefix as a separate feature might not be helpful to community members reading this document. Moreover, the prefixes like *la–* that have become integrated into Tutelo verb stems do not have any bearing on the analysis of changes to verb-final vowels covered in in §3 and §4. For these reasons, I do not focus on these prefixes as

separate from the verbs they attach to. Rather, I would gloss the Tutelo verb for ‘bite off’ in 16 as a single unit with suffixes, as seen in 17.

(17) **Tutelo ‘bite off’ glossed without separate prefix**

latku:sisel
latkusi–se–l
bite.off–ASSERT–ASSERT.M
‘he bites it off’ (Hale 1883a)

The Tutelo prefixes that become integrated into the verb stem include the what has previously been analyzed as markers of the absolutive (an abstract object), the instrumental (actions occurring by a particular method or means), the locative (indicating the location of the action), the dative (a little understood function in Tutelo at the time of writing), the reflexive (action taken by the subject upon itself), the middle voice (another little understood function in the language), and the vertitive (often reflecting movement returning to a place) (Oliverio 1996:87-104). These prefixes number 20 in all.

Pronouns comprise the other category of prefixes, and examples of them can be seen below with the verbs covered earlier in 15, ‘steal’ and ‘die’.

(18) **Prefixed form of ‘steal’ and ‘die’**

mamano:ma
ma–mano:–ma
1SG.A–steal–REAL
‘I steal’ (Hale 1879)

wite:ola:ha
wi–te:ola:ha
1SG.P–die
‘I die’ (Hale 1879)

The prefixes are in boldface on the second line for both verbs. The first example, ‘I steal’, has a prefix and a suffix that look quite the same, [ma], yet have different meanings: ‘I’ and the realis marker (i.e. a statement of evidence) respectively. The second example, ‘I die’, only has a prefix, a different one that also means ‘I’. As ‘I steal’ and ‘I die’ in 18 show, pronouns that have one form in English can have differing forms in Tutelo. This type of prefix comprises 19 marked combinations of person (first, second, and third), number (singular and plural), constituent (subject and object), and verb type (active, stative, and dative), and they will be discussed in more detail in §2.2.[19]

Many of the 19 person, number, constituent, and verb type combinations listed above can not only appear as prefixes, but also as infixes[20] in certain Tutelo verbs. Those verbs that take infixes present as one of two possibilities: the first, they have integrated a non-pronominal prefix into the verb stem that allows for infixes; the second, they are idiosyncratic lexemes that, as far as the current understanding of the language, have always taken infixes. An example of each is found in example 19.

(19) **Examples of Tutelo pronominal infixes**

áwanąga
á<wa>nąga (stem: *ánąga*)
<1SG.A>sit.on
‘I sit on’ (Hale 1878)

[19] Beyond these 19 marked combinations there are a few additional combinations involving the third-person singular (i.e. he, him, she, her, or it), however these are often unmarked as prefixes in Tutelo).
[20] An infix is a morpheme that is inserted into the middle of another form (that form generally being a verb in Tutelo). This occurs in informal English speech in some adjectives and adverbs. An example would be the expletive for copulation being placed in the middle of an adverb in ‘asbo-f*****g-lutely).

hiyanda:ha
hi<ya>nda:ha (stem: *hinda:ha*)
<2SG.A>run
'you run' (Hale 1878)

In the first example above, 'I sit on' has incorporated the locative prefix *á* to *nąga*, 'sit', to create the verb stem for 'sit on', *ánąga*. The addition of the locative prefix *á* allows for the first-person singular actor pronoun *wa–*, 'I', to be placed in the middle of the verb stem to produce the meaning 'I sit on', *áwanąga*. In the second example, the stem *hinda:ha*, 'run', does not contain any known Tutelo prefixes. Rather, it is a lexeme that as a feature takes infixes, as it does with *ya–* above to produce the meaning *hiyanda:ha*, 'you run'. In both examples, and in glosses containing infixes for the remainder of this document, the infix will be distinguished in the second and third lines of analysis by being placed in angle brackets (< >). When space in the four-line glosses allow (namely with shorter blocks of text), the stem will be provided without infixes in parentheses on the second line.

The final category of affixes that can appear attached to Tutelo verbs is circumfixes, of which there is only one documented in the language. The negative marker has both a prefixal and suffixal element, as can be seen below in 20.

(20) **The negative circumfix in Tutelo**

kimǫšpéna
ki–m–ǫšpé–na
NEG–1SG.A–know–NEG
'I don't know' (Dorsey 1882)

In the example above, ‘I know’ (*mǫšpé*) is has the prefixal element *ki–* and the suffixal ending *–na* that combined negate the verb. The result is ‘I don’t know’.

Many of the affixes mentioned in this section can attach to the same verb stem yielding various shades of meaning for each verb. This will be seen in examples from the next section, which explores the level of variation found among many of the affixal categories touched upon in §2.1.

2.2 Split intransitivity and person/number pronouns

The Tutelo pre-revitalization corpus contains 223 verb stems, many of which are inflected for person (specifically I, you, she, he, and we) according to a system of split intransitivity. This is a verbal system common among Siouan languages which distinguishes between two major classes of verbs: active and stative. Constituents known as adjectives in English are stative verbs in Tutelo. Beyond adjectives, transitive and intransitive verbs (those that do and do not require an object to complete their meaning respectively)[21] can fall into active and stative categories. According to Parks and Rankin, “The subjects of stative verbs and the objects of active transitives take the same pronominal affixes, while the subjects of active verbs, both transitive and intransitive, take a different set of pronominal affixes” (2001:107). Table 4 below charts the alignment of active and stative pronouns in Tutelo.

[21] Take for example the English verbs ‘make’ and ‘sleep’. Since ‘make’ is transitive, its appearance in a sentence without an object would be strange: compare ‘I make’ and a version with an object, ‘I make cookies’. Conversely, ‘I sleep’ is a well-formed sentence without an object because ‘sleep’ is intransitive. Sleep with an object, however (as in ‘I sleep cookies’) would not make sense.

Table 4: Alignment of active and stative verb prefixes in Tutelo

grammatical role	SUBJECT	OBJECT
Stative verb	Prefix-P (patient)	
Active transitive		Prefix-P (patient)
All active	Prefix-A (actor)	

While previous research has determined which Tutelo verbs are classified as active and stative, there is not sufficient documentation to clearly identify how every extant verb aligns in the split-intransitive system. In both Tutelo and other Siouan languages, different syntactic and semantic criteria have been used to further describe which verbal lexemes belong to each category (Boas and Swanton 1911:908, Mithun 1991:516-518, Oliverio 1996:60-61). These criteria are not without several exceptions in Tutelo, however. As there appears to be no clear set of rules regarding these exceptions that could be provided to the language community, the categories of active and stative may be best memorized as they correspond to each verb at the time of instruction.[22]

2.3 SINGULAR PRONOUN AFFIXES

Most Tutelo verbs are inflected for singular subjects by the addition of a prefix. Some verbs, however, are lexically predetermined to show this inflection by way of infix. There are singular affixes for active and stative verbs, with an additional set of dative affixes for a limited

[22] An example would the syntactic roles of stative verbs being linked to the subject of a state or the object of an action. These criteria are supported by the word *yando**mi**ste:ka* 'he loves me', where the infix *mi–* corresponds to English 'me', the object of the action 'love'. The criteria are defied, however, by the stative verb 'steal', *ma**mi**nunda:me*, in which the infix *mi–* corresponds to English 'I', the subject of an action ('steal') rather than a state.

number of verbs within the stative class. Examples of each set of pronouns are given in 21 through 24 below. The pertinent pronouns are shown in boldface in the first three lines of each example for emphasis. Examples of all variants for each type of pronoun are given, and they are shown as both prefixes and infixes when the data are available. This is a granular level of detail intended to expose language community members to every possibility they may find in the Tutelo pre-revitalization data. The intent for presenting this level of variation and detail is to discourage learner speakers from choosing one variant for each pronoun and overlooking much of the evidence and data available to support deeper understanding of the language.

(21) **Singular actor pronouns (subjects of active verbs)**

a. 1SG {gwa, m, ma, wa}$_{1SG.A}$

gwa*gilí:da*
gwa–gilí:–da
1SG.A–go.home–POT
'I must go home' (Sapir 1913)[23]

*ki**m**ǫšpéna*
ki–**m**–ǫšpé–na
NEG–**1SG.A**–know–NEG
'I don't know how I may be tomorrow' (Dorsey 1882)

ma*ịgu:wa*
ma–ị–gu:–wa
1SG.A–2SG.DAT–give–REAL
'I give to you' (Hale 1879)

[23] The *gwa–* prefix only ever appears in the one attested form in (9a). The series of phonemes [gw] is quite rare in the Tutelo pre-revitalization corpus and, aside from *gwagilí:da*, it only occurs across morpheme boundaries. As this is not an uncommon series of phonemes in Cayuga, the language and the people who for generations had adopted into their tribe the families of the Tutelo language consultants, I posit that this morph is evidence of language contact.

*ím**ma**ǫ́wa*
í<**ma**>ǫ́–wa (stem: *iǫ́*)
<**1SG.A**>use–REAL
‘(I use)’ (Dorsey, 1882)

***wa**kte:wa*
wa–kte:–wa
1SG.A–kill–REAL
‘I kill him’ (Hale 1880a)

*o**wa**lohiwa*
o<**wa**>lohi–wa (stem: *olohi*)
<**1SG.A**>tie–REAL
‘I tie him’ (Hale 1878)

b. 2SG {a, y, ya}$_{2SG.A}$

*kohinąkwi**a**hi:wa*
kohinąk<wi><**a**>hi:–wa (stem: *kohinąkhi:*)
<1SG.P><**2SG.A**>strike–REAL
‘you strike me’ (Hale, 1879)

*ki**y**ǫšpéna*
ki–**y–**ǫšpé–na
NEG–**2SG.A**–know–NEG
‘you don’t know’ (Dorsey 1882)

***ya**tíwa*
ya–tí–wa
2SG.A–reside–REAL
‘you reside’ (Hale 1883b)

*hi**ya**nda:ha*
hi<**ya**>nda:ha (stem: *hinda:ha*)
2SG.A–run
‘you run’ (Hale 1878)

c. 3SG {Ø}3SG.A

ktéwa
kté–wa
kill–REAL
‘(he kills)’ (Hale 1883a)

iǫ́tha
iǫ́–tha
use–?
‘(he uses)’ (Dorsey, 1882)

Actor pronouns attach exclusively to active verbs. The morph set at the top of 21 concludes with the subscript notation 1SG.A, indicating the all the morphs here are first-person (1) singular (SG) actor (A) pronouns. The actor series of singular pronouns has a total of seven marked pronoun morphs (*gwa–*, *m–*, *ma–*, *wa–*, *a–*, *y–,* and *ya–*). The examples above show each pronoun variant first as a prefix then as an infix when attestations of both are available in the pre-revitalization corpus. Though it may seem unlikely, the *m–* and *y–* actor pronouns are prefixes despite appearing in the middle of verbal constructions of the stem ‘to know’ (ǫšpé). In *ki**m**ǫšpéna* and *ki**y**ǫšpéna* (‘I don’t know’ and ‘you don’t know’ respectively) the actor pronoun is preceded by the circumfix *k–na*, ‘not’. Though preceded by another preverbal element, as *m–* and *y–* attach immediately before the verb they are still considered prefixes. The actor series of pronouns has an unmarked pronoun (shown as Ø above) for the third-person singular inflection of active verbs.

Though the amount of variation of affixes for each of the person-number combinations above is not as high as with other affixes shown later in this chapter and dissertation, it is challenging to handle this in the context of language pedagogy. I have found that learner

speakers want to learn one form for every morpheme in Tutelo, even though this is not the case in English. While this can be challenging for learner speakers, it provides an opportunity to teach the community about variation in language overall, and more specifically in Tutelo.

The patient set of pronouns attach as subjects to stative verbs, and they also exhibit a similar amount of variation as the actor pronouns in 21.

(22) **Singular patient pronouns (subjects of stative verbs)**

a. 1SG {mi, we, wi}1SG.P

mi*nąt*
mi–nąt
1SG.P–swallow
'I swallow' (Dorsey 1882)

*maha**mi**nąka*
maha<**mi**>nąka (stem: *mahanąka*)
<**1SG.P**>sit.down
'I sit down' (Hale 1878)

*wa**we**gitsiwa*
wa<**we**>gitsi–wa (stem: *wagitsi*)
<**1SG.P**>dance–REAL
'I dance' (Hale 1879)

wí*loxkáha*
wí–loxkáha
1SG.P–tear
'I tear' (Dorsey 1882)

b. 2SG {i, ti, yi}2SG.P

i*xa:ka*
i–xa:ka
2SG.P–weep
'you weep' (Hale 1879)

*wa**i**gitsi:se*
wa<**i**>gitsi–:se (stem: *wagitsi*)
<**2SG.P**>dance–ASSERT
'you dance' (Hale 1879)

***ti**lúšihí*
ti–lúši–hí
2SG.P–take.up–HORT
'take up' (Dorsey 1882)

***yí**loxkáha*
yí–loxkáha
2SG.P–tear
'(you tear)' (Dorsey 1882)

*maha**yi**nąka*
maha<**yi**>nąka (stem: *mahanąka*)
<**2SG.P**>sit.down
'you sit down' (Hale 1878)

c. 3SG {Ø, i}$_{3SG.P}$

loxkáha
loxkáha
tear
'(he tears)' (Dorsey 1882)

mahanąka
mahanąka
sit.down
'he sit downs' (Hale 1878)

***i**latkušita*
i–latkuši–ta
3SG.P–break–POT
'(he will break)' (Dorsey 1882)

Again, patient pronouns attach as subjects of stative verbs. The patient series of singular pronouns also has a total of seven marked pronoun morphs (*mi–*, *we–*, *wi–*, *ti–*, *yi–*, and *i–* counting twice as a second-person and third-person singular pronoun). The patient series of pronouns shares with the actor series an unmarked pronoun (shown as Ø above) as the most frequently occurring of third-person singular inflections in active and stative verbs.

Many variants from patient series of pronouns also instantiate as objects in verbal constructions. The examples in 23 below show singular patient pronouns as objects of the verbs to which they attach.

(23) **Singular patient object pronouns**

a. 1SG {mi, wi}1SG.P

*yando**mi**ste:ka*
yando<**mi**>ste:ka (stem: *yandoste:ka*)
<**1SG.P**>love
'he loves me' (Hale 1883a)

*kohinąk**wi**yahi:wa*
kohinąk<**wi**><ya>hi:–wa (stem: *kohinąkhi:*)
<**1SG.P**><2SG.A>strike–REAL
'you struck me' (Hale 1883a)

b. 2SG {hi, yi}2SG.P

***hi**kláko*
hi–klák–o
2SG.P–speak–INTER
'did he speak to you' (Hale 1879)

yi*kláko*
yi–klák–o
2SG.P–tell–INTER
'did he tell you' (Dorsey 1882)

*wa**yi**kteo:ma*
wa–**yi**–kte–o:–ma
1SG.A–**2SG.P**–kill–PROG–REAL
'I am killing you' (Dorsey 1882)

c. 3SG {Ø}3SG.P

wakǫspe:wa
wa–kǫspe:–wa
1SG.A–remember–REAL
'I remember it' (Hale 1883a)

Despite the additional second-person pronoun, *hi–*, there are significantly fewer marked patient object pronouns than their subject pronoun counterparts (four rather than eight). The first-person patient object pronouns (*mi–* and *wi–*) do not appear in the data as prefixes, though this is more likely a matter of sparse data than a morphosyntactic rule (note the presence of the second person object pronoun, *yi–*, as both a prefix and an infix).

In my experience teaching in the Tutelo language community, learner speakers have found it challenging to embrace patient pronouns being potentially both subjects and objects of verbs. The patient object pronoun becomes even more difficult for learner speakers to grasp when combined with another marked pronoun, as with *wayikteo:ma*, 'I am killing you'. I have found that this difficulty is eased somewhat by moving slowly through the pedagogy of

pronouns, and this informs why I separate the description and instruction of patient pronouns as subjects and objects.

In addition to actor and patient pronouns, some active and stative verbs can additionally adopt dative pronouns. The examples in 24 show the two contexts in which the singular morphs of these pronouns appear.

(24) **Singular dative pronouns**

a. 1SG {me, mi, mį}1SG.DAT

*wa**me**gino:ma*
wa<**me**>gino:–ma (stem: *wagino:*)
<**1SG.DAT**>sick–REAL
'I am sick' (Hale 1878)

***mi**gi:towe*
mi–gi:to–w–e
1SG.DAT–belong–REAL–INDEF
'it is mine (it belongs to me)' (Hale 1883a)

***mį**bi:wa*
mį–bi:–wa
1SG.DAT–good–REAL
'I am good' (Hale 1883a)

***mį**go:*
mį–go:
1SG.DAT–give
'give me' (Hale 1883a)

b. 2SG {į, yį, yę}2SG.DAT

*wa**į**giko:ha*
wa–**į**–giko:ha
1SG.A–**2SG.DAT**–call
'I call to you' (Hale 1883a)

*wa**yį**gino:ma*
wa<**yį**>gino:–ma (stem: *wagino:*)
<**2SG.DAT**>sick–REAL
‘you are sick’ (Hale 1883a)

***yį**gi:towe*
yį–gi:to–w–e
2SG.DAT–belong–REAL–INDEF
‘it is yours (it belongs to you’ (Hale 1883a)

*wahtakai **yę**kai:ks*
wahtaka–i **yę**–kai:ks
man–INDEF **2SG.DAT**–bad
‘you are (a) bad (man)’ (Hale 1879)

c. 3SG {Ø, į}3SG.DAT

wagino:ma
wagino:–ma
sick–REAL
‘he is sick’ (Hale 1878)

giko:ha
giko:ha
call
‘he calls to him’ (Hale 1883a)

***į**gi:towe*
į–gi:to–w–e
3SG.DAT–belong–REAL–INDEF
‘his (it belongs to him)’ (Hale 1883a)

Some of the dative pronouns above can appear as subjects of the verbs to which they attach, as is the case with *bi:, kai:k*, and *wa–gino:ma* ('good', 'bad', and 'sick' respectively). In the current understanding of Tutelo, the dative pronouns account for all instances where pronouns express indirect objects, as with *giko:ha*, *gito:*, and *go:* ('call to', 'belong to', and 'give [to]').[24] Indeed, all the examples above with these three verbs use the dative pronouns as indirect object pronouns. Examples of both the subject pronoun and indirect object pronoun contexts are provided in 24 for each morph when attestations are available in the pre-revitalization corpus. As with the patient pronouns, the ability for the dative pronouns to act as subjects as well as objects can be confusing for community members, necessitating a very slow (and for some, frustrating) crawl through pronouns in the language.

Tutelo has a series of independent pronouns that add emphasis or provide restriction or scope to the pronouns in question (e.g. expressing 'I myself' or 'I alone' rather than the first-person singular 'I') (Oliverio 1996: 148-151). As they do not attach verb stems, they are not explored in this dissertation.

2.4 Plural pronoun affixes

Whereas singular pronouns can appear as either prefixes or infixes depending on the verb they attach to, Tutelo first-person plural pronouns appear only as prefixes in all but one verb.

[24] Indirect object pronouns are not exclusively used with the preposition 'to' in English. Another preposition that would correlate with an indirect object pronoun is the benefactive 'for' in examples like 'for me' and 'for her'. While we do not currently have any data on an equivalent for this in Tutelo, evidence from other languages in the Siouan family suggest that Tutelo may have had another marker for the benefactive. It would require research beyond the scope of this dissertation to reconstruct such a marker and to identify whether it correlates with the use of dative pronouns.

(25) **1PL actor pronouns (subjects of active verbs)**

{ma, máe, mag, maig, máįt , mąk, mvk, wa}1PL.A

ma*įkse:ha*
ma–įkse:ha
1PL.A–laugh
'we laugh' (Hale 1878)

mag*walulutita*
mag–waluluti–ta
1PL.A–eat.something–POT
'we eat (something)' (Hale 1879)

maé*lakšéwa*
maé–lakšé–wa
1PL.A–laugh–REAL
'we laugh' (Dorsey 1882)

maig*yándosteka:*
maig–yándosteka:
1PL.A–love
'we love him' (Hale 1878)

máįt*kaxlé:pita*
máįt–kaxlé:pi–ta
1PL.A–sweep–POT
'we will sleep' (Dorsey 1882)

mąk*inda:ha*
mąk–inda:ha
1PL.A–run
'we run' (Hale 1879)

*ha****mąk****hewa*
ha<**mąk**>he–wa (stem: *hahe*)
1PL.A–say–REAL
'we say' (Hale 1878)

mvk*lakatskiho:ma*
mvk–lakatskih–o:–ma
1PL.A–kill;PL;OBJ–PROG–REAL
'we (are) kill(ing) them' (Hale 1879)

wa*ịkseha*
wa–ịkseha
1PL.A–laugh
'we laugh' (Hale 1878)

The example 'we say' is the only datum in 25 where the first-person plural appears as an infix rather than a prefix. Like the verb 'say', *ha…he:*, other verbs listed above also place singular pronouns as infixes, yet the first-person actor pronoun is prefixal (namely 'laugh', 'love', and 'run': *ị–kse:ha*, *yando–ste:ka*, and *hi–nda:ha*). Oliverio posited that the exceptional infix position of the first-person plural marker in 'to say' is connected to the demonstrative *ha* ('this') in the verb stem (1996: 66-67).[25] Overall, there are more morphs for first-person plural pronouns than all sets of the singular pronouns in Tutelo, which, in combination with the shifted positions of most affixes in this set, can makes this set of pronouns really challenging for community members to grasp.

Unlike the previous set of plural actor pronouns, the pre-revitalization data on the patient set of first-person plural subject pronouns does not contain any infixes. The data for first-person plural pronouns is more sparse than the previous pronominal data, and for that reason I use the same morph set to describe the pronouns as subjects and objects in examples 26 and 27

[25] Though there are no other instantiations of this phenomenon occurring in verbs other than *ha–he:* 'to speak', her assessment would suggest that the same phenomenon would apply to the stative verb *ha–le:*, yielding 1PL form akin to *ha**wai**le:wa*.

respectively. The morphs that have attestations in the data are found in bold within the patient morph sets for the next two examples.

(26) **1PL patient pronouns (subjects of stative verbs)**

{**wa**, **wáe**}1PL.P

wa*inéwa*
wa–iné–wa
1PL.P–see–REAL
'we saw' (Dorsey 1882)

waé*loxkáha*
waé–loxkáha
1PL.P–tear
'we tear' (Dorsey 1882)

There is little variation in the 1PL prefix above, though that may just be due to a paucity of data. That said, it is worth future research to determine if the difference in morphs *wa–* and *wáe–* are connected to whether the verbs they attach to are consonant- or vowel-initial.

There is even less data available in the corpus for first-person plural patient pronouns operating as objects, as can be seen in 27.

(27) **1PL patient object pronouns**

{**wa**, wáe}1PL.P

wa*kiteo:ma*
wa–kite–o:–ma
1PL.P–kill–PROG–REAL
'he is killing us' (Hale 1878)

Without additional data it is difficult to know whether this pronominal prefix only appears as *wa–* (rather than both *wa–* and *wáe–*) due to the verb stems being consonant-intial, or rather, if this is connected to the pronouns functioning as objects. This distinction may be of more interest to linguists than the typical community learner, however, as I believe they would embrace decreased variation among prefixes here.

The dative first-person plural pronoun variations are more numerous than in the stative set, as can be seen in 28.

(28) **1PL dative pronouns**

{maiį, mah, max, mąg, wąg}1PL.DAT

maiį*bi:wa*
maiį–bi:–wa
1PL.DAT–good–REAL
'we are good' (Hale 1879)

mah*gi:towe*
mah–gi:to–w–e
1PL.DAT–belong–REAL–INDEF
'ours (it belongs to us)' (Hale 1883a)

maxgi:towe
max–gi:to–w–e
1PL.DAT–belong–REAL–INDEF
'ours (it belongs to us)' (Hale 1883a)

mąg*wagino:ma*
mąg–wagino:–ma
1PL.DAT–sick–REAL
'we are sick' (Hale 1878)

wąg*wagino:ma*
wąg–wagino:–ma
1PL.DAT–sick–REAL
'we are sick' (Hale 1878)

Though there is greater variation above than in the patient set of 1PL pronouns, only 'ours' is used with some frequency in the current language community. As such, it is easy to teach this one form rather than burdening beginner speaker/learners with the nuances of the varied morphs above.

In contrast to the aforementioned pronouns, the second- and third-person plural pronouns usually attach as suffixes following the verb stem.[26] In additional contrast, these pronouns attach as suffixes to active and stative verbs; they are not, therefore, further distinguished by the categories of actor, patient, dative, or even subject and object. Finally, these pronouns differ from the singular and first-person plural series in Tutelo in that they may or may not appear immediately adjacent to the verb stem. The examples in 29 show all the morphs for Tutelo second-person plural suffixes. There is at least one instantiation located adjacent to and non-adjacent to verb stems. As most of the data below will show, the second-person plural is most often realized in Tutelo with the additional presence of a second-person singular prefix, a distinction from all the previous pronominal realizations in the language.

(29) **2PL suffixes in Tutelo**

{bo, bu, bu:, p, po, pu, pu:}2PL

*įksehǫ́**bo**lt*
įkseh–ǫ́–**bo**–l–t
laugh–PROG–**2PL**–ASSERT.M–POT
'you (pl) will (be) laugh(ing)' (Hale 1878)

[26] There is an independent pronoun, *hu:k* ('all') that occasionally appears in place of 2PL and 3PL suffixes, however it is not discussed here as it does not attach to Tutelo verb stems.

*oyahat**bu**a*
o<ya>hat–**bu**–a (stem: *ohat*)
<2SG.A>see–**2PL**–REAL
‘you (pl) see it’ (Hale 1883a)

*yįgi:tą**bu:**i*
yį–gi:tą–**bu:**–i
2SG.DAT–belong–**2PL**–INDEF
‘yours (pl) (it belongs to you [pl])’ (Hale 1879)

*walú:t**p***
walú:t–**p**
eat.something–**2PL**
‘you (pl) eat (something)’ (Hale 1879)

*įgiko**po**le:se*
į–giko–**po**–le:–se
2SG.DAT–call–**2PL**–3PL–ASSERT
‘he [sic] calls to you (pl)’ ‘they call to you’ (Hale 1883a)

*hayihe:**pu**a*
ha<yi>he:–**pu**–a (stem: *hahe:*)
<2SG.P>speak–**2PL**–REAL
‘you (pl) say’ (Hale 1883a)

*ki:hnįde:**pu:**a*
ki:hnįde:–**pu:**–a
hungry–2PL–REAL
‘you (pl) are hungry’ (Hale 1883a)

Similar to the Tutelo pronominal prefixes and infixes, most of the 2PL suffixal morphs above are immediately adjacent to the verb stems to which they attach. The example of *įksehǫ́**bo**lt* shows that this is not always the case, however. The 2PL suffix *–bo* follows the progressive suffix *–ǫ́* in *įksehǫ́**bo**lt*. With the inclusion of the progressive suffix here, the original gloss of ‘you (pl) will laugh’ may be more accurately conveying ‘you (pl) will be laughing’.

Examples from the morphs for 2PL in 29 also show that the second-person plural suffix is often (but not always) accompanied by a second-person singular prefix earlier in the verbal construction. The sentences *o**ya**hat**bu**a* (‘you [pl] see it’) and *ha**yi**he:**pu**a* (‘you [pl] say’) show examples of 2SG pronouns (actor and patient respectively) in bold prefixing verbs with 2PL suffixes (also in bold) and yielding 2PL subjects. Again, the presence of accompanying 2SG prefixes is optional, as *walú:t**p*** has no 2SG prefixes and still yielding plural gloss ‘you (pl) eat (something)’.

