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Methodological problems in reclaiming Nuu-wee-ya' from archival materials: The case of verbal prefix semantics

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The purpose of this research is to support the language revitalization and reclamation of Nuu-wee-ya', a Dene language from Southern Oregon and Northern California, and to contribute to the discussions on methodological particularities of archive-based research for language revitalization. Nuu-wee-ya' is a sleeping language comprising three dialects (Tututni/Upper Coquille, Tolowa, and Galice), two of which are currently being reawakened through community efforts and philological analysis of archival materials. Native American philological analysis for language reclamation is a burgeoning field needing methodological introspection. This paper describes the semantic function of a small subsection of verbal prefixes: *na-, ni-, nu-, ne-*, and *nv-*. I also provide commentary on unique factors of language reclamation from a philological analysis. It is hoped that this work can provide information on approaches to analyzing verb semantics to further speaker-learner reclamation of a sleeping language, furthering the development of methodologies in the field of Native American philology as well as contributing to the understanding of the semantic use of verbal prefixes in Dene languages. May this work support the growth and use of Nuu-wee-ya' language and culture.

an-du' tes-'a
'they are learning to talk'

1. Introduction[1] In honor of the speakers who have been lost, in support of learner-speakers breathing life into their languages, and in recognition of all language warriors, those who fight for the life of traditional, underrecognized languages, I present a description of the semantic functions of a subset of Nuu-wee-ya' (Dene) verbal prefix forms.[2] The purpose of this paper is two-fold: The first is to discuss the impacting factors of working from archival materials for language revitalization, as well as discussing methodological approaches. The second component of this paper

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[2] Dene is the preferred name for the language family that is also referred to as Athabaskan or Athapascan.

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is to describe the semantic functions of a prefix subset. This research is motivated by the desire to support language revitalization and language reclamation – that is, to increase speakers' use of Nuu-wee-ya' and to contribute to methodological conversations in the burgeoning field of archive-based language revitalization. The linguistic analysis in this paper supports further analysis of Nuu-wee-ya' as well as the fields of semantics and Dene linguistics.

Nuu-wee-ya' is a Pacific Coast Dene language that has been considered 'sleeping' due to the loss of first-language (L1) speakers. Various efforts to revitalize the use of Nuu-wee-ya' have been occurring in multiple communities for decades. Due to the lack of L1 speakers, linguistic analysis of Nuu-wee-ya' must be done using archival materials.

I discovered over the course of this work that my analysis of the semantic use of lexical elements could not stand on its own without the framing of a language revitalization context because of insufficient examples. Thus, this paper describes the unique features of archive-based research for revitalization and discusses approaches to this type of research as a way to ground the purpose of describing the semantic functions in context.

Archive-based research for revitalization comes with its own challenges. This includes the lengthy process needed to make archival materials analyzable, the variation that comes with multiple orthographic representations, and the limitations of the data. Most archived materials are either handwritten notes or recordings. Both types of these materials require a lengthy process of formatting to make the data analyzable. Materials can be collected by researchers from different time periods using various orthographies. This means that once the materials are digitized, they must be in a consistent modern orthography system to facilitate research across materials within a corpus. This leads us to the ultimate challenge of archive-based research: the limitations of the data. Archival materials only contain what they contain; questions, clarifications, and additions – normal requests for a researcher when working with speakers – cannot be asked of these materials. In this research, I attempt to describe a particularly challenging component of Nuu-wee-ya' verb structure while taking into account the limitations of the data.

The Nuu-wee-ya' verb, like all Dene verbs, can have an intricate structure in which the verb stems combine with a system of lexicalized prefixes to convey a wide range of semantic meanings. Variation in the prefix form confuses the system, making it challenging to know how to gloss and describe the use of any given prefix. Without speakers to confirm or deny findings, it is hard to describe and gloss a prefix with absolute certainty. The verbs are challenging for modern learner-speakers and

impede language use.[3]

Specifically, this paper describes the semantic function of five verbal prefixes (*ni-, na-, nu-, ne-,* and *nv-*) as used in a subset of a corpus of language materials. This subset represents the forms found in the data set. Each of these forms can have multiple functions, and some of these forms have functions that would be expected from a different form. The description of their use in archival materials is intended to aid us in understanding when and how to use them in speech.

The paper proceeds as follows. Following this introduction, there is a section describing the location and classification of Nuu-wee-ya'. The third section covers the history of the language's speaking status and provides pertinent definitions of the statuses. The fourth section describes the Nuu-wee-ya' archive and explores factors that impact archive-based research for revitalization. This section also suggests approaches in the form of a research model. The fifth section describes the orthographies used and explains the structure of the examples in this paper. The sixth section provides a background to the pertinent verb structure, and the seventh section describes the methods used in this analysis. The eighth section is the analysis of the semantic functions of the verb prefix subset (*ni-, na-, nu-, ne-,* and *nv-*). Lastly, the reflection section discusses the implications of these findings for learner-speakers, linguists, and language revitalization warriors.