In my experience, this is not a suffix being commonly studied, learned, or used in community. This is likely due to the difficulty of grasping all the variation found in the singular and first-person plural affixes, making for a slow process of learning pronominal inflection in the current language community.

The examples in 30 show all the morphs for Tutelo third-person plural suffixes. Again, there is at least one instantiation located adjacent to and non-adjacent to verb stems.

(30) **3PL suffixes in Tutelo**

{hana:, hela, hla, hlé, hné, le, lé, le:, na, ne, né, ne:}3PL

*yądomisték**hana:***
yądo<mi>sték–**hana:** (stem: *yądosték*)
<1SG.P>love–**3PL**
‘they love me’ (Hale 1878)

*ohaté**hla***
ohaté–**hla**
see–**3PL**
‘they see it’ (Hale 1880a)

*oláše**hlé**wa*
oláše–**hlé**–wa
cut.off.piece.by.hand–**3PL**–REAL
‘they cut off a piece’ (Dorsey 1882)

*ínaxlóta**hné**wa*
í–naxlóta–**hné**–wa
3SG.P–blistered–**3PL**–REAL
‘they are blistered’ (Dorsey 1882)

*lakpe**le**se*
lakpe–**le**–se
drink–**3PL**–ASSERT
‘they drink’ (Hale 1879)

*bih**lé**se*
bi–**hlé**–se
good–**3PL**–ASSERT
‘they are good’ (Hale 1883a)

*įgikopo**le:**se*
į–giko–po–**le:**–se
2SG.DAT–call–2PL–**3PL**–ASSERT
‘he [sic] calls to you (pl)’ ‘they call to you (pl)’ (Hale 1883a)

*lu:ta**na***
lu:ta–**na**
eat–**3PL**
‘they eat’ (Hale 1879)

*įkse:ha**ne**se*
įkse:ha–**ne**–se
laugh–**3pl**–ASSERT
‘they laugh’ (Hale 1878)

*maigiándostéka**né**se*
maig–iándostéka–**né**–se
1PL.A–love–**3PL**–ASSERT
‘we love them’ (Hale 1878)

*gikoha**ne:**se*
gikoha–**ne:**–se
call–**3PL**–ASSERT
'they call to them' (Hale 1883a)

The verb *ɨgikopo**le:**se* is repeated above from its original appearance in the 2PL data because it shows morphs from both plural suffix sets. Moreover, it shows the 3PL suffix in a position non-adjacent to the verb stem *giko*, 'call'. The 3PL suffix *–le:* follows the the 2PL morph *–po* in *ɨgikopo**le:**se*, and I would posit that the original gloss 'he calls to you (pl)' needs to be amended to 'they call to you (pl)'. Third-person plural morphs are more utilized in community than the second-person plural, namely because they are embedded in introductory phrases like *mɨgikoha**ne:**se*, 'they call me (my name is)'.

What most of the person/number pronominal categories above share is a tremendous amount of variation for the would-be Tutelo language learner to engage. As most people in the language community have English as their first language, they are accustomed to one or a very few pronouns for each category. Whereas 'they' for the 3PL subject and 'them' for the 3PL object may have sufficed for the acquisition of English as a first language for most community members, learning to select from the equivalent morph set {hana:, hela, hla, hlé, hné, le, lé, le:, na, ne, né, ne:}3PL to encompass both subject and object pronouns in Tutelo as a second language may present a tremendous challenge. Adding to the difficulty, 2PL and 3PL Tutelo pronominal suffixes are able to stack onto the end of verbs stems when they would be separate words in English. Further, these plural pronouns can not only stack onto each other, but also onto suffixes that reflect tense, aspect, and mood in Tutelo verbs.

2.5 TENSE, ASPECT, AND MOOD

Tense, aspect, and mood are categories that often overlap in Tutelo. This overlap is not only a matter of function (e.g. the past tense being implied in an aspect marker), but also in location as the categories are realized by suffixes that precede and follow one another in the verbal complex. What follows is a description of these three categories (tense, aspect, and mood) with examples of each. I will provide a bit of community context only for three markers being described below, the aspect-marking realis suffix and the mood-marking assertive and masculine assertive suffixes. As the remaining suffixes are not often utilized in community at the time of writing, their description will be more grammatical in nature.

TENSE

Tense is a verbal category in Tutelo that conveys when events occur in time. The past is the only tense in Tutelo that is overtly marked with an exclusively dedicated suffix. Examples of each of the morphs in the set for this suffix are given in 31.

(31) **Tutelo past tense marker**

{ok, oka, o:ka, o:k^{h}a, óka, oke, óke, oké}$_{PST}$

*wagela:ki**ok***
wa–gela:ki–**ok**
1SG.A–call–**PST**
'I called' (Hale 1883a)

*maohati**oka***
ma–ohati–**oka**
1PL.A–see–**PST**
'we saw it' (Hale 1883a)

*yakǫspe**o:ka***
ya–kǫspe–**o:ka**
2SG.A–remember–**PST**
‘you remembered it’ (Hale 1883a)

*luti:**o:k^{h}a***
luti:–**o:k^{h}a**
eat–**PST**
‘he has eaten’ (Hale 1879)

*kikǫspele**óka***
kikǫspe–le–**óka**
remember–3PL–**PST**
‘(they remembered)’ (Dorsey 1882)

*máoxáte**oka***
má–oxáte–**oka**
1PL.A–see–**PST**
‘(we saw it)’ (Dorsey 1882)

*oxáte**óke**hléwa*
oxáte–**óke**–hlé–wa
see–**PST**–3PL–REAL
‘(they saw it)’ (Dorsey 1882)

*oxate**oké**wa*
oxate–**oké**–wa
see–**PST**–REAL
‘(he) did see some time ago’ (Dorsey 1882)

While most of the examples in 31 show the morphs for the past tense as the sole suffixes on the verb stems to which they attach, third-person plural morphs *–le* and *–hlé* as well as the realis marker *–wa* (discussed in the next section) additionally stack with the past tense morphs in ‘they remembered’ (*kikǫspe**leóka***), ‘they saw it’ (oxáte**ókehlé**wa), and ‘(he) did see some time ago’ (oxate**oké**wa). These data begin to reveal a complex system of affix stacking as the plural markers are not consistent in their placement before or after past tense suffixes. Moreover, the

past tense morph in ‘they saw it’ is followed by a third suffix, the realis marker *–wa.* This aspectual marker and its overlap with tense will be discussed in the next section.

ASPECT

Aspect is a category in Tutelo that expresses the flow of time in verbal constructions. Below I identify four aspectual suffixes in Tutelo: the realis, the durative, the progressive, and the potential markers.

The realis suffix shows evidence of a verb taking place. As it relates to time, it indicates a completed action in the past or one that is in the process of taking place in the present. Examples of this suffix are shown in 32.

(32) **Realis marker in Tutelo**

{a, ma, w, wa, wá}REAL

*yimanǫpu:**a***
yi–manǫ–pu:–**a**
2SG.P–steal–2PL–REAL
‘you (plural) steal it’ (Hale 1878)

*ao:**ma***
ao:–**ma**
make–REAL
‘(he) makes’ (Dorsey 1882)

*yakte:**wo***
ya–kte:–**w–**o
2SG.A–kill–**REAL**–INTER
‘did you kill him?’ (Hale 1883b)

*waktamą**wa***
wa–ktamą–**wa**
1SG.A–break.in.pieces–REAL
'I broke in pieces' (Dorsey 1882)

*yáxkǫšpépu**wá***
yá–xkǫšpé–pu–**wá**
2SG.A–remember–2PL–**REAL**
'you all remember' (Dorsey 1882)

The realis marker can appear as the only suffix after a verb stem as is the case with the verbs *a–ǫ* ('make') and *ktamą* ('break in pieces') in 32. It can also appear as a sole suffix indicative of time, in which case it most often translates as present tense (e.g. *ao:**ma*** '[he] makes'). However, *yakte:**wo*** and *waktamą**wa*** both have past tense glosses, 'did you kill him' and 'I broke in pieces' respectively. This suffix can also follow the past tense marker *–oké* (see *oxate**okéwa*** in 31) as well as the durative marker *–yuké* to yield a past tense translation.

I have taught this suffix as a first point of reference at the end of verbs in well formed Tutelo sentences, framing the instruction by letting speaker/learners know that most basic Tutelo verbs do not like to be bare (i.e. they are more commonly found with suffixes). While community members have embraced the use of the realis marker, they sometimes struggle to accept that it can refer to action both in the past and the present. Conditioned by their first language English, many speaker/learners insist that these tenses should be marked differently. While that is possible by way of the past tense marker {ok, oka, o:ka, o:kha, óka, oke, óke, oké}PST, I have found it easier for the sake of beginning instruction to encourage the use of the realis suffix for both past and present until later instruction on tense, aspect, and mood.

The suffix *–yuké* has been previously analyzed as a denoting the past events. Oliverio identified that these events may refer to an action in the past or one that occurs prior to an action yet to be realized (1996:110). The examples in 33 show attested form for the four morphs of this marker found in the pre-revitalization corpus.

(33) **Past or past/durative in Tutelo**

{yu, yúka, yuké, yux}PST;DUR

*kohóčáwayé**yu***
kohóčá–wa–yé–**yu**
hole–1SG.A–cause–**PST;DUR**
‘(I cut a hole)’ (Dorsey 1882)

*ólakpe**yúka***
ólakpe–**yúka**
drink–**pst;dur**
‘he did drink’ (Dorsey 1882)

*oklášа**yuké**wa*
oklášа–**yuké**–wa
speak–**PST;DUR**–REAL
‘they were speaking together’ (Dorsey 1882)

*kohóčyáyebu**yux***
kohóč–yá–ye–bu–**yux**
hole–2SG.A–cause–2PL–**PST;DUR**
‘you 3 make a hole’ (Dorsey 1882)

The sentences that gloss as ‘he did drink’ and ‘they were speaking together’ support Oliverio’s assessment that the morphs from the suffix in 33 can indicate past events. The phrases about cutting a hole, however, are parts of larger sentences that do not support suffixes from this morph set being tied to initial or subsequent action.

(34) **Past/durative and ‘cutting a hole’ in context**

*mašę́ iyaǫ́tha kohóčyáyebu**yux***
mašę́ i–ya–ǫ́–tha kohóč–yá–ye–bu–**yux**
knife INSTR–2SG.A–use hole–2SG.A–cause–2PL–**PST.DUR**
‘you 3 make a hole’

Though the gloss for the full sentence is also ‘you 3 make a hole’, the morphemes involved suggest a gloss with more detail: ‘you (pl) make a hole using a knife’. In this gloss, there is no previous or subsequent action; the use of the knife and the digging of the hole are happening concurrently. I label the morphs from 33 and 34 the past/durative marker, for in addition to the past reading of the suffixes in *ólakpe**yúka*** and *oklášа**yuké**wa* (‘he did drink’ and ‘they were speaking together’ respectively), the data also suggest a durative interpretation in many instances. That ‘they were speaking together’ indicates action that takes place over a duration of time rather than instantaneously; similarly, the act of digging a hole with a knife ostensibly takes longer than an instant to perform. Even though the suffix can perform as a function of tense, there is not enough data to substantiate that it does so without simultaneously indicating a durative aspect (e.g. even the gloss ‘he did drink’ for *ólakpe**yúka*** could indicate a process of drinking rather than imbibing a single gulp of liquid).

Similar to the durative aspect, the progressive aspect in Tutelo indicates action that takes place over the course of time. The morphs for this aspectual suffix appear attached primarily to verbs in the present tense, and they are listed in 35.

(35) **Progressive aspect in Tutelo**

{o, o: ó, ǫ́, ǫ:}PROG

*yakte**o**ma*
ya–kte–**o–**ma
2SG.A–kill–**PROG**–REAL
‘you are killing him’ (Hale 1883a)

*kohi:nykwahi**o:**ma*
kohi:nyk<wa>hi–**o:–**ma (stem: *kohinąkhi*)
<1SG.A>strike–**prog**–real
‘I strike him’ (Hale 1879)

*ówalákpe**ó**ma*
ó<wa>lákpe–**ó**–ma (stem: *ólákpe*)
<1SG.A>drink–**PROG**–REAL
‘I am drinking’ (Dorsey 1882)

*įkseh**ǫ́**bolt*
įkseh–**ǫ́**–bo–l–t
laugh–**PROG**–2PL–ASSERT.M-POT
‘you (pl) will (be) laugh(ing)’ (Hale 1878)

*yakte**ǫ́**mo*
ya–kte–**ǫ́**–m–o
2SG.A–kill–**PROG**–REAL–INTER
‘are you killing him?’ (Hale 1880b)

*miandestag**ǫ:**wa*
mi–andestag–**ǫ:–**wa
1SG.P–love–**PROG**–REAL
‘I [sic]love’ ‘he loves me’ (Hale 1878)

Most glosses of the Tutelo data in 35 are in the present tense, however they do not always reflect the progressive as it is understood in English (having the *–ing* suffix). Many of the glosses do have the progressive English *–ing*, however, and the nuance of how this suffix may work in both

languages could have easily been misunderstood between the various researchers and their Tutelo-speaking consultants in the late 19th century.

There is one datum in the pre-revitalization corpus that shows the progressive suffix being utilized in a non-past, non-present verb construction: *įkseh**ó**bolt*. This was originally glossed as ‘ye will laugh’ (or ‘you plural will laugh’), however with the presence of the final sound [t] a more accurate gloss might be ‘you (pl) will be laughing’. The final [t] in this verb construction is one of the morphs for the potential aspect.

The potential aspect in Tutelo describes actions that have not yet occurred. This most often comprises but is not limited to what is thought of as the future tense in English. The morphs for the potential aspect appear with examples in 36.

(36) **Potential aspect in Tutelo**

{da, t, ta, té}POT

*kiksu:x**da**se*
kiksu:x–**da**–se
vomit–**POT**–ASSERT
‘one vomits’ (Hewitt 1888)

*oyalakpe:**t**buá*
o<ya>lakpe:–**t**–bu–á (stem: *olakpe:*)
<2SG.A>drink–**POT**–2PL–REAL
‘(you [pl] will drink)’ (Dorsey 1882)

*įwakse:he**ta***
į<wa>kse:he–**ta** (stem: *įkse:he*)
<1SG.A>laugh–**POT**
‘I shall laugh’ (Hale 1878)

*įksehe**té**hela*
įksehe–**té**–hela
laugh–**POT**–3PL
'they will laugh' (Hale 1878)

Like the previous tense and aspect markers, the potential suffix can either appear as a sole suffix at the end of a verbal construction (as in *įwakse:he**ta***, 'I shall laugh') or it can precede additional suffixes (like the 3PL suffix *–hela* in *įksehe**té**hela*, 'they will laugh'). Though most of the data above conveys the future tense in English, *kiksu:x**da**se* yields a different temporal read by locating the potential suffix before a marker of the assertive mode. The resulting gloss, 'one vomits', is not an indication of an action taking place in the future, but rather the potential for this action to occur at a time other than the past or present. The assertive mode (represented here by the suffix *–se*) and other suffixes expressing modality are the subject of the next section.

MOOD

Mood (or mode) is a category in Tutelo that can express the degree of truth attributed to verbal constructions or the type of speech of the person making utterances in the language. Below I identify six suffixal modal elements in Tutelo: the assertive, the desiderative, the negative, the hortative, the imperative, and the interrogative markers.

There are two suffixes in Tutelo utilized to express assertive speech. They align with the gender of the speaker, explicitly in the case of the masculine assertive marker and implicitly with what I call the "assertive marker" being a general and non-masculine suffix. Examples of both suffixes of the assertive mode are listed with examples in 37:

(37) **Assertive mode in Tutelo**

a. {se}ASSERT

*nątku:si**se**l*
nątku:si–**se**–l
break.with.foot–**ASSEERT**–ASSERT.M
'he breaks it off with the foot' (Hale 1883a)

*gíleda**se***
gíle–da–**se**
go.home–POT–**ASSERT**
'one will go home' (Hewitt 1888)

*įgikopole:**se***
į–giko–po–le:–**se**
2PL.DAT–call–2PL–3PL–ASSERT
'he [sic] calls to you (pl)' 'they call to you (pl)' (Hale 1883a)

b. {l, la}ASSERT.M

*oaha:ti**la***
o<a>ha:ti–**la** (stem: *oha:ti*)
<1SG.A>see–**ASSERT.M**
'I see' (Hale 1879)

*įksehóbo**l**t*
įkseh–ǫ́–bo–**l**–t
laugh–PROG–2PL–**ASSERT.M**–POT
'you (pl) will (be) laugh(ing)' (Hale 1878)

There is less variation in the assertive mode markers than some of the previously mentioned suffixes. The first example for the assertive suffix and the masculine assertive suffix in 37 shows each morph immediately adjacent to a verb stem (*–se* following *nątku:si*, 'to break off with the foot', and *–la* following *oha:ti*, 'to see' respectively). All other examples show both markers as further removed from the verb stems. Additionally, the morphs in bold in *nątku:si**se**l* ('he breaks

it off with the foot') and *įksehǫ́bo**l**t* ('you [pl] will [be] laugh[ing]') show that assertive markers in the language can also be followed by other suffixes in Tutelo verbal constructions. Finally, *nątku:si**sel*** shows the assertive marker *–se* followed by the masculine assertive marker *–l*. While this combination of suffixes appears often in the revitalization corpus, the exact nature of its meaning is undetermined at this time.

In my experience, the assertive and masculine assertive markers are two of the most utilized suffixes in common speech across the Tutelo language community at the time of writing. This is largely because they are attached to verbal constructions used in introductions. I suspect that there is interest in these suffixes because they allow for the expression of gender fluidity. Ending a verb in *–se* can indicate a female speaker, gentle speech, and/or someone who may identify as female or feminine. Likewise, a verb ending in *–la* can indicate a male speaker, highly assertive speech, and/or someone who identifies as male or masculine. As gender fluidity is very much a part of general public discourse at the time of writing, I have noticed that these suffixes have been a point of interest for many speaker/learners.

The desiderative marker in Tutelo expresses verbs as a wish or a desire. The pre-revitalization corpus contains little data on this suffix, and it is only attested as preceding the latter half of a circumfix in the language.

(38) **Desiderative mode in Tutelo**

{be, bi}$_{\text{DESID}}$

*kope**be**ni:se*
k–ope–**be**–ni:–se
NEG–go–DESIDE-NEG-ASSERT
'he does not wish to go' (Hale 1880a)

*kiwile:**bi**na*
ki–wi–le:–**bi**–na
NEG–1SG.P–come–DESID–NEG
‘I do not wish to come’ (Hale 1883a)

As with all attestations of the desiderative suffix in the corpus, these markers in 38 are followed by a variant of the second half of the negative circumfix, the next modal marker to be described. These data call for future research on the desiderative to be conducted across the Siouan language family to ascertain whether expressing desire can only be accomplished with the desiderative suffix in conjunction with negation of a verbal construction.

As its name states, the negative mode serves to negate any verbal construction to which it is affixed. It is the only documented circumfix in the language, and its morphs with examples are shown in 39.

(39) **Negative mode in Tutelo**

{k–na, ki–na, ki–ną, k–ni, k–ni:}NEG

k**ịkséh**na
k–ịkséh–**na**
NEG–laugh–**NEG**
‘he is not laughing’ (Hale1878)

ki**hu:**na
ki–hu:–**na**
NEG–come–**NEG**
‘he came not’ (Hale 1883a)

ki**gi:tohne:**nę
ki–gi:to–hne–:**nę**
NEG–belong–3PL–**NEG**
‘not theirs (it does not belong to them)’ (Hale 1878)

ki*kihninde:****ni****se***
ki–kihninde:–**ni**–se
NEG–hungry– **NEG**–ASSERT
'he is not hungry' (Hale 1879)

k*opebe****ni:****se***
k–ope–be–**ni:**–se
NEG–go–DESID–**NEG**–ASSERT
'he does not wish to go' (Hale 1880a)

In 39 and throughout the Tutelo pre-revitalization corpus, the first half of the negative mode circumfixes are always the first element of verbal constructions. The latter part of the circumfixes can be found in various locations: adjacent to the verb stem (as with *–na* following the verb *įkséh*, 'laugh'); at the end of a verbal construction but following another suffix (as with *–nạ* following the 3PL suffix *–hne:* in *kigi:tohne:nạ* 'not theirs [it does not belong to them]'); or between suffixes (as with *–ni:* being located between the desiderative and assertive suffixes, *–be* and *–se* respectively, in *kopebeni:se* 'he does not wish to go').

Unlike the negative mode, the hortative mode contains morphs that are only found adjacent to the end of verb stems. This hortative mode expresses humble request, and the morphs for it can be found with examples in 40.

(40) **Hortative mode in Tutelo**

{hi, hí, yę́}HORT

*owaklaxá****hi****ta*
o<wa>klaxá–**hi**–ta (stem: *oklaxá*)
<1SG.A>speak–**HORT**–POT
'(let's have me speak)' (Dorsey 1882)

*tilúši****hí***
ti-lúši-**hí**
2SG.P–take–**HORT**

‘take up’ (Dorsey 1882)

*olákpe**yę́***
olákpe–**yę́**
drink–**HORT**
‘drink’ (Dorsey 1882)

All the examples in 40 show the hortative morphs immediately following the end of the verb stems *owaklaxá*, *lúši*, and *olákpe* (‘speak’, ‘take up’, and ‘drink’ respectively). While the first two examples above have similar hortative suffixes (differing only by tone or length as represented by the acute accent), the morph in the final example is largely different in phonological shape, *–yę́* rather than *–hi* or *–hí*.[27] With such scant data it is hard to determine what triggers the differing shape, though future comparative research across the Siouan family may clarify whether the distinction is one of number (singular versus plural), gender, or another category.

The imperative mode is a stronger form of request than the hortative. It expresses commands, and the imperative morphs are listed with examples in 41.

(41) **Imperative mode in Tutelo**

{í, yí}IMPER

kátiı́
káti–**í**
cut–IMPER
‘(cut)’ (Dorsey 1882)

[27] The *–yę́* morph will not be included in future morph sets for §3 and §4, as this variant of the hortative does not meet the criteria for the study in those chapters.

*yílatkuša**yí***
yí–latkuša–**yí**
2SG.P–break–**IMPER**
'you break it' (Dorsey 1882)

The morphs in 41 are characteristic of all the attestations of the imperative suffix in the Tutelo pre-revitalization corpus. These markers are always the sole suffix located after verb stems.[28] While *–í* and *–yí* are marked suffixes for the imperative, I posit that this is only half of the range of imperatives in Tutelo. Whereas the marked suffixes above represent the imperative in plural commands, evidence also suggests that there is an unmarked imperative that conveys commands to singular recipients. This evidence will be discussed in §3.

Rather than making a demand with the hortative mode, the last mode covered here is the interrogative. The interrogative suffix attaches to verbs to be posed as questions. There is only one interrogative marker morph, and it is listed with examples in 42.

(42) **Interrogative mode in Tutelo**

{o}INTER

*yiklák**o***
yi–klák–**o**
2SG.P–tell–**INTER**
'did he tell you?' (Dorsey 1882)

*oyaklašáw**o***
o<ya>klašá–w–**o** (stem: *oklašá*)
<2SG.A>speak–REAL–**INTER**
'were you speaking together?' (Dorsey 1882)

[28] The *–í* morph will not be included in future morph sets for §3 and §4, as this variant of the imperative does not meet the criteria for the study in those chapters.

Though there is only one morph for the interrogative mode, there are two examples showing differing positions of the suffix relative to verb stems. The first example places the interrogative suffix immediately after the verb stem *klák*, 'tell'. The last example places the suffixes after the realis suffix *–w*. In all attestations of the interrogative suffix, the marker is located at the end of verbal constructions.

Additionally, there are causative irrealis morphemes that qualify as modal markers. The causative suffix *–hiye* is in a class by itself as it can attach to both verbs (as is the case with the stative verb 'blue' and its causative variant *aso:ti* and *asothiyé* respectively) and nouns (as in 'hole' and its causative 'to make a hole', *kohoč* and *kohočhiyé* respectively). It can also function as a word, a separate word meaning 'to cause'. The separate word *kišé* has been glossed as 'perhaps' would also classify as a marker of mood in the language. Since neither of these morphemes attach exclusively to verbs, they are not described here in this section. The limited data on *kišé* (one attestation in the corpus) is briefly addressed in the next chapter, however. For now, the focus shifts away from those morphemes that attach as suffixal elements on Tutelo verbs to the phonology of the verb endings where those affixes occur.

2.6 CONSONANT- AND VOWEL-FINAL VERB STEMS IN TUTELO

There are 223 verb stems in the Tutelo pre-revitalization corpus, and most of them end in vowels. Stems ending in consonants are much less frequent, numbering 13 in all.[29]

[29] There is arguably an additional consonant-final verb, *kapečaš* 'naughty', however its status as a lexical verb is dubious. *Kapečaš* was the name of a language consultant who suspected yet was uncertain that his name might be of Tutelo origin (Speck 121). While the meaning, 'naughty', is an adjective in English, if this were a correct translation it would be categorized as a stative verb in Tutelo.

(43) **Consonant-final verb stems in Tutelo**

Verb	Gloss
búš	round, globular
ɟtkús	straight
kiksu:x	vomit
lakaplék	sweep the floor
lublax	rip, tear
lu:čkép	twisted, wrung
lučkɟk	wrench
lu:pét	to open
masi:gora:k	iron
monotisnok	stay
nąko:kisek	stamp with the foot
ulučkɟ́x	cork up a bottle
walikaskɟ́x	round, circular

Verbs in 43 end in either plosives (stop consonants) or fricatives, sounds which the data indicate may not be conducive to suffixation. Indeed, there is only one instance of any of the verbs above being inflected by any kind of suffix.

(44) **Suffixation of a consonant-final Tutelo verb**

*kiksúx**da**se*
kiksúx–da–se
vomit–POT–ASSERT
'one vomits' (Hewitt 1888)

As the addition of the potential marker *–da* to the verb stem ‘vomit’ is the only occurrence of suffixation with all consonant-final verbs in the language, there is much that is currently unknown about the inflection of these verbs. Several of the verbs in 43 have cognates in the Siouan family, yet their cognates are vowel final (e.g. fricative-final *lublax* for ‘rip/tear’ in Tutelo compared to vowel-final *yübláze* for ‘tear/rip open/break open’ in Kanza and *lubláðe* for ‘tear by hand’ in Chiwere). A thorough study of the sound changes in the language family leading to the deletion of final vowels for some of the verbs in 43 may reveal more about what knowledge of them has been lost over time.

The remaining 210 verbs in Tutelo end in vowels. Of them, the majority have vowel endings that remain constant regardless of any affixes that may attach to their stems. I call these stems ending in unchanging vowels “non-ablauting verbs” in Tutelo. Among the verb stems in this category, ‘drink’ (*olakpé*) has the greatest variety of affixation in its attested forms. Despite any minor changes involving vowel length and tone, example 45 shows how the vowel at the end of the verb stem is always [e].

(45) **Inflection of non-ablauting Tutelo verb *olakpé*, ‘drink’**

Affixation	Interlinar Gloss	Adjacent Suffix
a. no affixes	*ola:kp**e:*** ola:kp**e:** drink ‘I drink [sic]’ ‘he drinks’ (Hale 1878)	Ø

Affixation	Interlinar Gloss		Adjacent Suffix
b. single suffix only	*olakp**é**wa*		–wa (realis)
	olakp**é**–wa		
	drink–REAL		
	‘(he drinks)’	(Dorsey 1882)	
	*olakp**é**ta*		–ta (potential)
	olakp**é**–ta		
	drink–POT		
	‘(he will drink)’	(Dorsey 1882)	
	*olákp**e**yę́*		–ę́ (hortative)
	olákp**e**–yę́		
	drink–HORT		
	‘drink’	(Dorsey 1882)	
	*ólakp**e**yúka*		–yúka (past/durative)
	ólakp**e**–yúka		
	drink–PST;DUR		
	‘he did drink’	(Dorsey 1882)	
c. multiple suffixes	*olákp**e**hléwa*		–hlé (3PL)
	olákp**e**–hlé–wa		
	drink–3PL–REAL		
	‘(they drink)’	(Dorsey 1882)	
d. infix and suffix	*oyalákp**e**bú*		–bú (2PL)
	o<ya>lákp**e**–bú	(stem: *olákpe*)	
	<2SG.A>drink–2PL		
	‘(you [pl] drink)’	(Dorsey 1882)	
e. infixes and suffixes	*ówalákp**e**óma*		–ó (progressive)
	ó<wa>lákp**e**–ó–ma	(stem: *ólákpe*)	
	<1SG.A>drink–PROG–REAL		
	‘I am drinking’	(Dorsey 1882)	

From a verbal construction with no suffix added to verb stems with added suffixes of aspect, mode, person, and number, the [e] at the end of *olakpé* is consistent. There are minor suprasegmental differences of tone and vowel length, but the core phoneme at the end of the verb stem is always [e].[30]

There are 39 vowel-final verbs in Tutelo that may experience much greater variation at the end of their stems as a result of the suffixes, words, or other environments that follow them. This process is called ablaut, and it will be covered in the next two chapters with pre-revitalization corpus data from 21 vowel-final verbs. These 21 verbs are also listed in Appendix B.

[30] See Table 1a. for further discussion on length and tone in Tutelo vowels.

3. SIMPLE ABLAUT PATTERNS IN TUTELO VERBS

This chapter identifies the pattern of ablaut in Tutelo in distinction from the non-ablauting verbs outlined in 2.6. It then draws a comparison between ablaut in Tutelo and English, highlighting that vowel location within words and syntactic versus morphological shifts as differentiating factors of the phenomenon within both languages. The chapter then shifts to past research on ablaut in Siouan languages and follows with highlighting the overall differences found between the past work on Tutelo and the observations made in this study. After presenting the criteria and high-level data to be studied in this analysis, the chapter finishes by presenting those ablaut triggers that prompt only one vowel variant at the end of ablauting verb stems. These triggers create the category I call simple Tutelo ablaut.

Vowels at the end of Tutelo verb stems do not always remain as consistent as the [e] in *olakpé* in 41 from the last chapter. In 46, *hinda:ha* 'run', shows how the vowel at the end of a Tutelo verb stem can be subject to change.

(46) **Suffixal inflection of Tutelo verb *hinda:ha*, 'run'**

Inflected Verb	Suffix	Gloss	Source
*hiwanda:h**a***	Ø	'I run'	(Hale 1878)
*hinda:h**i**sel*	–se (assertive)	'he runs'	(Hale 1878)
*hiyanda:h**a**pusek*	–pu (2PL)	'you (pl) run'	(Hale 1878)

The [a] at the end of the non-suffixed form *hinda:ha* remains the same when the verb stem is followed by the 2PL suffix *–pu*. It shifts, however, from [a] to [i] (a→i) when the verb stem is

followed by the assertive marker *–se*. Unlike *olakpé*, this ability for the stem-final vowel to shift renders the verb *hinda:ha* an ablauting verb.

Ablauting Tutelo verb stems can change depending on the suffix, environment, or lack thereof that follows them. This chapter and the next are devoted to observing the class of ablauting verbs, the vowel changes they experience, and the triggers that correlate with the stem-final vowels in verbal constructions. Ablaut is not a phenomenon that is exclusive to the Tutelo language. Indeed, it may prove useful for community members who were mostly born and raised in the United States to show how an analogous process happens in their first language, English.

The term ablaut is also utilized to name a phenomenon in Germanic and other Indo-European languages. This use of the term refers to vowel alternations are found word-medially as seen in the English[31] verb sing in 47.

(47) **Ablaut in English verb sing**

*s**i**ng→s**a**ng→s**u**ng*

Whereas in English, vowel change found in ablaut is associated with word-medial vowels, this is not necessarily the case in Tutelo verb-sterm alternations. The study that follows will refer to verbal roots and stems, and the latter is what I consider when looking at the location of vowel alternations. For the purposes of this document, roots refer to the most pared-down chunks of meaning at the core of verbs. These roots in some instances have meaning in daily use in the language with no further additions to the words necessary. This is the case with the verb *lu:ta*,

[31] English is primarily a Germanic language.

'eat', a verb that cannot be broken down into smaller morphemes (units of meaning). In such cases, the roots are also considered stems.

This study refers to stems as those verbs that are available for conjugation and daily use. Though *lu:ta* is both a root (in that it cannot be further broken down into meaningful component parts in Tutelo) and a stem (in that it can by itself carry meaning and be used as a verb without any additional changes), a root like *ste:ka* that conveys the notion 'good' does not appear by itself and unaltered anywhere in the corpus of the language. The root *ste:ka* only ever appears once it has added prefixes for the word 'heart', *yą:ti*,[32] and the morpheme (or word part) *o–* that means 'in'. The resulting word, *yąndoste:ka*, 'love (literally, to be good in the heart)', is found in common usage in the language and is the only use of *ste:ka* found in the entire Tutelo pre-revitalization corpus. An analogy in English can be found in the noun *cranberry*. While *berry* is a root in that it can be used to build other words like *blueberry* or *blackberry*, it is also a stem in that it can stand alone without a prefix and still have meaning. The same cannot be said for *cran–* however, which traditionally does not occur by itself or in combination with any other word or root in the English language (excluding marketing campaigns of the past few decades designed to sell mixtures of cranberry and other types of juice). As a result, the sentence 'I would like to eat a berry' makes sense in English whereas 'I would like to eat a cran' does not.

In distinction from vowels in word-medial positions undergoing alternations as in Germanic ablaut, I look to the vowels at the end of verb stems in Tutelo for potential

[32] The vowel length in this word reduces from [ą:] to [ą], and [t] changes to [d] in the final verb form, however the phonological processes involved in these changes are both understudied and not relevant to the research in this study.

alternations. An example of this is with [a] at the end of *lu:t**a***,[33] 'to eat', sometimes appearing as [i] or disappearing entirely (as in *walú:**t*** or 'eat something!' respectively) (Oliverio 1996:235). Or, in the case of *mąklu:t**i**ta*, 'we will eat', the final [a] of *lu:t**a*** sometimes appears as [i] in a word-medial position when followed by certain suffixes (here, the potential marker *–ta*) (Oliverio 1996:235). The position within words of the vowels that undergo alternation is not the only difference between English and Tutelo ablaut.

Vowel alternations in English ablaut are usually due to syntactic (or grammatical) changes occurring within the confines of a word. To the previous English example using the word sing we add the nominal (noun) form to show an additional vowel alternation: sing→sang→sung→song. Here the change of the vowel in sing is associated with the change of tense (present to past), aspect (the past participle sung) and constituent class (or part of speech, in this case the change from a verb to the noun song). No additional morphemes (or word parts/units of meaning) are added outside the confines of the word sing. In most cases with Tutelo, the vowel alternations are triggered by what comes after the verb stem. For example, with *lu:ti* and *lu:tana* ('to eat' and 'they eat' respectively), it is the addition of *–na*, 'they', that triggers the vowel change. Though there are differences between English and Tutelo ablaut (again, the location of the alternating vowel in the word or stem, as well as the presence of external triggers in Tutelo), I will still refer to the Tutelo pattern as ablaut in this study. In the past I have opted to refer to this process as stem-final vowel alternations, however what is gained

[33] Boldface is utilized again in this description of ablaut to emphasize vowel alternations. In the case of final vowel deletion, the preceding consonant will appear in bold.

in specificity with this name is overridden by its impracticality for pedagogy in the language community.[34]

3.1 PREVIOUS RESEARCH ON ABLAUT IN SIOUAN

Apart from Catawba, Rood examined the underlying (or, in his words, basic) vowels in ablauting verbs from all branches of the Siouan-Catawba language family (1983). In addition to the vowels [a] and [e] being present in all the languages of this study, he showed the presence of [i] in three distinct subgroupings of the language family as proof that all three vowels were present in the ancestral Proto-Siouan[35] language (Rood 1983: 27). Rankin showed that Quapaw (and by extension, the other languages of the Dhegiha subgrouping of the larger Siouan-Catawba language family) has an underlying /e/ vowel at the end of ablauting verbs. His analysis revealed that three enclitics he examined in Quapaw were historically preceded by an additional vowel, and that this historical (or diachronic) addition accounted for what appeared as irregularities in the language's ablaut pattern (Rankin 1995: 10). He also identified reduplication as a trigger for Quapaw ablaut. While reduplication also occurs in Tutelo (as a repetition of the heavy syllable in certain verbs to indicate plurality of the subject), it does not trigger ablaut in any of the language's pre-revitalization documentation.

Other work on the verbs that undergo ablaut in the language family (Albright 2002, Cumberland 2005, Greer 2016, Jones 1992) has identified a vowel change from a single

[34] The amount of time that could be spent teaching about all the linguistic nuances that come together for the phrase "stem-final vowel alternations" could be better utilized helping community members focus on lexemes or facets of Tutelo grammar.

[35] A protolanguage is a hypothetical language postulated as an ancestor to multiple languages that constitutes a family. As it is hypothetical there are no attested instances of Proto-Siouan or any other protolanguage actually being spoken. Still, Proto-Siouan is believed by most linguists working on Siouan languages to be the ancestor of Tutelo, Biloxi, Ofo, Lakota, and all the other languages in the family.

underlying vowel to a different surfacing one (resulting in a transition from either *a*→*e* or *e*→*a* depending on the language). Kirchner's work on Dakota (2009) and Rankin's grammar sketch of Ofo (2002) each identified two underlying vowels at the end of verbs that undergo ablaut (*a* and *ą* in Dakota; *e* and *i* in Ofo). In his grammar of Hidatsa, Park (2012) identified several vowels that undergo changes in ablauting verbs: long and short oral vowels changing to a different vowel of equivalent length; glottalized vowels changing to long vowels; and, even instances of long vowels changing to diphthongs. Similar to Hidatsa, research on ablaut in Crow found several possible vowel changes at the end of ablauting verbs.

Graczyk found that the Crow language not only had a version of *e*→*a* ablaut (in this case, lengthened forms of the vowels which he presented with double graphemes, *ee*→*aa*) as found in other languages in the family, but two additional types of ablaut as well, *ee*→*ii* and *ii*→*aa* (1996:10). While previous analysis of Tutelo ablaut has posited a single underlying vowel instantiating as three possible surface vowels at the end of ablauting verbs (e→a, e→e, and e→i) (Oliverio 1996:42), this study has bypassed the idea of underlying representation and has found even greater variation in attestations of Tutelo ablauting verbs.

3.2 COMPARISON: PREVIOUS RESEARCH VS CURRENT SUMMARY OF TUTELO ABLAUT

To date, Oliverio's dissertation is the only published work that has focused on vowel changes in Tutelo ablaut (1996). Like analyses on ablaut in other Siouan languages, Oliverio's analysis assumes underlying representations and surface forms. As previously mentioned, underlying representations are abstract mental notions of what sounds appear in a language. These abstractions may or may not correspond to surface forms, the sounds that are uttered when

producing words and phrases in speech. While approaching the analysis of Tutelo with underlying representations and surface forms has created elegant descriptions of the language that characterizes much of the work in Siouan linguistics, this approach has had an impact on both the completeness of her analysis of ablaut and the speaker/learner community's ability to interpret and operationalize her findings.

Oliverio posited that most of the morphemes subject to ablaut were verbs at some point, indicating that, in addition to verbal lexemes[36], many of the suffixes that trigger the alternations in stem-final vowels were also verbs earlier in the history of the language. These earlier verbs would have had the ablaut feature that remained even after becoming verbal suffixes (1996:36). Oliverio assessed that the verbs and suffixes with alternating final vowels in Tutelo's corpus number 37 in all. In her analysis, the underlying final vowel for all alternating stems and suffixes was /e/ (which she wrote at the end of verb stems as E both to show the underlying vowel and to indicate by its capitalization the ablaut feature). She claimed the presence or absence of one of a variety of suffixes would trigger ablaut, causing the verb stem's final vowel /E/ to surface as [a], [e], or [i]. A summary of the stem-final vowel variants Oliverio identified along with the suffixes and other environments that trigger them are found in 48.

[36] Lexemes are words that as units can take on different forms all having the same basic meaning. In the case of Tutelo verbs, an example would be *wilu:ta*, *lu:ta*, and *lu:tana*, 'I eat', 'to eat', and 'they eat' respectively all being forms (inflections) of eat, *lu:ta*.

(48) **Oliverio's ablaut stem-final vowels and post-stem triggers**

Vowel	Suffix/Environment	Gloss
[a]	–helÉ	3PL
	–í	imperative (command)
	#	end of clause/sentence, citation form, noun, verb
[e]	ki–nE	negative (not)
	–pi	desiderative (wish/want)
	–wa	realis (real occurrence)
	–yukÉ	past/durative (ongoing action)
[i]	–hí	hortative (gentle request)
	–la	assertive masculine (male declaration)
	–ó:khE	past
	–ǫ́:	progressive
	–se	assertive (general declaration)
	–tE	potential (includes equivalent of future in English)

(Oliverio 1996: 42)

The hashtag symbol (#) in 48 indicates two possibilities: either the verb is the end of a clause or a sentence, or it was elicited as a citation form (a word that a researcher elicited from a speaker as a translation by itself without any other words or context around it). Oliverio did not call yukÉ a past/durative marker, but rather she described it as a possible marker of the distant past. In my analysis, the suffix can function as a past and/or durative marker, a topic that will be discussed in §3.4. Beyond suffixes, Oliverio posited that a noun or an additional verb following an ablauting verb comprise environments that trigger a vowel change. The description above provides an elegant, well-structured template that attributes a total of three possible verb stem- and suffix-final variations to 16 environments. A closer examination of the language data, however, reveals more nuance and variation than in Oliverio's previous description.

Reviewing the pre-revitalization Tutelo corpus, I found five additional environments that have been unanalyzed in their ability to trigger vowel changes at the end of ablauting verb stems. These environments include suffixes to mark the second-person plural, the interrogative, and the negative imperative (a previously undescribed suffix), as well as an unmarked singular imperative and a marker for irrealis—a separate word (*kišé*). The example that follows compares the suffixes and other environments that I found next to Oliverio's analysis. Additionally, my findings contradict Oliverio's generalization that the suffixes and other environments she identified only trigger one vowel each; indeed, several environments trigger two or more possible vowel variants. Finally, based on the criteria for my analysis (see §3.3), some suffixes she found either are absent from or do not correlate with my analysis. Any differences between the analyses will be emphasized in boldface.

(49) **Side-by-side comparison of Oliverio's and Roberts' ablaut findings**

Vowel	Oliverio	Gloss	Roberts
[a]		**2PL**	**–bu**
		interrogative	**–o**
		hortative	**–hí**
		realis	**–wa**
		past/durative	**–yuké**
	–helÉ	3PL	–hana:
	–í	imperative	–yí
	#	end of clause	#
		end of sentence	
		citation form	
		noun, **(verb)**	
[e]		**2PL**	**–bu**
		3PL	**–hana:**
		potential	**–ta**
		citation form	**#**
		end of clause	

Vowel	Oliverio	Gloss	Roberts
[e] contd.		**end of sentence**	
	ki–nE	**negative**	
	–pi	**desiderative**	
	–wa	realis	
	–yukÉ	**past/durative**	
[i]		**negative imperative**	**–dáx**
		imperative	**–yí**
		citation form	**#**
		end of clause	
		end of sentence	
	–hí	hortative	–hí
	–la	assertive masculine	–la
	–ó:khE	past	–o:ka
	–ǫ́:	progressive	–ǫ:
	–se	assertive	–se
	–tE	potential	–ta
Ø		**2PL**	**–bu**
		3PL	**–hana:**
		irrealis (possibility)	**kišé**
		negative	**ki–na**
		interrogative	**–o**
		progressive	**–ǫ:**
		singular imperative	**–#**

In addition to the stem-final vowels Oliverio described in Tutelo ablaut, the data reveal another variant in which the stem-final vowel—and in some cases the consonant that precedes it—deletes from the word entirely. As shown in the first column of 49 and for the remainder of this study, the null symbol (Ø) represents that deletion. Further, the data reveal three additional suffixes that trigger vowel alternation: the 2nd person plural *–bu*, the negative imperative *–dáx*, and the interrogative *–o* (all in bold above). Another imperative environment also triggers ablaut,

one that is not marked by the addition of a suffix to the verb stem or any other word to the utterance. I call this a singular imperative, and it is marked by an en dash preceding a hashtag (both in bold) in the table above. Under the column of my findings, most of the suffixes and environments do not appear with Oliverio's orthographic conventions; rather, they are listed as the most frequent trigger variant in the data. As such, Oliverio's underlying representations /–helÉ/, /ki–nE/, and /–ó:k^{h}E/ appear in this study as *–hana:*, *ki–na*, and *–o:ka* respectively. For the remainder of the study, verb stems and suffixes will be presented in the modified morph sets listed in §3.3.

Whereas Oliverio found that the negative, desiderative, and past/durative markers all correlate with /e/ vowel endings in the ablaut schema she described, these markers did not correlate as such in my findings. Further, the realis suffix was associated with different vowels in both descriptions, and seven other environments[37] that Oliverio associated with one stem-final vowel variant were found correlating to two or more possible vowels in my analysis.

An additional environment, the irrealis *kišé*, 'perhaps', has been found to trigger the deletion of the final stem vowel in ablauting verbs. While the environments listed as "noun" and "verb" are mentioned in both 48 and 49, they are placed in parentheses in the latter. The parentheses acknowledge these combinations of vowels and environments in the language's pre-revitalization documentation; however, the data are not sufficient to be fully included in this study. The next section details the methods and criteria that allow for data to be included in this analysis of ablaut.

[37] These include the end of sentence, the end of clause, and citation form as well as suffixes marking the hortative and imperative modes, the potential aspect, and the third-person plural pronoun.

3.3 METHODS AND DATA

The data in the analysis that follows fall into two categories: verb stems and post-stem triggers. A survey of the pre-revitalization corpus was conducted to determine and count the collocation of ablauting verbs and post-verb stem environments. Ablauting verb stems included in the data presented in this study have at least two attested forms showing differing final vowels from among the variants [a, i, e] and vowel deletion Ø. According to this criterion, 21 of the total 223 Tutelo verb stems have attested forms showing alternating final vowels. For the verb stems selected, suprasegmental alternations (namely, vowel length and tone) are beyond the scope of this study.

Vowels in the data below will be listed with the acute accent as it was originally documented. Verb stems and suffixes in the data and narrative of this study appear as morph sets: again, a presentation of all variants in curly brackets followed by the gloss in subscript and small capital letters (see §1.4). In this case, 'take' as a morph set would be {lúši, loša, lóša}$_{\text{TAKE}}$. The morph sets in the remainder of this dissertation are further delineated by their original sources, i.e. by the first two letters of researcher's last name (again Dorsey, Frachtenberg, Hale, Hewitt, and Sapir) appearing in subscript after the morph subset they documented in additional curly brackets. The modified morph set of 'take' would show that all the data on the verb was documented by Dorsey as follows: {{lúši, loša, lóša}$_{\text{Do}}$}$_{\text{TAKE}}$. This additional documentation measure is meant to account in part for the perception of different researchers being reflected as transcription variations in the data. It also is meant to clarify the sources within each data set, a matter of importance as the language community has had varying takes on which historical source should be given primacy.

The 21 verb stems in this study are listed as morph sets in 50. Ellipses (…) are used below for those stems that take infixes so as not draw attention away from the shape of the stem variants with pronominal inflection (i.e. pronouns inserted in the middle of the stems). As an example, the first-person singular actor pronoun *wa–* would be removed from *owáklaxá* 'I speak', and replaced with an en dash to yield *o…klaxá*, an easier form to compare with a similar stem *oklá∫a* 'he speaks', also presented with ellipses for uniformity, *o…klá∫a*. The stems are listed in the order by which they are later introduced into the ablaut analysis that follows in the remainder of this chapter and §4. Boldface is used within the verb stem morph sets to indicate the most commonly occurring variant that appears when there is no suffix, environment, or apparent ablaut process taking place.[38]

(50) **Ablauting verb stems**

Stems

{{o…klaša, o…kláša, o…klašá, o…klášá, o…klaxá}$_{Do}$, {o…klák, o…kla:k, o…klaka, o…kláka, **o…kla:ka**}$_{Ha}$}SPEAK, CALL, TELL

{{**latkúša**, latkuši, latkúši, látkuši}$_{Do}$}BREAK, CUT BY HAND

{{klák}$_{Do}$, {gela:gi, **gela:ki**, kla:ka }$_{Ha}$}SPEAK, TELL, CALL

{{lút}$_{Fr}$, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}$_{Ha}$}EAT

{{o…hate, o…hati, o…xat, o…xáta, o…xate, o…xáte, o…xaté, o…xati, o…xáti}$_{Do}$, {o…hat, o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:, o…haté, o…hate:, o…hati, o…ha:ti, }$_{Ha}$}SEE

{{**nątkúša**, nątkúši}$_{Do}$, {nątku:si}$_{Ha}$}BREAK WITH THE FOOT

{{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}$_{Ha}$}CALL

{{lákatkúš}$_{Do}$, {lakatku:si}$_{Ha}$}BREAK, CUT BY FORCE, STRIKING

[38] Some verbs either have only ablauting data or equal instances of different, non-abluating morphs. In this case, no morphs within the set will be in boldface.

Stems

{{lakatskih, lakatski:hi}Ha}KILL (PLURAL OBJECT)

{{yądo…stag, yądo…stegi, yądo…stegí, yądo…stegi, yądo…steka, **yądo…ste:ka**,yądo…ste:ki, yądo…sték, yądo…stéka}Ha}LOVE

{{hi…ndaha, **hi…nda:ha**, hi…ndahi:}Ha}RUN

{{į…kšéha, į…kšé}Do, {**į…kse:ha**, į…kseha, į…kse, į: …kʃe:, ę…kséh, į…kséh, į…ksehe, į…kse:he}Ha}LAUGH

{{naxló:t, **naxlóta**}Do}BLISTERED, CHAFED

{{**loxkáha**, loxkáhi}Do}TEAR

{{lúši, loša, lóša}Do}TAKE

{{kilé:}Fr,{kle:}Ha, {gíle, gle}He, {gilí:}Sa}GO BACK, GO HOME, COME BACK, COME HOME

{{ną́, **ną́t**, ną́ta, ną́te ną́ti, nątí}Do}SWALLOW

{{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP

{{**maha…ną́ka**, maha…ną́ka, maha…ną́k}Ha}SIT, SIT DOWN, REMAIN

{{ha…le, **xa…la** }Ha}GO THERE

{{latski:he, lastski:ha}Ha}KILL BY HAND

The verb stems in 50 show a great amount of variation, as all the possible ablauting vowel alternants are presented along with any consonantal variation also present in the pre-revitalization corpus. While this type of presentation can at times make for a copious visual, it provides future community researchers with data transparency and lessens the time navigating between primary sources.

The suffixes and environments that trigger final-vowel alternation in the preceding verbs number 18 in all. These triggers are listed in 51 and are shown as morph sets when applicable. The morph sets below are subcategorized by numbered classes in the first column according to the types of final-vowel alternations they trigger in ablauting stems, the subject of analysis in §3.4. The morphs of the negative marker circumfix are presented with an en dash between their prefixal and suffixal segments (e.g. *ki–na*) to show that a verb will always be located in between.

(51) **Post-stem ablaut-triggering morphemes**

Class	Ablaut triggers	Morphosyntactic function
1	{{yu, yúka, yuké, yux}$_{Do}$}$_{PST;DUR}$	past/durative
1	noun	
2	{{ok, oka, o:ka, o:kha, oke, oké}$_{Ha}$, { óka, oke, óke}$_{Do}$}$_{PST}$	past tense
2	{{dáx}$_{Do}$}$_{NEG.IMP}$	negative imperative
2	{{la}$_{Do}$, {l, la}$_{Ha}$}$_{ASSERT.M}$	masculine assertive
2	{{se}$_{Ha}$, {se}$_{He}$}$_{ASSERT}$	assertive
3	{{–#}$_{Do}$, {–#}$_{Ha}$}$_{SG.IMP}$	singular imperative
3	{{k–na, ki–na, ki–ną, k–ni, k–ni:}$_{Ha}$}$_{NEG}$	negative[39]
3	{{kišé}$_{Do}$}$_{IRR}$	irrealis
3	{{o}$_{Do}$, {o}$_{Ha}$}$_{INTER}$	interrogative
4	{{hi, hí}$_{Do}$}$_{HORT}$	hortative
4	{{yí}$_{Do}$}$_{IMPER}$	imperative
5	{{ta}$_{Do}$, {da}$_{Fr}$, {t, ta, té}$_{Ha}$, {da}$_{He}$, {da}$_{Sa}$}$_{POT}$	potential
6	{{o, o:, ǫ:}$_{Ha}$, {ó, ǫ́}$_{Do}$}$_{PROG}$	progressive
7	{{bu}$_{Do}$, {bo, bu, bu:, p, po, pu, pu:}$_{Ha}$}$_{2PL}$	2nd person plural
7	{{hla, hlé, hné}$_{Do}$, {hana:, hla, hela, le, le:, na, ne, ne:, né}$_{Ha}$}$_{3PL}$	3rd person plural
7	{{ma, w, wa, wá}$_{Do}$, {a, ma, wa}$_{Ha}$, {wa}$_{He}$}$_{REAL}$	realis
8	{#}	citation form, end of sentence

[39] It is the *–na* portion of this circumfix that is of interest in triggering ablaut.

Some morph sets above reveal that certain suffixes can show as much variation as many of the ablauting verbs in 50. Again, I chose to use these morph sets opting for transparency over a less cumbersome form of presentation (namely, using the most frequently occurring morph to represent an entire set of alternants).

3.4 ANALYSIS

The observations that follow are organized according to the ablaut triggers and the stem-final vowel alternants that precede them. The data show that the distribution of final vowel variants does not appear to be phonologically predictable (i.e. the vowels that appear at the ends of the stems above are not able to be systematically predicted based on any of the other sounds found in the stems alone). Rather, they are primarily dependent on the triggers, the morphemes and environments in 51, that come after the stems and select from the possible vowel alternants [a, e, i][40] and deletion Ø. These triggers pattern into eight classes labeled by number, each one reflecting the vowel or range of vowels each trigger may select at the end of ablauting verbs. These classes are provided as suggested groupings to facilitate the pedagogy of Tutelo ablaut.

The first part of this analysis that comprises the remainder of this chapter focuses on those trigger classes (1-3) that select only one final vowel in preceding stems. I provide examples of all verb/vowel/trigger combinations found in the pre-revitalization data. In some cases, I provide new analysis about the triggers themselves.

[40] For reasons previously mentioned, the variants of these vowels reflecting differences in length and tone are not listed here.

CLASS 1 TRIGGERS ([A] VOWEL)

The first class of ablaut triggers comprises the past and durative marker {{yu, yúka, yuké, yux}$_{Do}$}$_{PST;DUR}$, as well as a following noun. While the suffix has been previously described as a marker of the distant past, this current description as a past and/or durative marker is outlined §2.5. In this ablaut data, {{yu, yúka, yuké, yux}$_{Do}$}$_{PST;DUR}$ marks both the past and durative simultaneously. These triggers select the single stem-final vowel [a], as seen in 52 with 'cut' and 'speak'. All ablaut class example listings that follow in this and the next chapter will have the morph set of the verb stem displayed to the right of the four-line gloss. This is done to remind the reader of the stem-final vowel options that are found for each ablauting verb in the pre-revitalization data. In the second line of the examples below (and all those that follow in the ablaut analysis), the stem-final vowel and the trigger are in bold, while the remainder of the phrase is shaded for emphasis. The first example was not fully glossed by Dorsey, however I have provided the glosses in parentheses according to my most current understanding of the language. The notation sic (in brackets) indicates that I believe the gloss represents an erroneous translation by the researcher who originally documented the data. In these cases, I will also provide what I believe is a correct translation to the right of the original.

(52) **Class 1 examples**

a. {{yu, yúka, yuké, yux}$_{Do}$}$_{PST;DUR}$

oklášáyukéwa	{{o…klaša, o…kláša, o…klašá, o…kláš́á,
oklášá**–yuké**–wa	o…klaxá}$_{Do}$, {o…klák, o…kla:k, o…klaka,
speak–PST;DUR–REAL	o…kláka, **o…kla:ka**}$_{Ha}$}$_{SPEAK, CALL, TELL}$
'they were speaking together [sic]'	'he was speaking' (Dorsey 1882)[41]

[41] The morphology suggests the gloss should be 'he was speaking', however there may be some yet undiscovered constraint around the third-person plural suffix, *hana:*, in combination with the morphemes in this construction.

b. Pre-noun {{**latkúša**, latkuši, latkúši, látkuši}$_{Do}$}BREAK, CUT BY HAND

míma mašę́ya íyaǫ́wa wílatkúša waxú:k/minak
míma mašę́–ya í<ya>ǫ́–wa (stem: *íǫ́*) wí–latkúš**a waxú:k/minak**
1DISJ knife–EMPH <2SG.A>use–REAL 1SG.P–cut string/paper
'(I cut string/paper with a knife)' (Dorsey 1882)

As is the case throughout the Tutelo documentation, the data for the past durative marker and noun environment are limited (in this case, to *oklášá* and *latkúša*). Nonetheless, both triggers select the vowel [a] at the end of both verb stems. Another ablauting stem falls outside of the criteria established for this study, however it warrants examination for the first class of triggers.

ADDITIONAL CLASS 1 DATA

The environment of a potentially ablauting verb preceding another verb merits attention here. The one verb stem that precedes another verb in the pre-revitalization data, *a–nąga* ('sit on'), has no documented vowel variant other than [a] at the end. Not having a second vowel variant as such, it does not meet the criterion for full inclusion in this study. The verb stem's root *nąga* however, is shared by the ablauting stem {{**maha…nąka**, maha…nąka, maha…nąk}$_{Ha}$}SIT, SIT DOWN, REMAIN, which itself does meet this study's criterion of two or more stem-final vowel variants. By association, the following attestation suggests that a verb following an ablauting verb triggers the vowel [a] at the end of the stem.

(53) **Post-stem "verb" environment**

miyę́ya áwanąga wilatkuša
miyę́–ya á<wa>nąg**a** (stem: *ánąga*) **wi–latkuša**
tree–EMPH <1SG.A>sit.on 1SG.P–break
'I sit on tree and break' (Dorsey 1882)

In (53), *a…nąga* is followed by the verb ‘break’ inflected for the first-person singular, *wilatkuša*. The one attestation above is not robust proof of an ablaut trigger, but given the amount of pre-revitalization Tutelo data available it may be worth the language community’s consideration.

One might think that this ablaut variant—[a]—in a pre-noun environment is not very important for pedagogy in the language community due to Tutelo being an SOV language. As shown in §1.5 however, this order can change to SVO, potentially placing any transitive ablauting verbs before a noun and rendering the understanding of this ablauting vowel variant much more valuable in daily Tutelo speech. The pre-verb environment is not as applicable to instruction being delivered in the language community at the current time. While learner speakers throughout the language community are learning to use the basic verbs required to start and finish daily conversations, these verbs are rarely in phrases or sentences where they directly precede other verbs. As more people are requesting and are encouraged to engage in basic translations, the need for serial verb constructions (and therefore an increased need for placing an [a] at the end of ablauting verbs preceding other verbs) will become more necessary. Though its use for the past and durative marker may not be so useful at the current level of community engagement with the language across the Yesáh tribes, for the pre-noun environment alone it will soon be necessary to teach this particular ablaut pattern.

CLASS 2 TRIGGERS ([I] VOWEL)

The second class of alternation triggers comprises the past marker {{ok, oka, o:ka, o:kha, oke, oké}$_{Ha}$, {óka, oke, óke}$_{Do}$}$_{PST}$, the negative imperative suffix {{dáx}$_{Do}$}$_{NEG.IMP}$, the assertive

marker {{se}$_{Ha}$, {se}$_{He}$}$_{ASSERT}$, and the masculine assertive marker {{la}$_{Do}$, {l, la}$_{Ha}$}$_{ASSERT.M}$.[42] A negative imperative suffix has not been previously described in Tutelo. Further, there is only one datum in the language to support its existence, leaving a gap in knowledge as to whether this is a bona fide suffix, a product of language contact, or even a possible indication of one individual's idiolect.[43] In a language community bereft of extant data, however, even one datum warrants inclusion in this study. The suffixes in this class trigger the single stem-final variant [i], and they attach to nine verbs in the pre-revitalization data: two words for 'call', 'break by hand', 'break with the foot', 'eat', 'kill (plural object', 'love', 'run', and 'see'. Example (54) lists each of the attested verb/trigger combinations:

(54) **Class 2 examples**

a. {{ok, oka, o:ka, o:k^{h}a, oke, oké}$_{Ha}$, { óka, oke, óke }^{Do}}$_{PST}$ trigger

wagela:kiok čʰǫk, kihu:na {{klák}$_{Do}$, {gela:gi, **gela:ki**, kla:ka }$_{Ha}$}$_{SPEAK, TELL, CALL}$
wa–gela:k**i–ok** čʰǫk kihu:na
1$_{SG.A}$–call–$_{PST}$ dog NEG–come–$_{NEG}$
'I called the dog, he came not' (Hale 1883a)

setǫle lutio:ka {{lút}$_{Fr}$, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}$_{Ha}$}$_{EAT}$
setǫle luti**–o:ka**
yesterday eat–$_{PST}$
'he has eaten (yesterday)' (Hale 1879)

setǫle lutio:kʰa {{lút}$_{Fr}$, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}$_{Ha}$}$_{EAT}$
setǫle luti**–o:kʰa**
yesterday eat–$_{PST}$
'he has eaten (yesterday)' (Hale 1879)

[42] Apart from the negative imperative marker *–dáx*, these triggers were described in §2.5. Whereas morphemes described in §2 have been established in previous description of the Tutelo language, the negative imperative is first described here as its discovery is new like the analysis of data in §3 and §4.
[43] Moreover, it is not clear at this juncture whether *–dáx* is a single suffix or the future marker *–dá* combined with [x], a phoneme that appears at the end of some verbs and numerals in data not otherwise described in this dissertation or previous research on Tutelo.

maohatioka {{o…hate, o…hati, o…xat, o…xáta, o…xate,
ma–ohat**i–oka** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
1PL.A–see–PST o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'we saw it' (Hale 1883) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

oyahatio:ka {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<ya>hat**i–o:ka** (stem: ohati) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<2SG.A>see–PST o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'you saw it' (Hale 1878) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

owaxatióka {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<wa>xat**i–óka** (stem: oxati) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<1SG.A>see–PST o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'(I saw it)' (Dorsey 1882) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

oxatiokéwa {{o…hate, o…hati, o…xat, o…xáta, o…xate,
oxat**i–oké**–wa o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
see–PST–REAL o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'did see some time ago' (Dorsey 1882) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

oxátiókehléwa {{o…hate, o…hati, o…xat, o…xáta, o…xate,
oxat**i–óke**–hlé–wa o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
see–PST–3PL–REAL o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'(they saw it)' (Dorsey 1882) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

b. {{dáx}Do}NEG.IMP trigger

ehákya iyaǫ́tha ilatkúšidáx {{**latkúša**, latkuši, latkúši, látkuši}Do}BREAK, CUT BY HAND
e–hák–ya i<ya>ǫ́–tha (stem: *íǫ́*) i–latkúš**i–dáx**
ANIM.POSS–hand–EMPH <2SG.A>use–? 2SG.P–break.by.hand–NEG.IMP
'Don't break it with your hand' (Dorsey 1882)

c. {{se}Ha, {se}He}ASSERT trigger

nątku:sisel {{**nątkúša**, nątkúši}Do, {nątku:si}Ha}BREAK WITH THE FOOT
nątku:s**i–se**–l
break.with.the.foot–ASSERT–ASSERT.M
'he breaks it off with the foot' (Hale 1883a)

įgikohi:se {{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}Ha}CALL
į–gikoh**i:**–**se**
2SG.DAT–call–ASSERT
'he calls to thee' (Hale 1883a)

lakatku:sisel {{lákatkúš}Do, {lakatku:si}Ha}BREAK, CUT BY FORCE, STRIKING
lakatku:s**i–se**–l
cut.by.force–ASSERT–ASSERT.M
'he cuts it off with an axe' (Hale 1883a)

lakatski:hisel {{lakatskih, lakatski:hi}Ha}KILL (PLURAL OBJECT)
lakatski:h**i–se**–l
kill–ASSERT–ASSERT.M
'he kills them' (Hale 1879)

waiyądostegíse {{yądo…stag, yądo…stegi, yądo…stegí,
wai–yądosteg**í–se** yądo…stegi, yądo…steka, **yądo…ste:ka**,
1PL.P–love–ASSERT yądo…ste:ki, yądo…sték, yądo…stéka}Ha}LOVE
'he loves us' (Hale 1878)

hiyandáhise {{hi…ndaha, **hi…nda:ha**, hi…ndahi:}Ha}RUN
hi<ya>ndáh**i–se** (stem: *hindáhi*)
<2SG.A>run–ASSERT
'you run' (Hale 1878)

ohatise {{o…hate, o…hati, o…xat, o…xáta, o…xate,
ohat**i–se** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
see–ASSERT o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'he sees' (Hale 1880a) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

d. {{la}Do}ASSERT.M trigger

wílatkúšila {{**latkúša**, latkuši, latkúši, látkuši}Do}BREAK, CUT BY HAND
wí–latkúš**i–la**
1SG.P–break.by.hand–ASSERT.M
'I break (by hand)' (Dorsey 1882)

oahatila {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<a>ha:t**i–la** (stem: *oha:ti*) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<1SG.A>see–ASSERT.M o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'I see' (Hale 1879) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

That this class of suffixes triggers only one vowel variant, [i], could be considered beneficial for the current stage of community language usage. The two assertive markers in this class of triggers, {{se}$_{Ha}$, {se}$_{He}$}$_{ASSERT}$ and {{la}$_{Do}$, {l, la}$_{Ha}$}$_{ASSERT.M}$ (assertive and assertive masculine respectively), are among the three most currently utilized suffixes in daily speech.[44] Community members often use these suffixes to introduce themselves (e.g. my use of *–la* to indicate I am a male speaker when saying *Corey mįgiko:hane:**la***, 'they call me Corey [my name is Corey]'). While the community has little experience utilizing the past tense comfortably in Tutelo, questions about how to incorporate the past into translations abound. Being able to teach this same vowel variant [i] at the end of ablauting stems before the past tense marker {{ok, oka, o:ka, o:kha, oke, oké}$_{Ha}$, {óka, oke, óke}$_{Do}$}$_{PST}$ marks a natural progression from some of the most commonly used suffixes (the assertive markers) to one of the most requested (the past).

CLASS 3 TRIGGERS (Ø VOWEL DELETION)

The third class of triggers comprises the unmarked singular imperative, the negative circumfix {{k–na, ki–na, ki–ną, k–ni, k–ni:}$_{Ha}$}$_{NEG}$, the irrealis {{kišé}$_{Do}$}$_{IRR}$, and the interrogative marker {{o}$_{Do}$, {o}$_{Ha}$}$_{INTER}$. The unmarked singular imperative has not previously been described in Tutelo. Rather, the imperative has been described by Hale as "[…] a sharp accent on the final syllable of the verb," (1883a) and by Oliverio as an addition of the suffix *–í* to the verb (1996:118). Hale's description does not account for vowel deletion in ablauting verb

[44] The other most common suffix in current community usage is the realis marker *–wa*. This is involved with a more complicated ablaut pattern that will be covered in §4.2.

stems, and this ablaut study finds the suffix Oliverio described more reflective of imperatives addressed to a plural party rather than to an individual.

Tutelo having distinct singular and plural imperative forms has an analogue in the sister language Hidatsa. Indrek Park described two forms of the Hidatsa imperative, the singular addressee being a null variant that, among other patterns, triggers the deletion of a final short vowel after single consonants other than [h]. He identified *–ara* as the Hidatsa imperative to plural addressees.

(55) **Hidatsa imperatives**

Stem	Gloss	Singular Imperative	Plural Imperative
náhdabi	(dog) attack someone	*náhdab!*	*náhdabaara!*
girusúùgi	wash something	*girusúùg!*	*girusúùgaara!*
cixí	jump	*cíx!*	*cixáàra!*

Similar to the Hidatsa singular imperative above, Tutelo suffixes in Class 3 trigger the deletion of the final vowel in ablauting verb stems, and they attach to the verbs ‘cut by force’, ‘blister’, ‘eat’, ‘kill (plural object)’, ‘laugh’, and ‘love’ in the Tutelo data. In the attested verb/trigger combinations in 56, the final consonant of the ablauting stem will be in bold to indicate the deleted vowel. Only the latter part of the negative circumfix will be in bold for emphasis:

(56) **Class 3 examples**

a. {{–#}$_{Do}$, {–#}$_{Ha}$}$_{SG.IMP}$ trigger

yi:ma lákatkúš {{lákatkúš}$_{Do}$, {lakatku:si}$_{Ha}$}$_{BREAK, CUT BY FORCE, STRIKING}$
yi:ma lákatkú**š–#**
2$_{SG.DISJ}$ cut.by.force–$_{SG.IMPER}$
'(cut it!)'[45] (Dorsey 1882)

wa:lút maksapá:
wa:–lú**t–#** maksapá:
$_{ABS}$–eat–$_{SG.IMPER}$ bread
'eat (some) bread!' (Frachtenberg 1913)

b. {{k–na, ki–na, ki–ną, k–ni, k–ni:}$_{Ha}$}$_{NEG}$ trigger

kįkséhna {{įšéha, įšké}$_{Do}$, {**įše:ha**, įseha,
k–į–ksé**h–na** įse, į: ʃe:, ękséh, įséh, įsehe,
$_{NEG}$–$_{STEM}$–laugh–$_{NEG}$ įse:he}$_{Ha}$}$_{LAUGH}$
'he is not laughing' (Hale 1878)

c. {{kišé}$_{Do}$}$_{IRR}$ trigger

nahamp minaxló:t kišé {{naxló:t, **naxlóta**}$_{Do}$}$_{BLISTERED, CHAFED}$
nahamp mi–naxló:**t** **kišé**
tomorrow 1$_{SG.P}$–blister $_{IRR}$
'(tomorrow) I blister perhaps' (Dorsey 1882)

d. {{o}$_{Do}$, {o}$_{Ha}$}$_{INTER}$ trigger

yiklákо {{klák}$_{Do}$, {gela:gi, **gela:ki**, kla:ka }$_{Ha}$}$_{SPEAK, TELL, CALL}$
yi–klá**k–o**
2$_{SG.P}$–$_{TER}$
'did he tell you?' (Dorsey 1882)

Whether in ablauting or non-ablauting verbs, negation is a very important process in the use of the Tutelo language. As for the remaining triggers in Class 3, many parents have requested

[45] This gloss is entirely in parentheses because occasionally documenters would note the grammatical form without giving a direct translation. In this case, Dorsey only listed the translation as 'imperative', however the disjunctive pronoun that accompanies the verb provides evidence for the singular imperative directly addressing an individual in the second person.

translations for household use with their children that involve giving commands or asking questions. Inquiry and commands have formed the core of many dialogues that parents have taught their children in Tutelo in recent years, and it is helpful for the parents to know that the vowels delete at the end of such useful ablauting verbs as ‘eat’ and ‘speak’ when engaging in conversation in the home (while simultaneously transmitting the use of the language across generations).

3.5 Discussion

I refer to simple ablaut in Tutelo as a pattern found in an idiosyncratic class of the language’s vowel-final verb stems. Rather than ending in a verb that remains consistent in all environments, these verbs can appear with one of three possible endings, the vowel [a], [i], or a vowel deletion that I use the symbol Ø to represent. While it will be key for the language community to commit the idiosyncratic class of verbs to memory in the learning/acquisition of Tutelo, I emphasize the triggers (suffixes and other environments) that cause the verbs to select only one of the possible endings above. While three of these triggers have less potential for use in the community at this time (namely, the past durative, the negative imperative, and the irrealis suffixes), the remaining markers are either already appearing frequently in the utterances of speaker learners (the assertive and interrogative suffixes) or are highly sought after in translation (the past tense suffix). In the case of the latter (and frankly all other Tutelo data in my work), there is a range of subtle variations found among the morphs for the past tense, {{ok, oka, o:ka, o:k^{h}a, oke, oké}$_{\text{Ha}}$, {óka, oke, óke }$_{\text{Do}}$}$_{\text{PST}}$. It is as important to my pedagogical practices for Tutelo language community members to see and engage with the amount of morph variation as it

is for them to commit the ablaut patterns to memory. Ideally, engaging with such variation prepares them to better understand, interpret, and operationalize the Tutelo data available not only in ablaut but across the entire grammar of the language.

The next chapter describes the remaining five classes of ablaut triggers. These triggers allow for more than one vowel variant at the end of ablauting verb stems, presenting an additional burden of memorization for learner speakers and greater nuance and challenge for the Tutelo language teacher.

4. COMPLEX ABLAUT PATTERNS IN TUTELO

After reviewing the methods of the study on ablaut, this chapter presents the data pertaining to more complex ablaut patterns in the Tutelo language. Here, complex ablaut is defined as those suffixes and environments that trigger ablauting verbs to present with two or more possible vowels at the end of the stem. The chapter goes on to present five additional categories of such suffixes and environments (trigger classes 4 through 8) with examples for each. Before final discussion on abluat, the chapter draws to a close by presenting verb stems that do not meet the criteria for this study yet do share similar roots and/or phonological shapes with ablauting verbs.

4.1 METHODS AND DATA

The data in this chapter and the methods used to collect them are no different from the those in §3.3. For an accounting of this chapter's ablauting verbs, the suffixes and environments that trigger them, as well as the criteria for their selection, please refer to §3.3. The only difference in the verbs presented for complex versus simple ablaut patterns is that data for {{latski:he, lastski:ha}$_{Ha}$}$_{\text{KILL BY HAND}}$ were not found in collocation with any of the suffixes or environments presented trigger classes 1-3. This verb will be included in the analysis of trigger class 8.

4.2 Analysis

For the remaining trigger classes (4-8), I observe the triggers that allow for more than one possible vowel variant at the end of ablauting verb stems. I provide examples of all verb/vowel/trigger combinations found in the pre-revitalization data. When a particular trigger selects more than one vowel variant, I analyze what phonological factors may contribute to each selection. Class 4 is the first of five classes that trigger two or more possible vowels in the ablauting verb stems that precede them.

Class 4 triggers (vowels [a, ɪ])

The fourth class of Tutelo ablaut triggers comprises the imperative marker {{yí}$_{Do}$}$_{IMPER}$ and the hortative mode marker {{hi, hí}$_{Do}$}$_{HORT}$. As previously mentioned, Oliverio described the imperative as being marked by the suffix *–í* (a variant of *–í* not appearing in any of the abluating verb data), however she did not specify whether the addressee of verbs with this suffix was singular or plural. Most of the pre-revitalization data indicate this suffix has been utilized specifically for plural addressees, yet there are a few data that do not specify the number of people receiving the imperative. An example of each is provided below.

(57) **Plural and indistinguishable addressees in the Tutelo imperative *–yí***

yįdúbayi yílatkúšayí {{**latkúša**, latkuši, latkúši, látkuši}$_{Do}$}$_{BREAK, CUT BY HAND}$
yį–dúba–yi yí–latkúša–yí
2SG.DAT–four–INDEF 2SG.P–break–IMP
'you four you break it' (Dorsey 1882)

miyę́ katií
miyę́ kati–í
wood cut.by.striking–IMP
'(cut wood)' (Hale 1878)

While the gloss ‘you four’ from the first example in 57 indicates plural address, the gloss in the second example is only lists the word ‘imperative’, leaving the people reading Dorsey’s documentation with the task of assigning a gloss with singular or plural addressees (1882).

The suffixes in Class 4 trigger either [a] or [i] at the end of ablauting verb stems, and they attach to the Tutelo verbs for ‘break’, ‘speak’, ‘take’, and ‘tear’ in the data. The examples in 58 show all combinations of the verbs, vowel variants, and triggers in this class.

(58) **Class 4 examples**

a. {{yí}Do}IMPER trigger

yįdúbayi yílatkúšayí {{**latkúša**, latkuši, latkúši, látkuši}Do}BREAK, CUT BY HAND
yį–dúba–yi yí–latkúš**a–yí**
2SG.DAT–four–INDEF 2SG.P–break–IMP
‘you four you break it’ (Dorsey 1882)

yíloxkáhiyí {{**loxkáha**, loxkáhi}Do}TEAR
yí–loxkáh**i–yí**
2SG.P–tear–IMP
‘(you [plural]) tear it)’ (Dorsey 1882)

b. {{hi, hí}Do}HORT trigger

owaklaxáhita {{o…klaša, o…kláša, o…klašá, o…klášá,
o<wa>klax**á–hi**–ta (stem: *oklaxá*) o…klaxá}Do, {o…klák, o…kla:k, o…klaka,
<1SG.A>speak–HORT–POT o…kláka, **o…kla:ka**}Ha}SPEAK, CALL, TELL
‘(let’s have me speak)’ (Dorsey 1882)

tilúšihí iyanągoį {{lúši, loša, lóša}Do}TAKE
ti–lúš**i–hí** i–ya–nąg–o–į
2SG.A–take–HORT INSTR–LOC–sit–do–INDEF
‘take up chair’ (Dorsey 1882)

The cause for each suffix selecting [a] or [i] at the end of the ablauting stems in this class is currently unclear. The consonants preceding each ablauting stem-final vowel, [š] and [x] (or [h], as it is very common throughout Tutelo for [x] to lenite or weaken into the less fricated [h]) both appear before each vowel variant. Moreover, no consistent pattern emerges in the vowel harmony of the data for these suffixes. There may be patterns of harmony that emerge for each suffix separately, however that remains the subject of future research.

As with many of the complex ablaut triggers in this chapter, the lack of predictable vowel selection at the end of verb stems due to imperative and hortative suffixes presents a challenge for pedagogy. It is important to consider here is the current and potential future frequency of use for both the specific verb stems and the triggers. To my knowledge, all the verb stems and suffixes above are not currently being used frequently in the language (with the possible exception of 'speak'). Moreover, I have seen very little if any use of the imperative suffix. However, most verbs and suffixes shown in the data for this class have the potential for frequent use again in the community, particularly for conversations between parents and children where 'pick up', 'break', and 'speak' are likely candidates for commands and more gentle requests (i.e. the imperative and hortative respectively). As these morphemes are few in number, committing them to memory rather than a pattern associated with this class of ablaut triggers may be the most accessible approach for teaching the data above (at least until more is understood about the vowel selection in this class).

CLASS 5 TRIGGERS (VOWELS [E, I])

Unlike Class 4, the next class of ablaut triggers consists of only one suffix, the potential marker {{ta}Do, {da}Fr, {t, ta, té}Ha, {da}He, {da}Sa}}POT. This morpheme triggers either [e] or [i] at the end of ablauting stems, including 'break', 'eat', 'go home', 'kill (plural object)', 'laugh', 'tear', 'tell', and 'sweep'. The examples in 59 show all combinations of the verbs and vowel variants with suffixes from the morph set for the potential marker, {{ta}Do, {da}Fr, {t, ta, té}Ha, {da}He, {da}Sa}}POT.

(59) **Class 5 examples**

wílatkúšita {{**latkúša**, latkuši, latkúši, látkuši}Do}BREAK, CUT BY HAND
wí–latkúš**i–ta**
1SG.P–break–POT
'I will break' (Dorsey 1882)

yínątkúšita
yí–nątkúš**i–ta** {{**nątkúša**, nątkúši}Do, {nątku:si}Ha}BREAK WITH THE FOOT
2SG.P–break.with.the.foot–POT
'(you will break it with the foot)' (Dorsey 1882)

nihamp mąklu:tita {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha}EAT
nihamp mąk–lu:t**i–ta**
tomorrow 1PL.P–eat–POT
'we will eat (tomorrow)' (Hewitt 1888)

wá:gleda {{kilé:}Fr,{kle:}Ha, {gíle, gle}He,
wá:–gl**e–da** {gilí:}Sa}GO BACK, GO HOME, COME BACK, COME HOME
1SG.A–go.home–POT
'I will go home' (Dorsey 1882)

gwagilí:da {{kilé:}Fr,{kle:}Ha, {gíle, gle}He,
gwa:–gil**í:–da** {gilí:}Sa}GO BACK, GO HOME, COME BACK, COME HOME
1SG.A–go.home–POT
'I must go home' (Sapir 1913)

mąklakatski:hita {{lakatskih, lakatski:hi}Ha}KILL (PLURAL OBJECT)
mąk–lakatski:h**i–ta**
1PL.A–kill;PL;OBJ–POT
'you (pl) kill them' (Hale 1879)

įwakse:heta {{į…kšéha, į…kšé}Do, {**į…kse:ha**, į…kseha,
į<wa>kse:h**e–ta** (stem: *įkse:he*) į…kse, į: …kʃe:, ę…kséh, į…kséh, į…ksehe,
<1SG.A>laugh–POT į…kse:he}Ha}LAUGH
'I shall laugh' (Hale 1878)

oha:teta {{o…hate, o…hati, o…xat, o…xáta, o…xate,
oha:t**e–ta** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
see–POT o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'he will see it' (Hale 1883a) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

oaha:tita {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<a>ha:t**i–ta** (stem: *oha:ti*) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<1SG.A>see–POT o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'I see [sic]' 'I will see' (Hale 1878) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

minątíta {{ną́, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
minątíta
mi–nąt**í–ta**
1SG.P–swallow–POT
'(I will swallow)' (Dorsey 1882)

lihi:ok wagela:gita {{klák}Do, {gela:gi, **gela:ki**, kla:ka }Ha}SPEAK, TELL, CALL
li–hi:–ok wa–gela:g**i–ta**
if–come–PST 1SG.A–tell–POT
'if he comes, I will tell him' (Hale 1883a)

májtkaxlé:pita {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
máįt–kaxlé:**pi–ta**
1PL.A–sweep–POT
'we will sleep' (Dorsey 1882)

Similar to the stem-final vowels in Class 4, the selection of the [e] and [i] vowel variants at the end of the ablauting verb stems above appears to be arbitrary, i.e. affected neither by

adjacent consonants nor vowel harmony across syllables. The selection of voiced rather than unvoiced variants of the potential suffix (*–da* vs. *–ta* for example) may be more connected to the researcher who documented the data in this class than some systemic feature of Tutelo phonology and/or morphology. Frachtenberg, Hewitt, and Sapir recorded the voiced *–da*, whereas Dorsey and Hale documented several unvoiced variants. Alternatively, the time of recording could be an additional factor. Hale and Dorsey worked with Tutelo speakers and published their findings between the late 1870s and the early 1880s. Hewitt published his work in the late 1880s, and both Frachtenberg and Sapir conducted and published their work a few decades later in the early 1910s. The possibility that this range of documentation is tracking a sound change from unvoiced [t] to voiced [d] in language use warrants further research.

Compared to Class 4, the increased number of ablauting verbs present in the data of Class 5 make committing the distribution of [e] and [i] as stem-final vowels due to the potential marker even more challenging. As verb-suffix combinations above could yield such potentially frequently occurring translations as 'will eat', 'will tell', and 'will see', the matter of how to teach the impact of the potential marker on ablauting verbs will not be able to be avoided for long. For now, the variation in the potential marker—{{ta}$_{Do}$, {da}$_{Fr}$, {t, ta, té}$_{Ha}$, {da}$_{He}$, {da}$_{Sa}$}}$_{POT}$—as it relates to the various documenters provides an excellent opportunity to engage learner speakers with the nuance that different researchers bring to the data.

CLASS 6 TRIGGER (VOWEL [I] AND DELETION Ø)

The sixth trigger class consists of one suffix, the progressive marker {{o, o:, ǫ:}$_{Ha}$, {ó, ǫ́}$_{Do}$}$_{PROG}$. This morpheme triggers either [i] or a deletion at the end of ablauting stems, and in

the Tutelo documentation it attaches to the verbs for ‘kill’, ‘laugh’, ‘love’, and ‘see’. The examples in 60 show all combinations of the verbs and vowel variants with suffixes from the morph set for the progressive marker {{o, o:, ǫ:}Ha, {ó, ǫ́}Do}PROG.

(60) C**lass 6 examples**

mąklakatsksiho:ma {{lakatskih, lakatski:hi}Ha}KILL (PLURAL OBJECT)
mąk–lakatsksi**h–o:**–ma
1PL.A–kill–PROG–REAL
‘we (are) kill(ing) them’ (Hale1879)

įksehǫ́bolt {{į…kšéha, į…kšé}Do, {**į…kse:ha**, į…kseha,
į–kse**h–ǫ́**–bo–l–t į…kse, į: …kʃe:, ę…kséh, į…kséh, į…ksehe,
STEM–laugh–PROG–2PL–ASSERT.M–POT į…kse:he}Ha}LAUGH
‘you (pl) will (be) laugh(ing)’ (Hale 1878)

miyądostagǫ:wa {{yądo…stag, yądo…stegi, yądo…stegí,
mi–yądosta**g–ǫ:**–wa yądo…stegi, yądo…steka, **yądo…ste:ka**,
1SG.P–love–PROG–REAL yądo…ste:ki, yądo…sték, yądo…stéka}Ha}LOVE
‘I (am) love(ing)’ (Hale 1878)

owaxatióma {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<wa>xat**i–ó**–ma (stem: *oxati*) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<1SG.A>see–PROG–REAL o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
‘(I am seeing it)’ (Dorsey 1882) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

Apart from the verb for ‘see’ in the last example, all the data in 60 show the progressive suffix as triggering a vowel deletion at the end of the preceding verb. What may account for [i] at the end of ‘see’ is the rarity of the sequence [ato] in the Tutelo pre-revitalization corpus. This sequence occurs less than five times throughout the documentation of the language, and it never occurs in any verbal construction. If the last example, ‘see’, were to have a vowel deletion rather than [i] at the end of the verb stem, the result would be *owax**ato**ma*. The sequence [ato] is in bold print, highlighting a sequence that would be utterly unique (and likely undesirable) in Tutelo. Apart

from the [ato] sequence above and other rare ones like it, it may be safe at this point in the community's engagement with language learning to teach the progressive as largely triggering stem-final vowel deletion in ablauting verbs.

CLASS 7 TRIGGERS (VOWELS [A, E] AND DELETION Ø)

The seventh class of triggers comprises the second-person plural marker {{bu}$_{Do}$, {bo, bu, bu:, p, po, pu, pu:}$_{Ha}$}$_{2PL}$, the third-person plural marker {{hla, hlé, hné}$_{Do}$, {hana:, hla, hela, le, le:, na, ne, ne:, né}$_{Ha}$}$_{3PL}$, and the realis marker {{ma, w, wa, wá}$_{Do}$, {a, ma, wa}$_{Ha}$, {wa}$_{He}$}$_{REAL}$. These morphemes triggers either [a], [e], or a deletion at the end of ablauting stems, and in the pre-revitalization data they attach to Tutelo verbs for 'blister', 'call', 'come', 'eat', 'go home', 'laugh', 'love', 'run', 'see', 'sit down', 'speak', 'swallow', 'sweep', 'tear', and 'tell'. The verb stem 'call', *–giko:ha*, drops not only the final vowel before the second-person plural *–pu*, but also the preceding consonant [h]. The exact cause of this additional deletion is inconclusive, though it seems to be related to Tutelo phonotactics.[46] The examples in 61 show all combinations of the verbs and vowel variants with suffixes from the morph set for the second-person plural, third-person plural, and realis markers.

(61) C**lass 7 examples**

a. {{bu}Do, {bo, bu, bu:, p, po, pu, pu:}Ha}$_{2PL}$ trigger

įgikopole:se {{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}$_{Ha}$}$_{CALL}$
į–gik**o–po**–le:–se
2SG.DAT–call–2PL–3PL–ASSERT
'he [sic] calls to you (pl)' 'they call to you (pl)' (Hale 1883a)

[46] These include rules about what sounds can occur adjacent to each other in a language. While [h] and [p] do occur in succession in Tutelo words, it is quite rare and would indicate that this sequence would be dispreferred.

įgikopu:a {{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}Ha}CALL
į–gik**o–pu:**–a
2SG.DAT–call–2PL–REAL
'they call to you' (Hale 1883a)

walú:tp {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha}EAT
wa–lú:**t–p**
ABS–eat–2PL
'you (pl) eat (something)' (Hale 1879)

kįyakséhpuna {{į…kšéha, į…kšé}Do, {**į…kse:ha**, į…kseha,
k–į<ya>ksé**h–pu**–na (stem: *įkséh*) į…kse, į: …kʃe:, ę…kséh, į…kséh, į…ksehe,
NEG–STEM<2SG.A>laugh–2PL–NEG į…kse:he}Ha}LAUGH
'you (pl) are not laughing' (Hale 1878)

hiyanda:hapusek {{hi…ndaha, **hi…nda:ha**, hi…ndahi:}Ha}RUN
hi<ya>nda:h**a–pu**–se–k (stem: *hinda:ha*)
<2SG.A>run–2PL–ASSERT–?
'you (pl) run' (Hale 1878)

oyahatbua {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o<ya>ha**t–bu–a** (stem: *ohat*) o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
<2SG.A>see–2PL–REAL o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'you (plural) see it' (Hale 1883a) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

yíenątebúa {{ną, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
yíe–nąt**e–bú**–a
2SG.P–swallow–2PL–REAL
'(you [plural] swallow)' (Dorsey 1882)

yákaxle:pbúa {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
yá–kaxle:**p–bú**–a
2SG.A–sweep–2PL–REAL
'(you [plural] sweep)' (Dorsey 1882)

b. {{hla, hlé, hné}Do, {hana:, hela, hla, le, le:, na, ne, ne:, né}Ha}3PL trigger

ínaxlótahnéwa {{naxló:t, **naxlóta**}Do}BLISTERED, CHAFED
í–naxlót**a–hné**–wa
3SG.P–blister–3PL–REAL
'they are blistered' (Dorsey 1882)

gikohane:se {{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}Ha}CALL
gikoh**a–ne:–**se
call–3PL–REAL
'they call to them' (Hale 1883a)

lu:tana {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha}EAT
lu:t**a–na**
eat–3PL
'they eat' (Hale 1879)

ịkse:hanese {{ị…kšéha, ị…kšé}Do, {**ị…kse:ha**, ị…kseha,
ị–kse:h**a–ne**–se ị…kse, ị: …kʃe:, ę…kséh, ị…kséh, ị…ksehe,
STEM–laugh–3PL–REAL ị…kse:he}Ha}LAUGH
'they laugh' (Hale 1878)

kịkse:hane:na {{ị…kšéha, ị…kšé}Do, {**ị…kse:ha**, ị…kseha,
k–ị–kse:h**a–ne:**–na ị…kse, ị: …kʃe:, ę…kséh, ị…kséh, ị…ksehe,
NEG–STEM–laugh–3PL–NEG ị…kse:he}Ha}LAUGH
'they are not laughing' (Hale 1878)

ịkse:hana {{ị…kšéha, ị…kšé}Do, {**ị…kse:ha**, ị…kseha,
ị–kse:h**a–na** ị…kse, ị: …kʃe:, ę…kséh, ị…kséh, ị…ksehe,
STEM–laugh–3PL ị…kse:he}Ha}LAUGH
'they laughed' (Hale 1878)

maigyą́dostékanése {{yądo…stag, yądo…stegi, yądo…stegí,
maig–yą́dosték**a–né**–se yą́do…stegi, yądo…steka, **yądo…ste:ka**,
1PL.A–love–3PL–ASSERT yądo…ste:ki, yą́do…sték, yą́do…stéka}Ha}LOVE
'we love them' (Hale 1878)

yą́domistékhana: {{yądo…stag, yądo…stegi, yądo…stegí,
yą́do<mi>sté**k–hana:** (stem: *yą́dosték*) yą́do…stegi, yądo…steka, **yądo…ste:ka**,
<1SG.P>good–3PL yądo…ste:ki, yą́do…sték, yą́do…stéka}Ha}LOVE
'they love me' (Hale 1878)

yądostekane:se {{yądo…stag, yądo…stegi, yądo…stegí,
yąd–o–stek**a–ne:**–se yą́do…stegi, yądo…steka, **yądo…ste:ka**,
heart–LOC–1SG.P–good–3PL yądo…ste:ki, yą́do…sték, yą́do…stéka}Ha}LOVE
'they love me' (Hale 1878)

ohatéhla {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o–hat**é–hla** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
LOC–see–3PL o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'they see it' (Hale 1880a)

oxátehlése {{o…hate, o…hati, o…xat, o…xáta, o…xate,
o–xát**e–hle–se** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
LOC–see–3PL–ASSERT o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'(they see)' (Dorsey 1882)

mahanąknese {{**maha…nąka**, maha…nąka, maha…nąk}Ha}SIT, SIT DOWN, REMAIN
mahanąk**–ne**–se
sit.down–3PL–ASSERT
'they sit down' (Hale 1878)

inątahlétela {{ną, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
i–nąt**a–hlé**–te–la
3SG.P–swallow–3PL–POT–ASSERT.M
'(they will swallow)' (Dorsey 1882)

huk inąthnéwa {{ną, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
huk i–nąt**–hné**–wa
all 3SG.P–swallow–3PL–REAL
'(they all swallow)' (Dorsey 1882)

inątanetela {{ną, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
i–nąt**a–ne**–te–la
3SG.P–swallow–3PL–POT–ASSERT.M
'(they will swallow)' (Dorsey 1882)

ákaxlé:phléwa {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
ákaxlé:**p–hlé**–wa
sweep–3PL–REAL
'(they sweep)' (Dorsey 1882)

c. {{ma, w, wa, wá}Do, {a, ma, wa}Ha, {wa}He}REAL trigger

hawilewa {{ha…le, **xa…la** }Ha}GO THERE
ha<wi>l**e–wa** (stem: *hale*)
<1SG.P>come–REAL
'I come' (Hale 1883a)

wáglewa {{kilé:}Fr,{kle:}Ha, {gíle, gle}He,
wá–gl**e–wa** {gilí:}Sa}GO BACK, GO HOME, COME BACK, COME HOME
1SG.A–go.home–REAL
'I (am) going homeward' (Hewitt 1888)

oyaklašáwo {{o…klaša, o…kláša, o…klašá, o…kláš á,
o<ya>klaš**á–w**–o (stem: *oklašá*) o…klaxá}Do, {o…klák, o…kla:k, o…klaka,
<2SG.A>speak–REAL–INTER o…kláka, **o…kla:ka**}Ha}SPEAK, CALL, TELL
'were you speaking together?' (Dorsey 1882)

íma loxkáhawá {{**loxkáha**, loxkáhi}Do}TEAR
íma loxkáh**a–wá**
3DISJ tear–REAL
'he tears' (Dorsey 1882)

ákaxlé:phléwa {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
ákaxlé:**p–hlé**–wa
sweep–3PL–REAL
'(they sweep)' (Dorsey 1882)

mą́ątkaxlé:pwa {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
mą́ąt–kaxlé:**p–wa**
1SG.P–sweep–REAL
'we sweep' (Dorsey 1882)

The verbs stems in 61 meet an important criterion for this study: having data that show two different vowel variants from the possible set of alternants [a, e, i, Ø]. What follows, however, is a form of 'laugh' (lakšéha) that does not meet this criterion. The single datum for this verb in the corpus does, however, share a root with ablauting {{ą…kšéha, ą…kšé}Do, {ą…kse:ha, ą…kseha, ą…kse, ą: …kʃe:, ę…kséh, ą…kséh, ą…ksehe, ą…kse:he}Ha}LAUGH, another stem meaning 'laugh' that instantiates with the three vowel variants, [a, e, Ø] as do all other data in 61 above.

(61.d) C**lass 7 additional datum**

máelakšéwa
máe–lakš**é–wa**
1PL.A–laugh–REAL
‘we laugh’ (Dorsey 1882)

‘We laugh’ in 61.d completes the data in 61.c, showing an instance of stem-final vowel deletion when an ablauting verb is suffixed by *–wa* or some variant thereof (*lakšé**ha**→lakš**éwa***).

Triggering three preceding vowel alternants, the suffixes in this class raise the question of how the verbs select [a], [e], or a deletion at the end of ablauting stems. Several factors were considered to address this question: the features of the consonants preceding the ablauting vowels in verb stems (the [t] in *lu:ta* for instance); phonetic sequences not found in the language (like [tap] not occurring at the end of words in Tutelo, whereas [tp] can be found as in the data set above with *walú:tp*); harmony of the vowels in both the ablauting portion of the stem and in the preceding and subsequent syllables (e.g. the alignment in height and frontness of the unshaded vowels in bold in *hiyand**a:h**a**p**u**sek*); the number of syllables in the word phrases (six as marked by ' preceding each one in '*hi*'*yan*'*da:*'*ha*'*pu*'*sek*); and finally, the number of syllables in each word phrase and whether the total number was even or odd. None of the above factors were conclusive, however phonemes and phonetic sequences not found in Tutelo as well as syllable economy may contribute to the selection of vowel deletion or the alternants [a] or [e] in ablauting verbs suffixed by the triggers in this class.

The first two examples in 61c bring attention to an apparent constraint on the phoneme [l] as it relates to verb stems in Tutelo. While [l] can appear at the end of verbal constructions in the language (as in the stative non-abluating verb ‘ugly’ in *ati: okayeye:k**sel***, ‘ugly houses’), it does

not appear at the end of any verb stem in the pre-revitalization corpus. Even in the case of ablauting verbs (whether or not included in this study) with [l] before the final stem vowel, vowel deletion is not an option. This constraint would require the data for ‘come’ and ‘go home’ above select either the [a] or [e] variants at the end of the stems, otherwise the verb stems would instantiate as **hal* and **gil*.

Though ‘come’ and ‘go home’ in 61c do not select a vowel deletion at the end of their stems when suffixed by the realis marker *–wa*, the reason behind their selection of [e] is unclear. It is noteworthy, however, that ablauting verbs with [l] preceding the stem-final vowel never select [a] before a suffix. Indeed, there is only one instance of any verb stem in the language ending in the sequence [la], and that is the citation form of ‘go’, *xala* (Hale 1883a).

Another factor that may contribute to the selection of vowel deletion over other vowel alternants in verbs suffixed by Class 7 Tutelo triggers is syllable economy. The data in 61 largely indicate that Tutelo values fewer rather than more syllables in its verbal constructions. This would provide a plausible reason for the [a] at the end of the verb stem ‘love’ to be deleted in the attested verb ‘they love me’ below.

(62) **Syllables of ‘they love me’**

***'yą́.do.mi.sté.ka**.ha.na:

'yą́.do.mi**.sték.ha**.na:

The syllables above are separated by periods, and both shading and bold print are used for emphasis. The first instance includes [a] at the end of the verb stem, producing a verbal

construction seven syllables in length. This does not appear in the pre-revitalization data, whereas the construction with a vowel deletion at the end of the stem and six syllables is attested.

Interestingly, even in verbal constructions where [a] or [e] is selected over vowel deletion at the end of the stem, a shorter form of the ablaut trigger is selected, as can be seen with 'they are blistered', 'they laughed', and 'they see' in 61b.

(63) **Syllable economy in 'they are blistered' and 'they laughed' (pl)'**

Verb	**–hana:**	**hlé/hné/na**	**Gloss**
blister	*'í.na.xló.t**a.ha.na:**.wa	í.na.xló.t**a.hné**.wa	they are blistered
laugh	*'į.kse:.h**a.ha.na:**	į.kse:.h**a.na**	they laughed
see	o.xá.t**e.ha.na**.se	o.xá.t**e.hlé**.se	they see

The examples 'blister' and 'laugh' above have [a] at the end of each verb stem, and the stem for 'see' end in [e]. Nonetheless, all three forms still achieve some syllable economy with the ablaut trigger they select. The verbs in the second column have been listed with the two-syllable *–hana:* from the morph set {{hla, hlé, hné}Do, {hana:, hela, hla, le, le:, na, ne, ne:, né}Ha}3PL, yet they do not appear in the data. What appears in the data are the verbs in the third column, each of which have selected a monosyllabic variant of the third-person plural suffix (*–hlé*, *–hné*, and *–na*). The resulting forms are one syllable shorter than those in the first column.

In some instances, the data from this class of triggers achieves syllable economy in both the choice of stem-vowel deletion and the selection of ablaut trigger variant, as with the forms of 'eat' and 'they sit down' in 64.

(64) **Syllables in ‘eat something’ and ‘they sit down’**

wa.lú:t.p {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha}EAT
wa–lú:**t–p**
ABS–eat–2PL
‘you (pl) eat (something)’ (Hale 1879)

ma.ha.nąk.ne.se {{**maha…nąka**, maha…nąka, maha…nąk}Ha}SIT, SIT DOWN, REMAIN
mahaną**k–ne**–se
sit.down–3PL–ASSERT
‘they sit down’ (Hale 1878)

In ‘you eat something’, the vowel is deleted at the end of *lu:ta*, and *–p,* the shortest (non-syllabic) option is selected from the morph set for the second-person plural marker, {{bu}Do, {bo, bu, bu:, p, po, pu, pu:}Ha}2PL. In ‘they sit down’, the vowel again is deleted at the end of the verb stem, and *–ne* one of the shorter, monosyllabic variants from the third-person plural morph set, {{hla, hlé, hné}Do, {hana:, hela, hla, le, le:, na, ne, ne:, né}Ha}3PL, is selected.

Syllable economy does not offer a comprehensive explanation of vowel variant selection in ablauting verbs with Class 7 suffixes. The example of ‘you (pl) run’ 61.a shows that these verb forms do not always opt for fewer syllables in the selection of ablauting vowel and trigger variants.

(65) **Syllables in ‘you (pl) run’**

hi.yan.da:.ha.pu.sek
hi<ya>nda:h**a–pu**–se–k (stem: *hinda:ha*)
<2SG.A>run–2PL–ASSERT–?
‘you (pl) run’ (Hale 1878)

The example above selects both the vowel [a] at the end of ‘run’ and one of the monosyllabic forms from the morph set for the second-person plural marker, {{bu}$_{Do}$, {bo, bu, bu:, p, po, pu, pu:}$_{Ha}$}$_{2PL}$. The result is a verbal construction with six rather than four syllables.

Without a comprehensive explanation to explain the distribution of [a, e], and vowel deletion as a result of the second-person, third-person, and realis markers, the teaching of the ablaut pattern in Class 7 could be truly challenging for the Tutelo language community. Here it may be advisable to start teaching this pattern with the verbs that are not only the most frequent in community use, but that also themselves have fewer documented ablauting vowel possibilities at the end of their stems. For example, the most frequent verbs from the data in this section include ‘call’, ‘come’, ‘eat’, ‘go home’, ‘love’, ‘see’, and ‘speak’. Of these, ‘come’, ‘go home’, and ‘speak’ only have two possible vowel-stem endings documented in the pre-revitalization data (see Appendix B for a listing of verb stems and correlating ablauting vowels). The remainder have three or four ablaut endings documented, making them candidates for later instruction. This is not an ideal solution, particularly as the lower number of ablaut endings associated with a verb may be due to a lack of data. For now, however, this approach may allow teachers and researchers additional time to learn more about the pattern triggered by Class 7 suffixes.

CLASS 8 TRIGGERS (VOWELS [A, E, I] AND DELETION Ø)

The environments that allow for the greatest amount of vowel variants at the end of ablauting verb stems includes the citation form and the end of sentences. Again, the citation form is produced when a word is requested as a translation by itself without any other words or

context around it. These environments trigger any one or combination of the four final vowel variants [a, e, i, Ø], and they occur with Tutelo ablauting verbs for ‘blister’, ‘break with hand’, ‘break with the foot’, ‘call’, ‘eat’, ‘go’, ‘kill’, ‘laugh’, ‘love’, ‘run’, ‘see’. ‘sit down’, ‘speak’, ‘swallow’, ‘take’, and ‘tear’. The examples in 48 show all combinations of the verbs and vowel variants with these environmental triggers.

(66) **Class 8 examples**

mínaxlóta {{naxló:t, **naxlóta**}Do} BLISTERED, CHAFED
mí–naxlót**a**
1SG.P–blister
‘I am blistered’

yim yílatkúša {{**latkúša**, latkuši, latkúši, látkuši}Do} BREAK, CUT BY HAND
yim yí–latkúš**a**
‘(you break with hand)’ (Dorsey 1882)

íma nątkúša {{**nątkúša**, nątkúši}Do, {nątku:si}Ha} BREAK WITH THE FOOT
íma nątkúš**a**
3DISJ break.with.the.foot
‘(she breaks it with the foot)’ (Dorsey 1882)

mįgiko:ha {{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}Ha} CALL
mį–giko:h**a**
1SG.DAT–call
‘he calls to me’ (Hale 1883a)

lu:ta {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha} EAT
lu:t**a**
eat
‘to eat’ (Hale 1883a)

lu:ti {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha} EAT
lu:t**i**
eat
‘to eat’ (Hale 1883a)

walút {{lút}Fr, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}Ha}EAT
wa–lú**t**
ABS–eat
'to eat (something)' (Frachtenberg 1913)

xala {{ha…le, **xa…la** }Ha}GO THERE
xal**a**
go
'go' (Hale 1883a)

wilatski:ha {{latski:he, lastski:ha}Ha}KILL BY HAND
wi–latski:h**a**
1SG.P–kill
'you kill them [sic]' 'you kill him'[47] (Hale 1879)

wilatski:he {{latski:he, lastski:ha}Ha}KILL BY HAND
wi–latski:h**e**
1SG.P–kill
'I kill them' (Hale 1879)

įwakse:ha {{į…kšéha, į…kšé}Do, {**į…kse:ha**, į…kseha,
į<wa>kse:h**a** (stem: *įkse:h*) į…kse, į: …kʃe:, ę…kséh, į…kséh, į…ksehe,
<1SG.A>laugh į…kse:he}Ha}LAUGH
'I laugh' (Hale 1878)

yądomiste:ka {{yądo…stag, yądo…stegi, yądo…stegí,
yądo<mi>ste:k**a** (stem: *yądoste:k*) yądo…stegi, yądo…steka, **yądo…ste:ka**,
<1SG.P>loves yądo…ste:ki, yądo…sték, yądo…stéka}Ha}LOVE
'he loves me' (Hale 1883a)

hiyanda:ha {{hi…ndaha, **hi…nda:ha**, hi…ndahi:}Ha}RUN
hi<ya>nda:h**a** (stem: *hinda:ha*)
<2SG.A>run
'you run' (Hale 1878)

[47] See §5.3 for discussion of animacy and third person in Tutelo. It is unknown what exactly was considered animate or inanimate in the language. If, for example, the objects of 'kill' (*latski:ha*) in the instance above did not inherently have enough animacy in the language, a 3PL suffix would not have been necessary for *latski:ha* to correctly mean 'you kill them'.

oha:ta {{o…hate, o…hati, o…xat, o…xáta, o…xate,
oha:t**a** o…xáte, o…xaté, o…xati, o…xáti}Do, {o…hat,
see o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:,
'he sees it' (Hale 1878) o…haté, o…hate:, o…hati, o…ha:ti, }Ha}SEE

mahaminą́ka {{**maha…nąka**, maha…nąka, maha…nąk}Ha}SIT, SIT DOWN, REMAIN
maha<mi>nąk**a** (stem: *mahanąk*)
<1SG.P>sit.down
'I sit down' (Hale 1878)

ima okla:ka {{o…klaša, o…kláša, o…klašá, o…klášá,
ima okla:k**a** o…klaxá}Do, {o…klák, o…kla:k, o…klaka,
3DISJ speak o…kláka, **o…kla:ka**}Ha}SPEAK, CALL, TELL
'he speaks' (Hale 1879)

mima minąt {{ną́, **nąt**, nąta, nąte nąti, nątí}Do}SWALLOW
mima mi–nąt**t**
1DISJ 1SG.P–swallow
'(I swallow)' (Dorsey 1882)

míma wilóša {{lúši, loša, lóša}Do}TAKE
míma wi–lóš**a**
1DISJ 1SG.P–take
'I take it' (Dorsey 1882)

míma wíloxkáha {{**loxkáha**, loxkáhi}Do}TEAR
míma wí–loxkáh**a**
1DISJ 1SG.P–tear
'I tear' (Dorsey 1882)

míma wákaxlé:p {{ákaxle:p, **ákaxlé:p**, kaxlé:pi}Do}SWEEP
míma wá–kaxlé:**p**
1DISJ 1SG.A-sweep
'(I sweep)' (Dorsey 1882)

Due to the lack of marked suffixation, as well as the variation in both stem-final vowels and ablauting verbs in this category, an explanation for the selection of final vowel variants in this category is unclear at this time. The same pedagogical intervention could be used here as was applied to the data in Class 7. Accordingly, 'break with hand', 'go', 'run', 'speak', and 'take'

would be the verbs that are both most frequent in community language use today and have the only two associated stem-final vowel variants (rather than three or four; again, see Appendix B for more information). Again, this is not a long-term solution, but it does allow for more time to devote to greater understanding of ablaut and the environments of citation form and end of sentence.

4.3 ADDITIONAL ABLAUTING STEMS

There are additional verb stems in Tutelo that may have also undergone ablaut in their final stems, however they largely have not been included in the data in the examples (52) to (66) because they only have one attested final-vowel variant in the pre-revitalization data. Despite the lack of sufficient attestations, they share a root with other verb stems undergo ablaut in the above study, like two forms of 'laugh'—under-attested *lakšé* from 61.d and demonstrably ablauting *į…kse:ha*—share the root *kse:ha*. These corresponding parts of the ablauting and likely ablauting verbs are in boldface below for emphasis.

(67) **Tutelo verbs sharing roots with attested ablauting verbs**

Non-Attested Verb	Attested Ablauting Verb	Common Root
*akák**nągí*** 'go out'	*maha…**nąka*** 'sit down, remain'	nąka
*akwakuk **nągi*** 'hide'	*maha…**nąka*** 'sit down, remain'	nąka
anąga 'sit on'	*maha…**nąka*** 'sit down, remain'	nąka
*a…**le:*** 'go there'	*ha…**le*** 'go there'	le:
*íg**latkúša*** 'break/cut'	***latkúša*** 'break, cut by hand'	tiku:sa
*i…**nąga*** 'sit'	*maha…**nąka*** 'sit down, remain'	nąka

Non-Attested Verb	Attested Ablauting Verb	Common Root
*i…**re*** ‘go to’	*ha…**le*** ‘go there’	le:
*i…**xáte***	*o…**ha:ta*** ‘see’	ha:ta
*kí**latkúša*** ‘break/cut’	***latkúša*** ‘break/cut by hand’	tiku:sa
*kó**naxlóta*** ‘blister/chafe’	***naxlóta*** ‘blister, chafe’	xlóta
*ko**naxlo:t**i* ‘scratch with foot’	***naxlót**a* ‘blister, chafe’	xlóta
*la**kšé*** ‘laugh’	*į…**kse:**ha* ‘laugh’	kse:ha
***latku:s**i* ‘bite off’	***latkúš**a* ‘break, cut by hand’	tiku:sa
latkúša ‘break with the foot’	***latkúša*** ‘break, cut by hand’	tiku:sa
***tiku:s**i* ‘break of by pushing’	*la**tkúš**a* ‘break/cut by hand’	tiku:sa
*ug**ré*** ‘float’	*ha…**le*** ‘go there’	le:
hvt’a ‘see’	*o…**ha:ta*** ‘see’	ha:ta
*ya…**le:*** ‘walk, go after’	*ha…**le*** ‘go there’	le:

Additionally, there are two more verb stems in the pre-revitalization corpus that only have one attested form, yet they share a root that differs only by initial phoneme from the root of another verb in this study (with the initial phonemes of both roots in bold for emphasis).

(68) **Tutelo verbs with root similar to attested ablauting verb *maha…nąka***

Non-Attested Verb	Attested Ablauting Verb	Similar Roots
mąki ‘lay down’	*maha…**nąka*** ‘sit down, remain’	**m**ąka/**n**ąka
*maha…**mągi*** ‘recline’	*maha…**nąka*** ‘sit down, remain’	**m**ąka/**n**ąka

It is also noteworthy that *mąki*, 'lay down', is likely related to the *mągi* portion of *maha…mągi*, 'recline', a possibility further reinforced by both verbs indicating spatial positioning.

4.4 Discussion

Analysis of vowel alternations at the end of ablauting verb stems reveals that Tutelo ablaut is more complicated and nuanced than previous analysis of the phenomenon would indicate. Oliverio's earlier analysis of the phenomenon found a three-tiered system of triggers that cause surface vowels [a], [e], and [i] at the end of ablauting stems. Due to the use of underlying representation in her analysis, these vowels could easily be understood as occurring discretely, i.e. to the exclusion of any other vowels variants, when triggered by suffixes or other environments (including among others citation form, end of sentence, and preceding a noun or verb). The Tutelo pre-revitalization corpus, however, contains data that challenge the neat and compact nature of this analysis. Oliverio's use of underlying representations in the previous ablaut analysis does not show any of the variation contained in this morphophonological process. Further, using one abstract representation—/E/—to capture the multiple vowel correspondences contained in the data is inadequate for the task.

Vowels were not the only aspect of Tutelo ablaut left underexplored in previous analysis. My current analysis shows that ablauting stems combine with eight different classes of ablaut triggers. I found five triggers were not considered or included in Oliverio's description of Tutelo ablaut: the interrogative suffix {{o}$_{Do}$, {o}$_{Ha}$}$_{INTER}$, the irrealis marker {{kišé}$_{Do}$}$_{IRR,}$ the singular imperative deletion {{–#}$_{Do}$, {–#}$_{Ha}$}$_{SG.IMP}$, the negative imperative suffix {{dáx}$_{Do}$}$_{NEG.IMP}$, and the second-person plural suffix {{bu}$_{Do}$, {bo, bu, bu:, p, po, pu, pu:}$_{Ha}$}$_{2PL}$.

The eight classes of triggers allow for the stem-final vowel variants [a, e, i], deletions, and combinations thereof. In distinction from previous analysis, these vowels occur discretely in only three of the eight classes of triggers. The remaining five classes allow for two or more vowel variants to occur at the end of lexically marked verb stems that precede certain triggers. This analysis captures the great variation and nuances of Tutelo ablaut more accurately than Oliverio achieved in her grammar.

The morph set from the Emergent framework helps present Tutelo ablaut in a transparent and nuanced manner. It does not, however, make any less complex the pedagogy required to teach this part of the grammar to the language community. The classes of triggers potentially mitigate the pedagogical complexity, offering eight stages of progressive complexity by which the community can engage with the phonological variation that Tutelo ablaut entails.

Once better understood, the various paradigms of Tutelo ablaut could be extended to verbs like *ugré*, 'float', and others in 67 and 68 lacking sufficient data yet having the same or similar roots as verbs examined in this study. Moreover, this understanding of ablaut patterns could be extended to those neologized verbs that are designated by the community as likely to exhibit this sort of morphological irregularity. Further research on the impact of phonotactic and phonological constraints involved in ablaut could increase the community's understanding of the sounds of its ancestral language. Additionally factors outside the realm of phonology need to be considered as they may impact the process of ablaut. Just as the assertive suffixes in Tutelo are gendered, some of the other suffix categories in this study may also be gendered. While the data from the pre-revitalization corpus does not give direct insight into that possibility, other gendered suffixes do exist in sister languages from the Siouan family. Even the possibility of gendered

phonemes at the end of ablauting verb stems warrants future analysis. In any case, a description of Tutelo ablaut is not complete unless the analysis moves beyond verb stems to examine those suffixes which also undergo ablaut, an additional subject for future inquiry. For now, however, the chapter that follows shifts from the analysis of verb forms in isolation to ablauting and non-ablauting verbs as would commonly be used in community: in the form of land acknowledgments.

5. LAND ACKNOWLEDGMENTS

According to Ambo and Beardall, ‘Land acknowledgments are an evolving practice to recognize local Indigenous Peoples as traditional stewards of their homelands’ (2023:103). While the exact date of the first land acknowledgment is unknown, they have been primarily observed in urban and academic spaces since the early 2000s (Vowel 2024). More prevalent in Canada, they have been delivered under various titles including territorial acknowledgments, welcome to Country, welcome of country, acknowledgment of country, title acknowledgment, and land introduction (Ambo and Beardall 2023:104, Vowel 2024). These acknowledgments were increasingly delivered after the 2015 final report of the Truth and Reconciliation Commission of Canada, a group commissioned to document the history of the country’s Indian residential school system (Stewart-Ambo and Yang 2021:22; National Centre for Truth and Reconciliation 2025).

Beyond the abovementioned definition, Métis author Chelsea Vowel identified purposes of the acknowledgment as being dependent on the parties involved: for Indigenous people, a way to resist erasure; for settlers, a way of offering ‘recognition as a form of reconciliation’ and a potential means of ‘honouring traditional Indigenous protocol’ (though the latter was viewed with some skepticism); for both, ‘to make spaces feel less unsafe for Indigenous Peoples’ (2024). Wilkes and colleagues further identified that the performance of these acknowledgments throughout Canadian universities has been tied to ‘the positionality of the acknowledger’ and the region of the country where they are delivered (2017:89).

Over the past five years of working with Tutelo in both the language community and the U.S. academy, I have encountered land acknowledgments as a source of meaningful (if sometimes problematic) engagement for both language learners and those wishing to honor the Indigenous stewards of lands in the lower 48 states of this country. This has resulted in several requests for translations and assistance with crafting these brief orations that have been used most often to initiate public-facing events. This section explores land acknowledgments that I have created in the past as fertile ground for utilizing under-attested parts of the Tutelo grammar and understanding contact phenomena in the language.

I also connect the analysis of the past two chapters to the land acknowledgments studied and reworked below. Though ablaut is not frequently present in the acknowledgments in this chapter, I highlight both ablauting and non-ablauting verbs in the first example, 69. The presentation and description of ablaut data in §3 and §4 were not my only takeaways that pertain to the land acknowledgments below, however. These chapters required of me a granular level of detailed research the likes of which I had not previously been able to exercise in my study of the Tutelo language. I continue this detailed analysis of the language by way of past land acknowledgments I have authored, highlighting errors I have made in their composition over the years as my understanding of the grammar has expanded. In my experience teaching Tutelo, I have found that openly disclosing and exploring past errors is highly instructive for the language community; accordingly, I choose the errors below as pedagogical opportunities. Finally, I show how my evolving ideas on land acknowledgments are reflected in the language I used to write them.

In February 2021, I co-taught a virtual professional development workshop to high school teachers, and I chose to open the event with a land acknowledgment. This acknowledgment was written before the language community began to standardize the Tutelo orthography. Example 51 shows the acknowledgment in a five-line gloss: the first line, as it was originally written using the orthographic conventions typical of the Tutelo language community in 2021; the second line, using the current orthography; the third line showing the morphemic separations in the data; and the fourth and fifth lines, a morpheme-by-morpheme translation and an English translation respectively as in the final two lines of previous glossed examples. Each section of the prayer is labeled letters a. through f. and is presented without capitalization and punctuation. Given the length of the texts glossed in this chapter, stems for infixed verbs will not be provided in the interlinear glosses as was done in §2-§4.

(69) **Land acknowledgment in Tutelo and English, 2021**

Tutelo

a. *mec**ou**remēchen kihoe huk*
mekureme:čʰen kihoe huk
mekure–me:čʰen kiho–e huk
nail–eat come.here–INDEF all
'all are welcome who come here'

b. *emāñti mañginēwa, emāñti waiohnahōma*
*emą:ti **mągine:wa**, emą:ti waiohnaho:ma* **←non-ablauting verb *agine:***
e–mą:–ti mą–gine:–wa e–mą:–ti wai–ohnaho:–ma
DEM–1PL.A–house 1PL.A.LOC–be.on–REAL DEM–1PL.A–house 1PL.P–work–REAL
'we are in our homes where we work'

c. *mi emāñti amāñi aginēnese*
*mi emą:ti amą:i **agine:nese*** **←non-ablauting verb *agine:***
mi e–mą:ti amą:–i a–gine:–ne–se
but DEM–1PL.A–house land–INDEF LOC–be.on–3PL–ASSERT
'but our homes are on the land'

d. *wāktāka Tohono O'odham bīlahuk*
wa:hta:ka Tohono O'odham bi:lahuk
wa:hta:ka Tohono O'odham bi:–la–huk
Indian Tohono.O'odham good–ASSERT.M–all
'the people of the Tohono O'odham we thank you all'

e. *mañkiloqkōyiñ hūk amāñi wāktāka iñgītoñyukehlewa maigyañdostēka*
mąkiloxko:yį hu:k amą:i wa:hta:ka įgi:tǫyukehlewa maigyą:doste:ka
mą–kiloxko:–yį hu:k amą–i wa:hta:ka į–gi:tǫ–yuke–hle–wa
1SG.DAT–let–HORT all land–INDEF Indian 3SG.DAT–belong–PST;DUR–3PL–REAL

maig–yądoste:ka **←ablauting verb *yądoste:ka***
1PL.A–love
'let us all love the land of Native peoples'

f. *yaq amāñi waiyāñdostēka hūk*
yax amą:i waiyą:doste:ka hu:k
yax amą:–i **wai–yą:doste:ka** hu:k **←ablauting verb *yądoste:ka***
thus land–INDEF 1PL.P–love all
'so that the Earth may love us'

Line d above shows that this oration was recognizing the Tohono O'odham, for it was on their land, Tucson, that I delivered this acknowledgment. As the participants in the virtual workshop were from other parts of the United States, I guided them on how to find whose land they were on, and I asked them to include that name after I said, "Tohono O'odham." The first line of each section a-f of data in 51 are presented primarily with the conventions of late 19th-century philologist Horatio Hale's orthography for the benefit of language community members who are still primarily referencing his work. The conventions include using a macron (¯) above vowels to indicate that they are long; writing nasal vowels as the corresponding oral vowel with *ñ* appearing afterwards (e.g. the nasal vowel *ą* in the current Yesa:sahį alphabet appears as *añ* in *mañkiloqkōyiñ* from example e. above); and representing the velar fricative from the current alphabet, *x*, as *q* (again, in *mañkiloqkōyiñ* from example e. above). An exception appears in bold

print in the first line of a., where the graphic representation of the vowel [u] appears as *ou*. This digraph (combination of two letters to represent one sound) is from a period earlier than the work of Horatio Hale. It represents the documentation of John Fontaine, who visited the Indian school at Fort Christanna in 1716. This digraph may derive from his Huegenot parentage, the influence possibly showing to distinguish between different vowel sounds written as *ou* and *u* in French. The word that this digraph appears in is a greeting, one of the most frequently occurring words in the limited lexicon of current speakers, and its spelling using *ou* has likely persisted until from the original source until recent years.

Additionally, in 69 I put in boldface the non-ablauting verb *agine:* 'to be at'. In this example, it is suffixed by both the realis and assertive suffixes, *–wa* and *–se* respectively, yet the vowel at the end of the verb stem remains the same [e]. Later in the example, I also put in boldface the ablauting verb *yądoste:k**a***, 'love'. Though it is highlighted twice above with differing pronominal prefixes, there is no suffixation and therefore no change to the stem-final vowel, [a]. A later example in this chapter, 97e, shows a version of the verb suffixed with the past tense marker yielding a stem final vowel [i] in *limaigyądoste:k**i**ok*, 'if we love (it)'.

Example 70 presents the acknowledgment entirely in the community's current orthography. I use asterisks below to identify the first occurrences of mistakes I made in the language due to my understanding of Tutelo at the time it was written. Additionally, parts of the text are in bold print to mark the first occurrences of phonology or grammar where some description or analysis is warranted.

(70) **2021 land acknowledgment with emphasis on errors and further analysis**

a. *mekureme:čʰen kihoe huk*
mekure–me:čʰen *kiho–e huk
nail–eat *come.here–INDEF all
'all are **welcome** *who come here'

b. *emą:ti mągine:wa, emą:ti waiohnaho:ma*
e–mą:–ti **mą–gine:–wa** *e–mą:–ti wai–ohnaho:–ma
DEM–1PL.A–house 1PL.A.LOC–be.on–REAL *DEM–1PL.A–house 1PL.P–work–REAL
'**we are in our homes** where we work'

c. *mi emą:ti amą:i agine:nese*
mi e–mą:ti amą:–i **a–gine:–ne–se**
but DEM–1PL.A–house land–INDEF ***LOC–be.on–3pl–ASSERT**
'but our homes ***are on the land**'

d. *wa:hta:ka Tohono O'odham bi:lahuk*
wa:hta:ka Tohono O'odham **bi:–la–huk**
Indian Tohono.O'odham **good–ASSERT.M–all**
'**the people of the Tohono O'odham we thank you all**'

e. *mąkiloxko:yį hu:k amą:i wa:hta:ka įgi:tǫyukehlewa maigyą:doste:ka*
mą–kiloxko:–yį hu:k amą–i wa:hta:ka ***į–gi:tǫ–yuke–hle–wa**
1SG.DAT–let–HORT all land–INDEF Indian ***3SG.DAT–belong–PST;DUR–3PL–REAL**

*maigyądoste:ka
1PL.A–love
'let us all love the land of Native peoples'

f. *yax amą:i waiyą:doste:ka hu:k*
*yax amą:–i wai–yą:doste:ka hu:k
*thus land–INDEF 1PL.P–love all
'*so that the Earth may love us'

The errors and opportunities for description and analysis in 70 fall into five categories: borrowings, lack of data, incorrect implementation of verbal morphology, incorrect use of non-verbal morphology, and translation. The first word in 70a., *mekureme:čhen*, provides a unique

example of how words can be borrowed and adopted in the Tutelo language community over the course of centuries.

5.1 BORROWINGS

The acknowledgment above contains two borrowings from other American Indian languages, Powhatan and Tohono O'odham. In 70a., the word *mekureme:čhen* was pulled from a word list documented by John Fontaine in 1716 (Alexander 1971:310). This list was the result of him eliciting words from schoolchildren at the Indian school near Fort Christanna, and these children were not only speakers of the mutually intelligible dialects that have contributed to contemporary Tutelo. Then governor of Virginia, Robert Spotswood, required all tribes on friendly terms with the British to send children to *Chunkete Posse*, 'Horse's Head', the town near Fort Christanna to be educated at the Indian school as hostages of the British colonial government (Kincheloe 2019: 76). This included, among others, children from Virginia Algonquian tribes, as can be seen in the etymology of *mekureme:čhen* from the Powhatan language in 71.

(71) **Etymology of *mekureme:čʰen* (Powhatan)**

mekureme:čʰen
mekuse–mechen
nails–eat
'nailbiter' (Strachey 1999:30-31)

The second line in 71 shows the morphemes contained in this word as originally spelled and translated in a Powhatan dictionary by William Strachey. As there are, to the best of my knowledge, very few if any fluent or near-fluent speakers of Powhatan at the time of writing, the

gloss in the final line above was posited in consultation with speakers of other Algonquian languages. While ‘nailbiter’ seems a reasonable incorporation of the words nail and eat, it is quite different from the word *mekureme:č^{h}en* as it was glossed earlier in example 70, ‘welcome’. In Fontaine’s list, the word *mecouremechin* is the response to the elicited phrase ‘you are very welcome here’. There is an obvious misalignment between ‘nailbiter’ and ‘you are very welcome here’ that is plausible in a school context where this elicitation might have taken place.

Those non-Siouan children in the school at *Chunkete Posse* had been removed from the communities they had known all their lives. They were removed to live with families who spoke a language they likely did not understand very well. They were made to learn in a school—a place and mode of instruction foreign to the Indigenous epistemologies with which they were familiar. They received instruction from a British man who both spoke a language and looked even more unfamiliar to them than the other Native peoples they had known in their communities of origin. The question of how to say ‘you are very welcome here’ could elicit thoughts of what it was like as a child to be immersed in this series of stressful environments: a new town, domicile, and host family, an utterly foreign language, and an odd form of pedagogy. To attend and be welcomed at the school at Horse’s Head could be very stressful, and that stress could physically manifest in myriad ways including biting or eating one’s nails: *mekureme:č^{h}en*.

However feasible the scenario above, the word *mekureme:č^{h}en* was misunderstood and adopted to mean ‘welcome’ at some point during Tutelo’s revitalization period (the early 1990s to the present). Added to *mekureme:č^{h}en* were the Tutelo words *kihoe huk* (translated as ‘all who come here’) to create the formal greeting in 70a widely used in the language community *mekureme:č^{h}en kihoe huk*. While this had been understood to mean ‘all who come here are

welcome', I had long suspected that *mekureme:č^{h}en* was of Virginia Algonquian[48] origin. The origin of the word came to light during a 2022 summer learning event that I facilitated for the language community on the land of the Chickahominy Tribe, based in New Kent, Virginia. The discovery of *mekureme:č^{h}en* as 'nailbiter' was potentially a source of contention, as there has been a current among some future Tutelo speakers that the language should be as purely Siouan as possible. During this event I invited representatives from the Chickahominy (Virginia Algonquian) language community to thank them for allowing us to work on their land, and I presented the story of *mekureme:č^{h}en* making its way into our language as a word to mean 'welcome'. Framed as a way to honor that part of our shared colonial history, Tutelo language community members at the 2022 event opted to continue using *mekureme:č^{h}en* to mean 'welcome' with full knowledge of the word's potentially dark past.

The other example of a word from a language other than Tutelo in the acknowledgment in 70 is the name of the people, *Tohono O'odham*, in line d. This instance is not truly a borrowing, however the meaning of the words in d. provides an interesting turn of phrase when this line of the acknowledgment is fully glossed into English from the original Native languages. While *Tohono O'odham* is the people of this nation's endonym (the name the people use to identify themselves) it also has its own meaning in the Tohono O'odham language.

(72) **Meaning of Tohono O'odham endonym**

Tohono O'odham
desert people
'desert people'

[48] I use Virginia Algonquian as both a designation of tribal confederacy and an interchangeable term for the Powhatan language. This is predicated upon the current intertribal language community consisting of eight Algonquian tribes throughout Virginia. The community is dedicated to the reconstruction and revitalization of its communal language, efforts that largely source historical documentation of the Powhatan language (Powhatan Algonquian Intertribal Roundtable).

Glossing the phrase from both Tutelo and Tohono O'odham into English in 70d reveals repetition.

(73) **Acknowledgment in Tutelo and Tohono O'odham**

wa:hta:ka Tohono O'odham bi:lahuk
wa:hta:ka tohono o'odham bi:–la–huk
Indian desert people good–ASSERT.M–all
'the people of the desert people we thank you all'

5.2 LACK OF DATA

The lack of extant data overshadows Tutelo revitalization and can leave the future speaker community with difficult choices to overcome language gaps. This is highlighted in possession as represented in both 70b and 70e. At the root of this analysis is the concept of land ownership in the Tutelo translation of 'the land of Native peoples'.

(74) **'the land of Native peoples' in Tutelo**

amą:i wa:hta:ka įgi:tǫyukehlewa
amą–i wa:hta:ka *į–gi:tǫ–yuke–hle–wa
land–INDEF Indian *3SG.DAT–belong–PST;DUR–3PL–REAL
'the land of Native peoples'

The asterisk in 74 indicates an error in the verbal construction that will be addressed in §5.3. The verb *gi:tǫ*, 'belong', has been described as expressing alienable possession, i.e. when the item that is possessed is not inherently part of that which owns it (Oliverio 1996:141-2). In the Tutelo pre-revitalization corpus, this verb is documented with only five different objects, each appearing prior to the inflected verb with dative affixation to indicate the possessor.

(75) **Alienable possession with *gi:tǫ***

hisé:p yįgi:towi
hisé:p yį–gi:to–wi
axe 2SG.DAT–belong–INDEF
‘your axe’ (Hale 1883a)

sa:s mįgi:towi
sa:s mį–gi:to–wi
bed 1SG.DAT–belong–INDEF
‘my bed’ (Hale 1883a)

isi: yįgi:towi
isi: yį–gi:to–wi
foot 2SG.DAT–belong–INDEF
‘your foot’ (Hale 1878)

mihąšá migídą
mi–hąšá mi–gídą
1SG.P–handkerchief 1SG.DAT–belong
‘my handkerchief’ (Dorsey 1882)

hąkšík migídą
hąkší–k mi–gidą
stick–DEF 1SG.DAT–belong
‘my stick’ (Dorsey 1882)

Four of the items above—‘axe’, ‘bed’, ‘handkerchief’, and ‘stick’—all track as non-inherent to a possessor and therefore aligning with alienable possession. As a possessed object, ‘land’ has not been documented in the Tutelo pre-revitalization data. Land is not inherently a part of anyone who may own it, therefore it should fall into the category of alienable possession. The categories of alienable and inalienable possession are not absolute, however. ‘Foot’ is an outlier in the list of possessed nouns in 75, being a part of the possessor’s body and thus inherent and

inalienable. Tutelo employs other morphosyntactic patterns to express inalienable possession, and with the exception of 'foot' they apply exclusively to body parts and kinship terms.

Oliverio identified yet another possession paradigm, however, that is documented for only two nouns: one, the object of alienable possession (*at^{h}i:*, house) and the other, an object of inalienable possession (*a:t*, 'father'). These two nouns employ what I posit is a possessive demonstrative prefix *e–* followed by a combination of the possessed object and (an) actor affix(es) indicating the possessor. An example of this is repeated below from parts of the earlier land acknowledgment, 70b and c.

(76) **1PL possession of 'house'**

emą:ti
e–mą:–ti
DEM–1PL.A–house
'our homes'

Previous work on Tutelo has suggested the *e–* prefix might be a demonstrative, a reflex (i.e. a morpheme derived from an earlier ancestral language) of a generic demonstrative **ʔe* in Proto-Siouan[49] (Oliverio 1996:136). I believe its origin may be from a different part of the Proto-Siouan lexicon, another demonstrative **he*. That the first phoneme in this proto-form is dropped in the Tutelo reflex is not unprecedented, as seen in attestations of interrogative pronouns for 'who' in 77.

[49] When writing about historical forms and reflexes in historical linguistics, an asterisk is placed before a form to indicate it is from a protolanguage.

(77) **Interrogative ‘who’ in Tutelo**

Distance	Interrogative Attestations
close	N/A
mid	*heto:a*, *e:towa:*
far	*keto:a*, *ketoa*

Demonstratives in Tutelo are generally classified by distance: those that indicate the greatest proximity begin in [l] or [n] (e.g. *lewa* and *newa*, ‘this’); middle proximity generally begins in [h] (as in *he:wa*, ‘that’); and the least proximity, with [k] (as in *kowai*, ‘there’).[50] Though there are no attestations of the interrogative for ‘who’ at close proximity in 77 or in the pre-revitalization corpus, we see the h- and k-initial forms reflected for mid and far distance respectively. In the case of the mid-distance forms, the interrogative appears as both with and without the initial [h], as either *heto:a* or *e:towa:*. While it is not possible to determine what contexts or semantics are connected to the differing vowel lengths in both attestations, this provides evidence that the initial *e–* prefix in some Tutelo possessive constructions could be synonymous with the attested prefix *he–* morpheme signifying ‘that’.

As plurality in Tutelo is not marked on nouns, note that the construction in 58 could mean ‘our home’ or ‘our homes’. The demonstrative–actor pronoun–object construction above is documented only for Tutelo nouns beginning in [a]. Due to the paucity of the pre-revitalization data, there is no documentation of other [a]-initial words being the object of any possessive grammatical structure in the language. This leaves the language community with the question of

[50] These demonstratives are sourced from Hale (1879 and 1883a).

how to express the possession of ‘land’, *amą:*, as the alienable object of the verb *gi:tǫ*, ‘belong’, or as a part of the demonstrative–actor pronoun–object construction similar to ‘house’ in 76.

(78) **Two strategies for 1PL possession of ‘land’**

demonstrative–actor pronoun–object	*gi:tǫ* and alienable possession
emą:mąi	*amą: mahgi:towi*
e–mą:–mą–i	amą: mah–gi:to–wi
DEM–1PL.A–land–INDEF	land 1PL.DAT–belong–INDEF
‘our land’	‘our land’

In the first example—the combination of a demonstrative, a pronoun, and the object—the [a] at the start of ‘land’, *amą:i*, lengthens the nasal vowel of the first-person plural pronoun, *mą*, that precedes it, yielding the result *emą:mąi*. In both constructions above, the indefinite marker *–i* is located at the end of the noun phrase, leaving ‘land’ in the example with the verb *gi:tǫ* as the shorter word *amą:* and *–i* at the end of the verbal construction, *mahgi:towi*. Based on ‘land’ being both [a]-initial and alienable, either option in 78 would be plausible to express the first-person plural possession of *amą:*. In such a case, I would present this data to the intertribal language community for its leaders to vote on which option they feel is better. This would constitute a moment where data and linguistic analysis would inform and yet be sidelined for the intuition and preferences of the community to be the ultimate arbiters of how to fill this gap in the language’s extant grammar.

The options for ‘land’ in 78 show possession in its first-person plural form to highlight the involvement of the actor pronoun in the paradigm. The translation required for the earlier land acknowledgement, however, was for the third-person plural: ‘the land of Native peoples’, or, to use a pronoun, ‘their land’. The third-person plural pronoun in Tutelo is a suffix that is

independent of the distinction between actor, patient, and dative roles found in all singular and first-person plural pronouns. A variant of this suffix, *–le* (from the morph set {{hné}$_{Do}$, {hana:, hela, le, le:, na, ne, ne:, né}$_{Ha}$}$_{3PL}$), only appears in one of the words documented in the possession paradigm Oliverio identified for [a]-initial objects.

(79) **3PL attestations in [a]-initial possessed objects**

ea:t^{h}ilei	*e:a:ti*	*eat*
e–a:t^{h}i–le–i	e:–a:t–i	e–at
DEM–house–3PL–INDEF	DEM–father–INDEF	DEM–father
‘their house’ (Hale 1883a)	‘their father’ (Hale 1878)	‘their father’ (Hewitt, 1888)

While ‘their house’ in the example above utilizes the third-person plural suffix to indicate multiple possessors, ‘father’ does not. An additional complication appears in the two tokens of ‘father’ above in that the indefinite marker *–i* appears not to be a requisite part of the possessive construction ‘their father’. These are the only three tokens of this paradigm, and they are isolated in the pre-revitalization documentation from any surrounding linguistic context. Due to a lack of sufficient data to make a clear determination as to whether the third-person plural suffix *–le* or the indefinite marker *–i* would be utilized with the [a]-initial object for ‘land’, *amą:*, the language community is now left to select between four options to translate a phrase like ‘the land of Native peoples’.

(80) **Tutelo options for ‘the land of Native peoples’**

a. demonstrative–object–actor pronoun
wa:hta:ka eamą:lei
wa:hta:ka e:–amą:–le–i
Indian DEM–land–3PL–INDEF
‘the land of Native peoples’

b. demonstrative–object–indefinite marker
wa:hta:ka e:amą:i
wa:hta:ka e:–amą:–i
Indian DEM–land–INDEF
'the land of Native peoples'

c. demonstrative–object
wa:hta:ka e:amą:
wa:hta:ka e:–amą:
Indian DEM–land
'the land of Native peoples'

d. *gi:tǫ* and alienable possession
amą: wa:hta:ka mahgi:towi
amą: wa:hta:ka mah–gi:to–wi
land Indian 1PL.DAT–belong–INDEF
'the land of Native peoples'

For new learners in the language community, engaging with the level of detail in 80a-d may seem too granular a task. Selecting from the patterns above and others from underexplored areas of the grammar is important, however, particularly as more progress is made to ascertain the prosody (rhythm and intonation) of pre-revitalization Tutelo phrases. Ample data clarifying under-described parts of the language's grammar would help expedite this process, but source material is insufficient in furnishing such data in the pre-revitalization corpus. While not ideal, granular analysis of limited data similar to 'house' and 'father' is both a slow and necessary part of understanding and recreating a more complete Tutelo grammar.

5.3 Incorrect implementation of verbal morphology

The potential for multiple added prefixes, infixes, and/or suffixes renders the morphology of Tutelo verbs more complex than the English verbs that members of the language community

are most accustomed to. With this added complexity comes the potential for more errors, particularly for those verbal patterns without analogous processes in the English. The earlier land acknowledgment had two such examples of errors in verbal morphology, one of which was found in the original version of 'the land of Native peoples' explored in the previous section.

(81) **Original version of 'the land of Native peoples' in Tutelo land acknowledgment**

amą:i wa:hta:ka įgi:tǫyukehlewa
amą–i wa:hta:ka *į–gi:tǫ–yuke–hle–wa
land–INDEF Indian *3SG.DAT–belong–PST;DUR–3PL–REAL
'the land of Native peoples'

The asterisk indicates that there is an error in the verb phrase above: in this case a third-person singular dative prefix *į–* (translating loosely as 'to him' or 'to her').

The third-person plural of Tutelo verbs is formed by a combination of affixes added to the verb stem, a singular prefix and a plural suffix as seen in 82.

(82) **Third-person plural verbs in Tutelo**

olášpehléwa
o–Ø–láše–hlé–wa
LOC–3SG.A–cut–3PL–REAL
'they cut off a piece' (Dorsey 1882)

ínaxlótahnéwa
í–naxlóta–hné–wa
3SG.P–blister–3PL–REAL
'they are blistered' (Dorsey 1882)

Example 82 presents both active and stative verbs, 'cut off a piece' and 'blister' respectively. The third-person singular affix in active verbs is not overt and is therefore shown in the second line above by the null morpheme Ø– where it is infixed in the verb *o…lašpé*, 'cut off a piece'. The third-person singular affix for stative verbs is *i–* and it is prefixed above to the verb *naxlóta*,

'blister'.[51] Both third-person singular verb forms add a suffix from the morph set for the third-person plural (see §2.4): *–hlé* attaches to *olašpé* and *–hné* to *ínaxlóta*, yielding 'they cut off a piece' and 'they are blistered' respectively.[52]

The pattern of third-person singular pronominal affix–verb stem–third-person plural suffix should apply as an analogy with the dative verb *gi:tǫ* as well. The verb phrase in the original land acknowledgment (separated here to distinguish the morphemes contained therein), *į–gi:tǫ–yuke–hle–wa*, follows this pattern with some minor additions, 3SG.DAT–belong–PST;DUR–3PL–REAL.[53] The data, however, reveal that this pattern does not always apply to the dative verb 'belong'. In all pre-revitalization third-person plural tokens of 'belong', the singular prefix *į–* is not present.

(83) **Third-person tokens of 'belong'**

a. *įgi:towe*
į–gi:to–w–e
3SG.DAT–belong–REAL–INDEF
'his' (Hale 1878)

b. *gi:towe*
gi:to–w–e
belong–REAL–INDEF
'his' (Hale 1879)

c. *hisép įgi:towe*
hisép į–gi:to–w–e
axe 3SG.DAT–belong–REAL–INDEF
'his hatchet' (Hale 1878)

[51] Similar to active verbs, the third-person singular prefix/infix in Tutelo stative verbs can also be a null morpheme.
[52] Both forms have an additional final suffix, –wa. This realis marker provides evidence of an event occurring and has no bearing on the plurality of verb phrases.
[53] Again, the additional morphemes—the past durative and realis markers—have no impact on whether the verb is conjugated for the singular or plural

d. *gitǫne:sel*
gitǫ–ne:–se–l
belong–3PL–ASSERT–ASSERT.MASC
'theirs' (Hale 1878)

e. *hisép gitohne:i*
hisép gito–hne:–i
axe belong–3PL–INDEF
'their hatchet' (Hale 1878)

Examples a-c show the third-person single possessor, 'his', both with specific and non-specific objects. The dative prefix appears to be optional as it is not marked in b. Examples d and e comprise a sample of the third-person plural data for 'belong'. In neither of these attestations nor any other 3PL tokens of 'belong' in the pre-revitalization data is the marked singular dative prefix *į–* present.[54] This would indicate that a more correct verb phrase in the land acknowledgment 83e would also be without the marked dative prefix.

(84) **Non-prefixed 3PL PST;DUR form of 'belong'**

amą:i wa:hta:ka gi:tǫyukehlewa
amą:–i wa:hta:ka *Ø–gi:tǫ–yuke–hle–wa
land–INDEF Indian *3SG.DAT–belong–PST;DUR–3PL–REAL
'the land of Native peoples'

In 84, 'belong' is in alignment with third-person plural tokens of the verb attested in the pre-revitalization data, having no third-person singular prefix attached to the verb stem *gi:tǫ*. The verb still has an asterisk next to it, however, as there remains an error with the third-person plural

[54] This is not only the case with *gi:tǫ* 'belong'. Of the three other documented Tutelo verbs requiring dative affixes, none have instances of the third-person singular dative *į–* as a prefix when the 3PL suffix is also present.

marker (*–hle* above): the order of the morpheme and the past durative marker that precedes it (*–yuke*).

The matter of affix ordering (i.e. where to place prefixes, suffixes, and infixes in relation to one another) in Tutelo is challenging when there are so few examples in the extant data. When authoring the land acknowledgment in 70 in 2021, I likely relied more on what sounded good to American English speakers than on my minimal yet growing familiarity with phrases in Tutelo to patch gaps where I was unable to find a particular combination of affixes. This occurred with the phrase above in 84 where the past durative marker *–yuke* precedes the third-person plural *–hle*. While the rhythm of **gi:tǫyukehlewa* ('it belongs to them') sounded good to my ear, it overlooked the one Tutelo datum where the past durative marker and the third-person plural marker affixed to the same verb.

(85) **Attested combination of 3PL and PST;DUR**

hiyehléyux
hiye–hlé–yux
CAUS–3PL–PST;DUR
'(they cause)' (Dorsey 1882)

Though the example in 85 is the only record in the pre-revitalization data of the third-person plural and the durative marker affixing to the same verb, it shows a person–aspect order opposite to that found in the land acknowledgment thus far: aspect–person. One attestation does not provide strong evidence of a pattern in Tutelo, however it is stronger than an intuition about prosody. Given the evidence in 85, the most correct version of this third-person and durative inflection of 'belong' for the land acknowledgment is in 86 below.

(86) **Most correct 3PL PST;DUR form of 'belong'**

amą:i wa:hta:ka gitǫne:yukéwa
amą:–i wa:hta:ka Ø–gitǫ–ne:–yuké–wa
land–INDEF Indian 3SG.DAT–belong–3PL–PST;DUR–REAL
'the land of Native peoples'

The order of suffixes in the verb above has been corrected to reflect the placement of the attested third-person plural and past durative markers found elsewhere in the language (i.e. the order found in 85). It is not only the ordering of the third-person plural marker that was erroneous in the land acknowledgment, but also its use as it corresponds to animacy in the Tutelo language.

Oliverio described animacy (among other factors including syntactic and semantic roles) as irrelevant for the presence of the third-person plural suffix in Tutelo verbs (1996:79). If this were the case, the phrase from the land acknowledgment 'but our homes are on the land' would be correctly translated as its morphemes were originally ordered.

(87) **'homes on land' in Tutelo land acknowledgment**

mi emą:ti amą:i agine:nese
mi e–mą:ti amą:–i **a–gine:–ne–se**
but DEM–1PL.A–house land–INDEF ***LOC–be.on–3PL–ASSERT**
'but our homes ***are on the land**'

The subject of the verb *agine:*, 'be on' in 87 is *emą:ti*, 'our homes'. Following Oliverio's description, the fact that homes are inanimate should have no impact on the use of the third-person plural marker *–ne* to indicate that 'they are on'. I would posit, however, that animacy is a factor affecting whether this suffixal marker would appear. In all the pre-revitalization data there are no instances in which the third-person plural suffix clearly describes an inanimate subject or

object. Indeed, there is evidence to suggest that Tutelo expresses the third-person plural similarly to Lakota, with a suffix for animate nouns (Ingham 2003:27) and reduplication on stative verbs for inanimate nouns (Ullrich and Black Bear, Jr. 2018:68).

(88) **3PL animate and inanimate attestations of 'good' in Tutelo**

a. *čʰǫge bihle:se*
čʰǫg e–bi–hle:–se
dog UNK–good–3PL–ASSERT
'good dogs' (Hale 1878)[55]

b. *ati apipisel*
ati a–pi–pi–se–l
house UNK–REDUP–good–ASSERT– ASSERT.M
'good houses' (Hale 1883a)

Both examples in 88 have plural subjects and share the same root, *bi:* ('good'). The difference in voicing (*bi:* rather than *pi*) may be a result of the type of consonant that precedes the verb in each sentence (though the transfer of voicing is beyond the purview of this study). The third-person plural suffix only appears with an animate subject, 'dogs'; whereas, the inanimate subject 'houses' utilizes reduplication of the verb (*apipi* rather than *api*) to express plurality.

However scant, the evidence in 88 and the lack of third-person plural suffixation on verbs connected to inanimate nouns suggests that a suffix should be removed from the verb in the land acknowledgment phrase 'but our homes are on the land'.

[55] The vowels [e] and [a] at the start of 'good' examples (a) and (b) above require further analysis to determine they are lexical, morphological, or a phonological insertion. This is beyond the scope of the current study.

(89) **More correct version of ‘but our homes are on the land’**

mi emą:ti amą:i agine:se
mi e–mą:ti amą:–i **a–gine:–se**
but DEM–1PL.A–house land–INDEF **LOC–be.on–ASSERT**
‘but our homes **are on the land**’

The third-person plural suffix *–ne* has been removed from the verb *agine:* (‘be on’) because the subject of this sentence, ‘our homes’, is inanimate. The result is *agine:se* rather than the original *agine:nese*, a verbal construction that appeared as if it were reduplicated (note the repetition of the syllable *ne*). As *agine:* is an active rather than a stative verb, it does not undergo reduplication. Plurality in this line of the land acknowledgment (‘our homes’ rather than ‘our home’) would have to be understood from context cues other than this verb.

The errors in the original land acknowledgment relating to the third-person plural suffix and the possession of land show that without sufficient data, errors in the utilization of Tutelo verbal morphology can occur quite easily. Such mistakes are not limited to verbs however, and the last line of the acknowledgment exemplifies that misinterpretation can also occur in Tutelo adverbs.

5.4 Incorrect use of non-verbal morphology

A common error that has occurred during the revitalization period of Tutelo (from the early 1990s to the present) is the use of the language’s morphemes based on an incorrect assumption of semantic equivalence with English. This was the type of error I made with the adverb that glosses as ‘thus’ in the last line of the land acknowledgment.

(90) **Resultative use of *yax***

yax amą:i waiyą:doste:ka hu:k
*yax amą:–i wai–yą:doste:ka hu:k
*thus land–INDEF 1PL.P–love all
‘*so that the Earth may love us’

To translate from English the longer phrase ‘let us all love the land of Native peoples so that the Earth may love us’, I utilized the adverb *yax* as a resultative, i.e. highlighting an action being the result of a previous one. *Yax* in 90 was meant to convey that the Earth loving people would be the result of people loving the land of Native peoples. However noble this connection may be, the use of the adverb as a resultative is not supported by its attested use in the pre-revitalization data.

(91) **Attested use of *yax–* as a demonstrative**

yaxhenąse
yax–heną–se
that;thus–far–ASSERT
‘that, thus far’ (Hewitt 1888)

The datum in 91 is the only attestation of *yax–* available in the pre-revitalization data. Here, it has been documented as qualifying the distance indicated by *heną*, ‘far’. The evidence in no way supports that *yax* is an indication of a resultative relationship.

Though *yax* is not the correct morpheme to describe the land acknowledgment’s resultative relationship ‘let us all love the land of Native peoples so that the Earth may love us’, there are attestations of a Tutelo structure that could effectively this idea.

(92) **'if' constructions in Tutelo**

a. *lihi:ok, wagela:gita* {{klák}$_{Do}$, {gela:gi, **gela:ki**, kla:ka }$_{Ha}$}$_{SPEAK, TELL, CALL}$
li–hi:–ok wa–gela:gi–ta
if–come–PST 1SG.A–tell–POT
'if he comes, I will tell him' (Hale 1883a)

b. *wihu:ta Jan lihi:ok*
wi–hu:–ta Jan li–hi:–ok
1SG.P–come–POT John if–come–PST
'I will come if John comes' (Hale 1883a)

Both examples in 92 use *if* as a prefix to a verb marked in the past tense (with the suffix *–ok*). The outcome of the clause 'if he (John) comes' is indicated by the potential marker *–ta* suffixed to the resulting verb: *wagela:gita* ('I will tell him') in a. and *wihu:ta* ('I will come') in b. The ordering of the clauses appears to be flexible across attestations, as the 'if' clause appears first in a. and last in b. The phrase from the land acknowledgment, 'let us all love the land of Native peoples so that the Earth may love us', can be similarly structured.

(93) **More correct Tutelo rendering of land/human relationship**

amą:i wa:hta:ka gitǫne:yukéwa limaigyądoste:kiok
amą–i wa:hta:ka Ø–gitǫ–ne:–yuké–wa li–maig–yądoste:ki–ok
land–INDEF Indian 3SG.DAT–belong–3PL–PST;DUR–REAL if–1PL.A–love–PST
'if we love the land of Native peoples'

amą:i waiyą:doste:kita hu:k
amą:–i wai–yą:doste:ki–ta hu:k
land–INDEF 1PL.P–love–POT all
'the land will loves us all'

The sentence in 93 neither uses the verb *kiloxko:* ('let') nor misuses the demonstrative adjective *yax* (that/thus). Though much longer than the exmples in 92, the sentence above uses

'if' and both past and potential suffixes in better alignment with Tutelo's attested morphosyntax, yielding the gloss 'if we love the land of Native peoples, the land will love us'.

The misuse of *yax* in the original land acknowledgment is just one example of what has often taken place in the language community since the revitalization period in the early 1990s: would-be speakers retrofit Tutelo morphemes to accommodate their understanding of language based on the grammatical structure of English. Sometimes this has resulted in a mistake within a constituent class, e.g. as with *yax* being used as a resultative rather than demonstrative adverb. It has also resulted in misuses across constituent classes, like an additional case in which *penihe:i*, the noun for 'copper' was mistaken for a color, a stative verb in Tutelo. The grammatical mechanics aside, these misuses are symptomatic of a community desperate to learn and make use of a language that, even with scant data, merits further description so that the utterances of future speakers can be in better alignment with the structure of Tutelo.

5.5 TRANSLATION

The final type of error in this land acknowledgment is due to translation. It is a misalignment between a few Tutelo words and the English words used to represent them, and they are found in the verbal construction used to express gratitude in the fourth line of the acknowledgment.

(94) **Misalignment in translation of gratitude**

wa:hta:ka Tohono O'odham bi:lahuk
wa:hta:ka Tohono O'odham bi:–la–huk
Indian Tohono.O'odham **good–ASSERT.M–all**
'**the people of the Tohono O'odham we thank you all**'

I exercised artistic license in the 2021 translation that I offered for the Tutelo phrase above. The word *bi:lá:huk* was translated by Edward Sapir in 1914 as the assertion ‘thank you!’. Given the presence of *huk* (‘all’) in this verb, I chose to separately add that morpheme to the translation. The Tutelo word *wa:hta:ka* has only ever been translated as ‘man’ or ‘Indian’ by the researchers who documented the word. A more accurate gloss of the above phrase is found in 95.

(95) **A more accurate translation of gratitude**

wa:hta:ka Tohono O’odham bi:lahuk
wa:hta:ka Tohono O’odham bi:–la–huk
Indian Tohono.O’odham good–ASSERT.M–all
‘thank you Tohono O’odham Indians (the Tohono O’odham Indians are good’)

The translation in 94 would be considered more polished for a professional development workshop than the gloss in 95. However, a translation like ‘the people of the Tohono O’odham we thank you all’ could lead to problems for community members who examine the original phrase in Tutelo more closely. Without understanding that liberties were taken in this translation, they could try to extrapolate the words ‘people’, ‘we’, ‘thank’, and ‘you’ from the original phrase *wa:hta:ka Tohono O’odham bi:lahuk*. As the equivalent of these words is not found in the Tutelo phrase, such an effort could lead to mistaken use of the lexemes: *wa:hta:ka* to mean ‘people’ or some part of *bi:lahuk* to mean ‘we’ for example. Example 78 shows an expression of gratitude and a gloss that are in better alignment.

(96) **A gloss aligned with an expression of gratitude for the Tohono O’odhm**

Tohono O’odham bi:lahuk
Tohono O’odham bi:–la–huk
Tohono.O’odham thank.you
‘thank you Tohono O’odham’

Both the Tutelo phrase and the gloss in 96 are shorter than the earlier version from the 2021 land acknowledgment in example 94. *Tohono O'odham bi:lahuk* is aligned with the remainder of the four-line interlinear gloss in a way that does not leave much room for the misinterpretation of meanings across morphemes in Tutelo.

5.6 Acknowledgments 2021/2025

The analysis and corrections to the 2021 land acknowledgment are based on borrowings, lack of data, incorrect implementation of verbal morphology, incorrect use of non-verbal morphology, and liberty taken in translation. In 97 the lines containing these errors are corrected and placed aside-by-side with the original version. This will allow community members reading this document to see how progressive understanding of the language can foster correction and more accurate use of their ancestor's linguistic legacy. For the sake of clarity and space constraints, the first line of each interlinear gloss is separated from the remaining lines. For longer blocks of text, the fourth and final line of the gloss appears after the morphemes of each portion of text have been identified. Where a correction or change was made, the text in both versions will appear in bold print.

(97) **Original and updated land acknowledgment, 2021 and 2025**

2021	2025
a. *mekureme:č^{h}en kihoe huk*	a. *mekureme:č^{h}en kihoe huk*
mekure–me:č^{h}en kiho–e huk	mekure–me:č^{h}en kiho–e huk
nail–eat come.here–INDEF all	nail–eat come.here–INDEF all
'all are welcome who come here'	'all are welcome who come here'

b. *emą:ti mągine:wa, emą:ti waiohnaho:ma*

e–mą:–ti
DEM–1PL.A–house

mą–gine:–wa
1PL.A.LOC–be.on–real

e–mą:–ti
DEM–1PL.A–house

wai–ohnaho:–ma
1PL.P–work–REAL
'we are in our homes where we work'

c. *mi emą:ti amą:i* ***agine:nese***

mi e–mą:ti amą:–i
but DEM–1PL.A–house land–INDEF

a–gine:–ne–se
LOC–be.on–*3pl–ASSERT
'but our homes ***are on the land**'

d. *wa:hta:ka Tohono O'odham bi:lahuk*

wa:hta:ka Tohono O'odham
Indian Tohono.O'odham

bi:–la–huk
good–ASSERT.M–all
'the people of the Tohono O'odham we thank you all'

e. ***mąkiloxko:yį hu:k amą:i wa:hta:ka įgi:tǫyukehlewa maigyą:doste:ka***

mą–kiloxko:–yį hu:k amą–i
1SG.DAT–let–HORT all land–INDEF

b. *emą:ti mągine:wa, emą:ti waiohnaho:ma*

e–mą:–ti
DEM–1PL.A–house

mą–gine:–wa
1PL.A.LOC–be.on–real

e–mą:–ti
DEM–1PL.A–house

wai–ohnaho:–ma
1PL.P–work–REAL
'we are in our homes, we work in our homes'

c. *mi emą:ti amą:i* ***agine:se***

mi e–mą:ti amą:–i
but DEM–1PL.A–house land–INDEF

a–gine:–se
LOC–be.on–ASSERT
'but our homes **are on the land**'

d. *wa:hta:ka Tohono O'odham bi:lahuk*

wa:hta:ka Tohono O'odham
Indian Tohono.O'odham

bi:–la–huk
good–ASSERT.M–all
'thank you Tohono O'odham'

e. ***amą:i wa:hta:ka gitǫne:yukéwa limaigyądoste:kiok***

amą–i wa:hta:ka
land–INDEF Indian

wa:hta:ka
Indian

Ø–gitǫ–ne:–yuké–wa
3SG.DAT–belong–3PL–PST;DUR–REAL

***į–gi:tǫ–yuke–hle–wa**
***3SG.DAT–belong–PST;DUR–3SG.DAT –REAL**

li–maig–yądoste:ki–ok
if–1PL.A–love–PST
‘if we love the land of Native peoples’

maig–yąd–o–ste:ka
1PL.A–love
‘let us all love the land of Native peoples’

f. ***yax amą:i waiyą:doste:ka hu:k***

***yax amą:–i**
***thus land–INDEF**

wai–yą:doste:ka hu:k
1PL.P–love all
‘*so that the Earth may love us’

f. ***amą:i waiyą:doste:kita hu:k***

amą:–i wai–yą:doste:ki–ta hu:k
land–INDEF 1PL.P–love–POT all
‘the land will loves us all’

The changes made in the updated version reflect a shift away from trying to have Tutelo accommodate English grammar. Both versions acknowledge the Tohono O’odham, the historical stewards of the land I was on during the virtual workshop in 2021. Expressing gratitude to Indigenous stewards of the land is an important part of the practice of land acknowledgments, however more recently I have used the Tutelo language to draw as much attention to the land itself as to the Native peoples who have been in historical relationship to it.

5.7 ACKNOWLEDGING THE LAND

In the fall of 2024, I discussed land acknowledgments with Skidi and Tohono O’odham scholar RM Shield Chief. In that conversation she highlighted for me what I felt had been missing from the past land acknowledgments I had written or translated into Tutelo. While I had

always felt it important to recognize the caretakers of Indigenous lands, Shield Chief expressed that, “Many times these acknowledgments don’t really talk about the land itself” (personal communication). That observation led me to think about the relationality between land and Indigenous people, and how so many acknowledgments have overlooked the part that the actual land plays in this dynamic. Reflecting on this conversation, I came to view so many of these orations I have heard over the past eight years as acknowledgments of land stewards rather than of the land.

During a keynote address on acknowledging traditional homelands at the University of Illinois at Urbana-Champaign in 2019, Hopi Historian Matthew Sakiestewa Gilbert articulated the land’s role in this sacred relationship, stating: “It was here among the tall grasses, flowing rivers, natural springs, and rolling meadows where the (Peoria, Kaskaskia, Wea, Miami, and Odawa, among other) tribes learned about and understood their identity as Indigenous people.” Indeed, the land served as more than a place to be managed and cared for, but also as a site upon which Native nations and the individuals, families, and clans that comprised them explored, attained, and often fought for their sense of self and sovereignty.

I have been asked on a few occasions to help members of the language community think through creating a land acknowledgment in Tutelo. The need for such an acknowledgment would often come at the request of a settler organization (i.e. an institution of higher learning or a civic organization), and given the tendency for these orations to pertain more to land stewards than the land itself, it has sometimes left community members feeling awkward about putting one together. Asking Indigenous caretakers to acknowledge themselves as having history with the land could result in a statement such as, ‘you are on my land’. While the brevity and directness

of this is easy enough to translate into Tutelo, it evokes an understanding neither of the historical relationship between land and people, nor the loss that has occurred as that relationship has changed over time. As Vowel conveyed, “Merely mouthing the names of local Indigenous nations does not automatically confer understanding” (2024).

Around the time I was in conversation with Shield Chief about how land acknowledgments have often been drafted and performed, I was asked to give a guest lecture for a Native American literature course at Elon University. Elon sits on the historical land of the Occaneechi and other tribal peoples who traversed, traded, lived, and/or originated in this region. As a point of departure for the lecture, I opted to do what I had never done nor seen done with a land acknowledgment: consider the agency of the land itself. In this choice I tried to recognize what Sakiestewa Gilbert later identified and admonished in his keynote, “The land has memory, and it still speaks to us. The question, of course, is whether you and I are willing to listen” (2019).

What follows is an appeal to the memory of The Oaks, the part of Elon’s campus where the university originated in the late 19th century. The land there sits underneath a grove of oaks, and the text in 98 is the result of the time I took to listen to trees and soil in November 2024.

(98) **Acknowledging the oaks**

Taskahu: nągise agine:wa lek,	The grove of oaks is here,
mi taskahu: nąnągise agine:hleyukéwa lek	but there used to be groves of oaks here.
Amą:i sá:p lek,	The land here is flat
mi amą:i kisá:pna	but the land was not flat
tok^{h}e:nax higu:n yaléneyukéwa lek	when the ancestors walked here.

tok^{h}e:nax higu:n yaléneyukéwa lek	when my ancestors walked here
amą:i api:yukéwa	the land was beautiful.
Ehį higu:n agine:na lek	Now my ancestors are here
amą:i api:la.	and the land is beautiful.
Wa:kilake taskahu: įgi:towe.	The oaks have their story.
Wa:kilake amą: įgi:towe.	The land has its story.
Komikla:šana,	They have not told me,
mi liomiklašpuyok awagine:ta lek	but if they wish to tell me, I will be here

The acknowledgment above does not feature a morphemic analysis as did the previous acknowledgments in this chapter, for analysis must stand aside so that the ability and willingness to listen may engage.[56] This text is both my recognition and evocation of the trees and the contours of the land, the latter serving as a gateway to conversation with the ancestors who were also in relationship with this place. The text also admits and accepts that there is a loss of communication, a gap that exists between me and the stories waiting to be shared. Just as the language community waits for the efforts of this current generation of language revitalization workers to fill the gaps in morphosyntax and phonology that will effect the greater daily use of

[56] A glossed version of this acknowledgment is located in Appendix C

Tutelo, so too will I wait and listen until the land and the trees find the circumstances right to share their stories with me.

6. CONCLUSION

This dissertation explored several aspects of the Tutelo language, namely its verbs and the morphophonological processes that take place at the end of verb stems. After illustrating features of these processes, it went on to explore the use of verbs and other constituents in a domain with growing popularity over the course of the last decade: land acknowledgments. It did so to show not only the operationalization of my and the language community's growing knowledge of Tutelo verbal constructions, but also to connect with the sentiments of how language revitalization can matter in community and beyond. The approach that was taken in the creation of this dissertation was a blend of description and modeling of engagement with the documentation in an attempt to show interested community members some of what happens beneath the surface of this current iteration of Tutelo revitalization.

6.1 ABLAUT

Relative to previous analysis, the study of ablaut in §3 and §4 revealed greater nuance and variation involved in the process of ablaut, the alternation of vowels at the end of verb stems contingent upon the absence or presence of suffixes or other environments following verbal constructions. The criteria of this dissertation's ablaut study classified ablauting verbs as those with two or more stem-final vowel variations from the set of Tutelo vowels [a, e, i,] and a deletion (Ø) correlating to patterns triggered by subsequent suffixes, words, or other patterns. According to this criterion, the Tutelo pre-revitalization corpus contains 21 verbs at the core of the ablauting verb class. There are an additional 14 verbs with roots identical to those of verbs in

the ablauting class and two with roots that are highly similar both phonologically and semantically. In sum, this brings the list of possible ablauting verbs in the corpus to a total of 38.

Ablaut patterns were assessed according to triggers, i.e. suffixes or environments that follow the ablauting verb stems. The study found a total of 16 suffixes and environments that produce any one or combination of three stem-final vowel variants [a, e, i] and/or a deletion. Represented by Ø, the deletion can be of a stem-final vowel or that vowel plus a preceding consonant (e.g. the verb *giko:ha* deleting its final two segments when followed by the 2PL suffix *–po* in *įgiko**po**le:se*, 'he [sic] calls to you (pl)'[57]). The suffixes and environments comprise eight classes based on what phonological shapes they trigger at the end of ablauting verbs.

The first three of the eight ablaut trigger classes select one stem-final vowel variant or deletion exclusively. These classes comprise the past, past durative, singular and negative imperative, assertive, masculine assertive, irrealis, and interrogative suffixes, as well as the negative circumfix and the environment where an ablauting verb without suffixal elements precedes a noun. The remaining five classes trigger between two and four stem-final vowel or deletion variants from the aforementioned listed, and they include the second- and third-person plural, hortative, imperative, potential, progressive, and realis suffixes, as well as the environments of ablauting verbs occurring either at the end of sentences or as citation forms.

In addition to illustrating a nuanced view replete with vowel variation in Tutelo ablaut, this study identified previously undescribed morphemes in the language: the singular and negative imperative. Additionally, the interrogative and second-person plural suffixes as well as the irrealis marker were newly associated as triggers for stem-final changes in ablauting verbs.

[57] Again, I believe this is more correctly glossed as 'they call to you (pl)'.

This study has raised additional questions necessary to answer to ensure an even deeper understanding of Tutelo ablaut. Just as the assertive markers are gendered, comparative Siouan language research may reveal that other markers involved in the ablaut process are also gendered. This may apply specifically to those morphosyntactic functions that have two quite different suffixal markers (e.g. *–hí* and *–yę́* for the hortative suffix). It may also be that gender factors into changes to the ablauting verb stems themselves (e.g. the fricatives [x] and [š] being a possible gender marker in *owaklax**á*** and *owáklašáwa*, both meaning 'I spoke to him'). Moreover, unpacking the orthographic conventions of the varying documenters who provided the data for this study could prove additionally insightful. Analyzing the various diacritics—marks like the acute accent (˝) or the macron (¯) that are added to letters—used by various researchers of Tutelo, is an important yet involved undertaking that is critical in understanding what if any role that vowel length and tone may play in ablaut. These are all matters for future research on the Tutelo language.

For now, the pedagogy surrounding ablaut and the reawakening of Tutelo cannot wait for all the language research yet to be done. Despite being part of a complicated system of stem-final vowel alternation, verbs like 'eat' and 'laugh' must be used on a regular basis in the community for Tutelo to be once again a daily feature of the Yesáh peoples. As discussed at different points throughout §3 and §4, frequency of use can serve as a guide for where to start with teaching ablauting verb stems. The same can apply to the frequency of use for the triggering suffixes and environments as well. Starting with those commonly utilized suffixes and environments that yield only one vowel alternant in ablauting verbs (i.e. simple ablaut patterns) can provide an ideal place to start as further research on complex ablaut patterns continues.

6.2 Land acknowledgments

Chapter five took the description and analysis of the preceding chapters and showed them in the evolving contexts of land acknowledgments. Several members of the language community work in public-facing capacities as representatives of their tribal nations, and domains such as basic introductions and land acknowledgments support these endeavors. Two land acknowledgments that I composed and delivered in 2021 and more recently in 2024 formed the basis of this chapter, largely a revision process showing the course of my growing understanding and implementation of Tutelo grammar over the course of the last five years.

The 2021 land acknowledgment, delivered to a virtual continuing education workshop for high school teachers, highlighted various areas of the Tutelo's grammar for examination and/or correction of my understanding of the language at the time. Analysis revealed salient points about historical orthography, borrowings, lack of data, incorrect implementation of verbal morphology, incorrect use of non-verbal morphology, and translation in Tutelo that were corrected when necessary to provide an updated version of that original acknowledgement.

Chapter five went on to observe the function of the land acknowledgment as a communication tool. Often a performative gesture towards Indigenous peoples, land acknowledgments have at times focused primarily on people rather than people and land in relationship. Inspired by the work and ideas of colleagues and mentors on the subject, I authored a different type of land acknowledgment in the fall of 2024, one that I hope achieved more balance between people and land than the 2021 version. Both acknowledgments made use of

ablauting and non-ablauting verbs; both acknowledgments may be subject to further revision as understanding of the Tutelo grammar continues to grow.

6.3 Approach

In my work on Tutelo reawakening and revitalization, I have been guided by two competing yet coexisting community sentiments. The first can be summed up in a quote that I cannot properly attribute, for I have heard some variant of it several times over the course of the past seven years. “I want to learn the language so that my ancestors understand me when I cross over.” It is a tremendous honor and burden to try assisting in this endeavor, using language data in an attempt to bridge gaps in language documentation, indeed, to bridge time and the metaphysical space between this life and the beyond. This process has required constant negotiation with community members, finding the words to convey in none too discouraging a way that given the circumstances and the nature of language change, we will likely not ever be able to speak Tutelo in the way that the ancestors did. That quest for language purity and faithfulness is both noble and sadly unattainable.

While some members of the Tutelo language community may aspire to a high level of attainment in the language, such aspirations are not always typical of people in similar language contexts. Leanne Hinton identified more attainable language revitalization goals for small communities without the human or documentary resources available to accelerate progress towards robust language usage. She noted that a smaller community such as the one surrounding the Tutelo language may not need to be extremely ambitious, suggesting that, “It may not have as its goal the reintroduction of the language as the primary language of interaction, but rather

may simply want to give the language a small place in ceremonial life or have a few phrases in community interaction" (2001a:416). This may be in alignment with Tutelo language community members who have approached me in this work asking for nothing more than one word to comprise their entire knowledge of the language. For many others, this would not be satisfactory, and having seen many people reach the milestone of use in ceremonial life and community interaction, it is rewarding to see them asking to know more. This leads to the other sentiment that has driven me in this work.

"How do you say 'have' in the language? Or 'be'?" The inquirers of these translations are as unidentifiable as the requests are ubiquitous in this work. They are indicative of the community's desire to use Tutelo in ways they understand, and to do so with immediacy. This desire prompts another type of ongoing negotiation, one in which language workers including myself would diplomatically educate and share with community members that Tutelo just does not work like English or many other languages they may have learned previously. This then prompts managing the frustration that often ensues, a frustration that at times is born from assuming that copular verbs, possessive constructions, and other familiar features of English grammar are not ubiquitous across all languages including Tutelo.

As I engaged with language work and started managing these negotiations, I originally set out to write this dissertation to be of equal utility for both language community members and linguists. This was done knowing that finding balance between writing for both audiences is difficult to achieve, as the intellectual and social needs of each vis-a-vis language work can be quite different. This was also done knowing that the Yesáh (the people of the Tutelo language community) at the time of writing have been longing for more descriptive and pedagogical

material to be made available to members of the community. While time will tell if this document proves useful for linguists, I will discuss here my hopes for what it may accomplish in the language community.

I recall reading Oliverio's thorough 1996 dissertation on Tutelo in hopes of being able to understand the language of my ancestry. I was armed with an easily accessible search engine in 2018, mistakenly thinking I could work my way through all the in-depth analysis that the dissertation provided with only a few keystrokes to overcome hurdles of unfamiliar terminology. Then I ran into the roadblock that stopped my course in life and sent me in the direction of linguistics and language revitalization: progressive nasalization.

There was no amount of web searches I could do to give me any insight into the phonological change making what would otherwise be a [w] become an [m] in certain Tutelo words. In retrospect, this was a moment when I could have chosen to halt my progress in understanding the language. Fortunately, I chose to dive more deeply into the study of Tutelo and the science of language. Now in 2025, I understand that this dissertation could provide such a moment of choice whether to engage or halt progress with the Tutelo language for community members. I hope that I carry this understanding with the weight and respect that it deserves.

Terms such as "underlying representation," "morphophonological," and "stem-final vowel alternation" hardly make this document easy to read for a would-be first-time learner; nor does the use of morph sets along with countless four-line glosses of Tutelo data. However, I derive comfort from the members of the language community whom I have been honored to regularly work with. As I have learned more linguistic tools to understand Tutelo, so has their

literacy in the jargon, tools, and methods of linguistics grown in tandem. I would like to believe that those community members have a greater chance of understanding this document than I did seven years ago when I met with the fortunate roadblock of progressive nasalization.

My use of linguistic jargon notwithstanding, I have tried to employ linguistic tools to the end of detailed language description and analysis, as well as greater metalinguistic awareness for Tutelo language community members. Through the use of the morph set, numerous glosses, and somewhat sprawling analysis by way of trial and error, I hope that this work on verbal patterns in isolation and real-world application lead the language community to understand the following principles I have found so important to Tutelo reawakening and revitalization:

- This is a language abounding in diversity of expression, both with differing concepts (e.g. stative versus active verbs) and, as the analysis of ablaut would indicate, with variations on similar concepts as well.
- This is not easy work. Translations are not always immediate, for concepts in English and other first languages are often handled very differently in Tutelo grammar. Communication that may be immediately available in a first language may take significantly longer to compose in Tutelo given the current state of the language.
- Mistakes will be made, and this is both natural and beneficial. As additional understanding of the Tutelo grammar comes in waves, so too do the mistakes that members of the language community make with the best of intentions to use the language correctly. These mistakes feed the knowledge of the language in an iterative process, with the mistakes of 2025 leading to the grammatical discoveries of 2030 and beyond.

- This language is absolutely worth the work. With all of Tutelo's challenges and gaps to be filled, every bit of understanding that the community gains is a win. Even with little data, it is possible to speak this language again.
- This language is beautiful.

My final hope for this dissertation and for all the work I do in the language may be best stated in the four-line gloss below:

mįgiloxko: Yesa:sahíya iwaǫ́tha bi:wahiyébita
mį–giloxko: Yesa:–sahį́–ya i<wa>ǫ́–tha (stem: *iǫ́*) bi:–wa–hiyé–bi–ta
1SG.DAT–let Yesa:–speak–emph <1SG.A>? good–1SG.A–CAUS–DESID–POT
'let me do good using Yesa:sahį́ (the Tutelo language)'

APPENDIX A

Letter of support from Yesa:sahį́ Language Project

Yesa:sahį́ Language Project

Martin Saniga, Executive Director
Yesa:sahį́ Language Project
yesanechilanguageproject@gmail.com

Natasha Warner, Professor and Head
Department of Linguistics
P.O. Box 210025, Communications Building 109
University of Arizona, Tucson, Arizona 85721

April 14, 2025

Dear Dr. Warner:

I am writing on behalf of the Yesa:sahį́ Language Project to express the organization's full support of Corey Roberts' doctoral research. Our organization is owned and operated by community members of the Monacan, Haliwa-Saponi, Sappony, Occaneechi, and Ohio Saponi, and our mission is to preserve our ancestral language and catalyze a strong future for our culture and our communities by restoring Yesa:sahį́ to everyday use. Corey's efforts since beginning his graduate training at the University of Arizona have been in full support of the organization's mission and language community's short- and long-term revitalization goals.

We understand that Corey will be writing about his general work with and observations in the language community, focusing both on verb patterns and land acknowledgments. We look forward to seeing his work, as well as the impact it will have on the teaching of our language.

Again, we offer our full support to Corey's research under the auspices of the University of Arizona. Please do not hesitate to contact me if I can provide additional information.

Sincerely,

Executive Director
Yesa:sahį́ Language Project

APPENDIX B

Ablauting verb stems and correlating stem-final vowels (organized by verb roots)

Ø – vowel deletion

Boldface morphs in morph sets –most frequent non-ablauting stem (when one exists)

Morph set abbreviations of language documenters: Do – James Dorsey, Fr – Leo Frachtenberg Ha – Horatio Hale, He – J.N.B Hewitt, Sa – Edward Sapir

a. giko:ha verb root

Verb Morph Set	Stem-final Vowels
{{gikoha, **giko:ha**, gikohi:, giko, kiko:ha}$_{Ha}$}$_{CALL}$	[a, i], Ø

b. ha:ta verb root

Verb Morph Set	Stem-final Vowels
{{o…hate, o…hati, o…xat, o…xáta, o…–xate, o…xáte, o…xaté, o…xati, o…xáti}$_{Do}$, {o…hat,o…hata, o…háta, **o…ha:ta**, o…ha:te, o…ha:te:, o…haté, o…hate:, o…hati, o…ha:ti, }$_{Ha}$}$_{SEE}$	[a, e, i] Ø

c. hi…nda:ha verb root

Verb Morph Set	Stem-final Vowels
{{hi…ndaha, **hi…nda:ha**, hi…ndahi:}$_{Ha}$}$_{RUN}$	[a, i]

d. kaxé:pi verb root

Verb Morph Set	Stem-final Vowels
{{ákaxle:p, **ákaxlé:p**, kaxlé:pi}$_{Do}$}$_{SWEEP}$	[i], Ø

e. kla:ka verb root

Verb Morph Set	Stem-final Vowels
{{klák}$_{Do}$, {gela:gi, **gela:ki**, kla:ka }$_{Ha}$}$_{SPEAK, TELL, CALL}$	[a, i], Ø
{{o…klaša, o…kláša, o…klašá, o…klášá, o…klaxá}$_{Do}$ {o…klák, o…kla:k, o–klaka, o…kláka, **o…kla:ka**}$_{Ha}$}$_{SPEAK, CALL, TELL}$	[a], Ø

f. kse:ha verb root

Verb Morph Set	Stem-final Vowels
{{ị…kšéha, ị…kšé}$_{Do}$, {**ị…kse:ha**, ị…kseha, ị…kse, ị:…kʃe:, ę…kséh, ị…kséh, ị…ksehe, ị…kse:he}$_{Ha}$}$_{LAUGH}$	[a, e], Ø

g. le: verb root

Verb Morph Set	Stem-final Vowels
{{ha…le, **xa…la** }$_{Ha}$}$_{GO THERE}$	[a, e]
{{kilé:}$_{Fr}$,{kle:}$_{Ha}$, {gíle, gle}$_{He}$, {gilí:}$_{Sa}$}$_{GO BACK, GO HOME, COME BACK, COME HOME}$	[e, i]

h. loša verb root

Verb Morph Set	Stem-final Vowels
{{lúši, loša, lóša}$_{Do}$}$_{TAKE}$	[a, i]

i. loxká:ha verb root

Verb Morph Set	Stem-final Vowels
{{**loxkáha**, loxkáhi}$_{Do}$}$_{TEAR}$	[a, i]

j. luta verb root

Verb Morph Set	Stem-final Vowels
{{lút}$_{Fr}$, {**luta**, lu:ta, luti, lu:ti, luti:, lú:t, ɾu:ti}$_{Ha}$}$_{EAT}$	[a, i], Ø

k. nąka verb root

Verb Morph Set	Stem-final Vowels
{{**maha…nąka**, maha…nąka, maha…nąk}$_{Ha}$}$_{SIT, SIT\ DOWN, REMAIN}$	[a], Ø

l. nąta verb root

Verb Morph Set	Stem-final Vowels
{{ną, **nąt**, nąta, nąte nąti, nątí}$_{Do}$}$_{SWALLOW}$	[a, e, i], Ø

m. ste:ka verb root

Verb Morph Set	Stem-final Vowels
{{yądo…stag, yądo…stegi, yądo…stegí, yądo…stegi, yądo…steka, **yądo…ste:ka**,yądo…ste:ki, yądo…sték, yądo…stéka}$_{Ha}$}$_{LOVE}$	[a, i], Ø

n. tkúša verb root

Verb Morph Set	Stem-final Vowels
{{lákatkúš}$_{Do}$, {lakatku:si}$_{Ha}$}$_{BREAK, CUT BY FORCE, STRIKING}$	[i], Ø
{{**latkúša**, latkuši, latkúši, látkuši}$_{Do}$}$_{BREAK, CUT BY HAND}$	[a, i]
{{**nątkúša**, nątkúši}$_{Do}$, {nątku:si}$_{Ha}$}$_{BREAK WITH THE FOOT}$	[a, i]

o. tskiha verb root

Verb Morph Set	Stem-final Vowels
{{lakatskih, lakatski:hi}$_{Ha}$}$_{KILL (PLURAL OBJECT)}$	[i], Ø
{{latski:he, lastski:ha}$_{Ha}$}$_{KILL BY HAND}$	[a, e]

p. xlóta verb root

Verb Morph Set	Stem-final Vowels
{{naxló:t, **naxlóta**}$_{Do}$}$_{BLISTERED, CHAFED}$	[a], Ø

APPENDIX C

Glossed version of *Acknowledging the Oaks*

taskahu: nągise agine:wa lek
taskahu: nągi–se agine:–wa lek
oak sit–ASSERT be.on–REAL DEM
'the grove of oaks is here'

mi taskahu: nąnągise agine:hleyukéwa lek
mi taskahu: ną–nągi–se agine:–hle–yuké–wa lek
but oak REDUP–sit–ASSERT be.on–3PL–PST.DUR–REAL DEM
'but there used to be groves of oaks here'

amą:i sá:p lek
amą:–i sá:p lek
land–INDEF flat DEM
'the land here is flat'

mi amą:i kisá:pna tok^{h}e:nax higu:n yaléneyukéwa lek
mi amą:–i ki–sá:p–na tok^{h}e:nax higu:n yalé–ne–yuké–wa lek
but land–INDEF NEG–flat–NEG when my.grandparent walk–3PL–PST.DUR–REAL DEM
'but the land was not flat when the ancestors walked here'

tok^{h}e:nax higu:n yaléneyukéwa lek amą:i api:yukéwa
tok^{h}e:nax higu:n yalé–ne–yuké–wa lek amą:–i api:–yuké–wa
when my.grandparent walk–3PL–PST.DUR–REAL DEM land–INDEF handsome–PST.DUR–REAL
'when my ancestors walked here the land was beautiful'

ehį́ higu:n agine:na lek, amą:i api:la
ehį́ higu:n agine:–na lek amą:–i api:–la
now grandparent be.on–3PL DEM land–INDEF handsome–ASSERT.M
'now my ancestors are here (and) the land is beautiful'

wa:kilake taskahu: įgi:towe
wa:–kilake taskahu: į–gi:to–we
ABS–tell oak 3SG.DAT–belong–REAL
'the oaks have their story'

wa:kilake amą: įgi:towe
wa:–kilake amą: į–gi:to–we
ABS–tell land 3SG.DAT–belong–REAL
'the land has its story'

komikla:šana, mi liomiklašpuyok, awagine:ta lek
k–o<mi>kla:ša–na mi li–o<mi>klaš–pu–y–ok a–wa–gine:–ta lek
NEG–STEM<1SG.P>tell–NEG but if–STEM<1SG.P>tell–DESID–EP–PST STEM–1SG.A–be.on–POT DEM
'they have not told me, but if they wish to tell me, I will be here'

REFERENCES

ALEXANDER, EDWARD. An Indian vocabulary from Fort Christanna, 1716. *The Virginia magazine of history and biography* 79 (3).303-313.

ALVORD, CLARENCE, and LEE BIDGOOD. 2016. *The first explorations of the Trans-Allegheny region by the Virginians 1650-1674*. Santa Maria, CA: Janaway Publishing, Inc.

AMBO, THERESA, and THERESA ROCHA BEARDALL. 2023. Performance or progress? The physical and rhetorical removal of Indigenous peoples in settler land acknowledgments at land-grab universities. *American Educational Research Journal* 60.103-140.

ARCHANGELI, DIANA, and DOUGLAS PULLEYBLANK. 2022. *Emergent phonology*. Berlin: Language Science Press.

BOYD, WILLIAM, and WILLIAM BYRD. 1967. *William Byrd's histories of the dividing line betwixt Virginia and North Carolina.* New York: Dover Publications, Incorporated.

BRAS, TY. 2018. Indigenous prof critical of U of M land acknowledgement. *The Manitoban* October 11. Online: https://themanitoban.com/2018/10/indigenous-prof-critical-of-u-of-m-land-acknowledgement/35407/.

DEMALLIE, RAYMOND J. (ed.) 2001. *Handbook of North American Indians,* 13. Washington, D.C.: Smithsonian Institution.

DORSEY, JAMES. 1882. Tutelo vocabulary. Ms. 4800:336. National Anthropological Archives, Smithsonian Institution.

FRACHTENBERG, LEO. 1913. Contributions to a Tutelo vocabulary. *American Anthropologist* 15.477-9.

GALLATIN, ALBERT. 1826. A table of Indian tribes of the United States, east of the Stony Mountains, arranged according to languages and dialects. Online: https://diglib.amphilsoc.org/islandora/object/text%3A1183.

GILBERT, MATTHEW SAKIESTEWA. 2019. You are on Indian land: Acknowledging the traditional homelands of Indigenous people at the University of Illinois at Urbana-Champaign. *Beyond the mesas*, 31 October 2019. Online: https://beyondthemesas.com/2019/10/31/you-are-on-indian-land-acknowledging-the-

traditional-homelands-of-indigenous-people-at-the-university-of-illinois-at-urbana-champaign/.

GRACZYK, RANDOLPH. 1996. On ablaut in Crow. Paper presented at the annual meeting of the American Anthropological Association, San Francisco.

GRUBER, JACOB. 1967. Horatio Hale and the Development of American Anthropology 111.5-37. *Proceedings of the American Philosophical Society*

HALE, HORATIO. 1878. Remarks on the Tutelo vocabulary. Ms. 4800:334. National Anthropological Archives, Smithsonian Institution.

HALE, HORATIO. 1879. Letter to Major J.W. Powell and accompanying Tutelo vocabulary. Ms. 4800:334. National Anthropological Archives, Smithsonian Institution.

HALE, HORATIO. 1880a. Letter to Reverend J.O. Dorsey. Ms. 4800:334. National Anthropological Archives, Smithsonian Institution.

HALE, HORATIO. 1880b. Letter to Reverend J.O. Dorsey. Ms. 4800:334. National Anthropological Archives, Smithsonian Institution.

HALE, HORATIO. 1883a. The Tutelo tribe and language. *Proceedings of the American Philosophical Society* 21.1-45.

HALE, HORATION. 1883b. Indian migrations, as evidenced by language: Part II The Dakota Stock.--The Algonkins.--The Chahta-Muskoki Stock.-- The Moundbuilders.--The Iberians. *The American Antiquarian and Oriental Journal (1880-1914)* 5, 2.

HEWITT, J.N.B. 1888. Tutelo vocabulary. Ms. 4800:335. National Anthropological Archives, Smithsonian Institution.

HINTON, LEANNE. 2001a. Sleeping languages: Can they be awakened? In Hinton & Hale, 413-18.

HINTON, LEANNE. 2001b. The use of linguistic archives in language revitalization: The Native California language restoration workshop. In Hinton & Hale, 419-23.

HINTON, LEANNE, and KEN HALE (eds.) 2001. *The green book of language revitalization in practice*. San Diego: Brill.

INGHAM, BRUCE. 2003. *Lakota.* Munchen: Lincom.

JANZEN, MELANIE. 2019. Breathing life into the territorial acknowledgment. *Transnational Curriculum Inquiry* 16.74-81

JEFFRIES, VICKIE. 2019. *Tutelo-Saponi children's word book*. Printed by the author.

KINCHELOE, JOHN. 2019. *Rediscovering Christanna: Native worlds and Governor Spotwood's fort*. Alcalde, NM: Spirit Line Press.

MEUSE, WILLIAM. 2010. *Yesanechi (Tutelo) etymological lexicon*. Printed by the author.

NATIONAL CENTRE FOR TRUTH AND RECONCILIATION. 2025. Truth and reconciliation commission of Canada. Online: https://nctr.ca/about/history-of-the-trc/truth-and-reconciliation-commission-of-canada/.

OLIVERIO, GIULIA. 1996. *A grammar and dictionary of Tutelo.* Lawrence, KS: University of Kansas dissertation. Online: http://b–ok.cc/book/3362115/bb419c.

PARKS DOUGLAS & ROBERT RANKIN. 2001. Siouan Languages. In DeMallie, 94-114.

POWHATAN ALGONQUIAN INTERTRIBAL ROUNDTABLE. 2025. Frequently asked questions. Online: https://www.powhatanroundtable.org/general-4.

RANKIN, ROBERT. 2009. *Siouan Tribes of the Ohio Valley: Where did all those Indians come from?* Paper presented at the 29th annual Siouan and Caddoan Languages Conference. The University of Nebraska, Lincoln, NE.

RICHARDSON, MARVIN. (ed.) 2021. Tutelo-Saponi Monacan Living Dictionary. Online: https://livingdictionaries.app/tutelo-saponi/entries/list

ROBERTS, COREY. 2020. *A grammar sketch of Tutelo-Saponi*. Tucson, AZ: University of Arizona thesis. Online: https://b-ok.cc/book/3362115/bb419c.

ROOD, DAVID. 1983. A preliminary consideration of Proto-Siouan ablaut. *Napao: A Saskatchewan Anthropology Journal* 13.24-28.

SALVUCCI, C.R. 2001. Preface. *The Tutelo language* (pp. 1–5). Bristol, PA: Evolution.

SAPIR, EDWARD. 1913. A Tutelo vocabulary. *American Anthropologist* 15.295-7.

SPECK, FRANK G, and GEORGE HERZOG. 2001. *The Tutelo sprit adoption ceremony: Reclothing the living in the name of the dead.* Harrisburg, PA: Pennsylvania Historical and Museum Commission.

STEWART-AMBO, THERESA, and K. WAYNE YANG. 2021. Beyond land acknowledgment in settler institutions. *Social Text* 146.21-46.

STRACHEY, WILLIAM. 1999. *A dictionary of Powhatan*. Bristol, PA: Evolution.

SWANTON, JOHN. 1909. A new Siouan dialect. *Anthropological essays presented to Frederic Ward Putnam in honor of his seventieth birthday, April 16, 1909*. New York: G.E. Stechert & Co., Publishers.

ULLRICH, JAN, and BEN BLACK BEAR, JR. *Lakota grammar handbook*. 2nd edition. Bloomington: Lakota Language Consortium.

VOEGELIN, C.F., 1941. Internal relationships of Siouan languages. *American Anthropologist* 43.246-9.

VOWEL, CHELSEA. 2024. *Revisiting "Beyond Territorial Acknowledgments"*. Online: https://apihtawikosisan.com/2024/11/revisiting-beyond-territorial-acknowledgments/.

WARNER, NATASHA; QUIRINA LUNA; and LYNNIKA BUTLER. 2007. Ethics and revitalization of dormant languages: The Mutsun language. *Language Documentation & Conservation* 1.58-76.

WILKES, RIMA; AARON DUONG; LINC KESLER; and HOWARD RAMOS. 2017. Canadian university acknowledgment of Indigenous lands, treaties, and peoples. *Canadian Sociological Association/La Soci´et´e canadienne de sociologie* 54.89-120.

WOOD, KARENNE. 2016. *The language ghost: Linguistic heritage and collective identity among the Monacan Indians of Central Virginia*. Charlottesville, VA: University of Virginia dissertation.

YESA:SAHĮ LANGUAGE PROJECT. 2024. *About us.* April 21, 2024. https://www.yesasahin.org/about-us.