2. Language: Location and classification Nuu-wee-ya' is an Indigenous Dene language traditionally spoken in what is now known as Southern Oregon and Northern California. Nuu-wee-ya', meaning 'our language,' is a term found in archival materials that refers to the language spoken by its three dialect groups. It is the preferred name of the modern communities as it fosters a wider base of speakers and encourages speakers to learn about all the dialects. The dialects have been described as distinct languages, but as the wishes of the modern community drive my research, I consider all dialects to be of a unified language. It has three main dialect groupings, including Tututni (TUU) and Coquille (COQ) to the north, Tolowa (TOL) and Chetco (CTC) to the south, and Galice (GAL) and Dakubeh to the east (Golla 2011). Each of these subdialects (excepting Dakubeh) have been assigned an ISO code. Other varieties representing different villages within the dialect regions have received limited archival attention, including Chasta Costa (Sapir 1914), Mikwanutene, Euchre, Naltenetene, and Joshua, among others. These varieties seem consistent with the broader dialect region (cf. Hall 2021).

[3] My curiosity with the Nuu-wee-ya' verb began as a learner-speaker. I learned from Gilbert Towner (1929–2009), an elder who stopped speaking his language at age six when he was sent to a boarding school. While he taught us, the learners at the Tutudin-Agness language workshops, the words that he could remember, he was unable to answer our questions about how the verbs were structured and why it was the way it was. He encouraged us to use only the words that he had taught us until someday, research might be done that could answer our questions about how to use the verbs. Due to our lack of communal understanding of verb structure, my ability to use my language was impaired. Gilbert's hope for future research and my budding interest directed me to the study of linguistics so that now, after years of analysis and collaboration, I am beginning to see his hope answered through this paper as well as other current research endeavors.

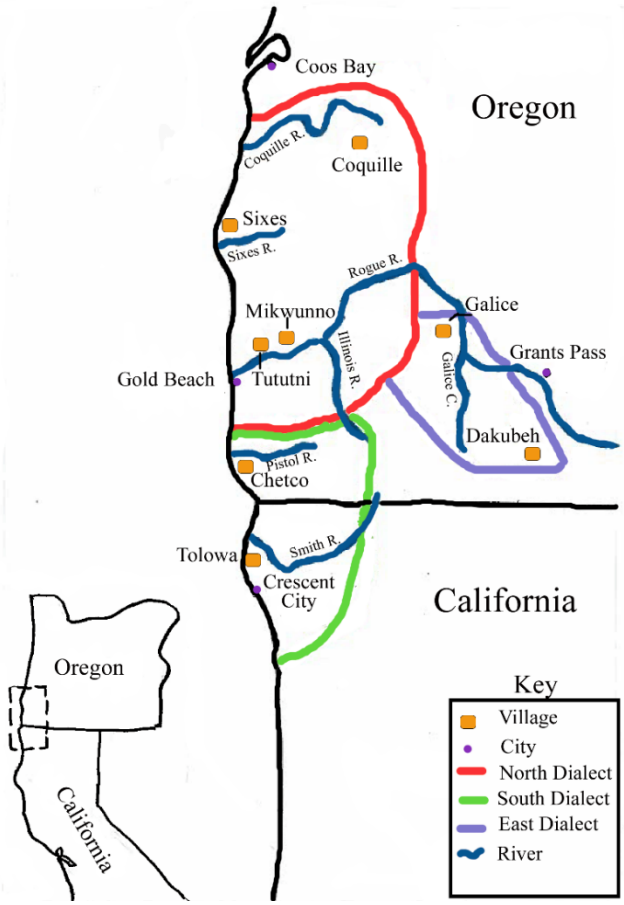

Figure 1. Nuu-wee-ya' dialect regions

3. Speaking status and definitions Due to war, genocide, reservations, and boarding school experiences, use of Nuu-wee-ya' declined from 1850 (Schwartz 1997) until the 1990s, when the language reached a sleeping state (Madley 2011). There is one remaining speaker of the southern dialect (Tolowa) and none of the northern and eastern dialects.

Tolowa Dee-ni Nation community members worked closely with the last speakers and, beginning in the 1980s, created a viable language revitalization process that has resulted in high school classes as well as at-home language revitalization projects, with children learning Tolowa as their first language (Bommelyn & Tuttle 2018). The Confederated Tribes of Siletz Indians, after working with tribal elders and with the Tolowa Dee-ni' Nation in the late 1990s and early 2000s, now teach from materials based on that collaboration and on archival materials collected from elders at Siletz (Wilkinson 2010: 377). They have been having language classes on

the reservation as well as in the tribal office in Eugene, Oregon. A speaker from Siletz, Gilbert Towner – who had spoken his variety until he was six – began working independently of the tribe in 2001 to teach Tututni to a group of willing learners, descendants of those who remained in Southern Oregon and did not go to the reservation. This community is not federally recognized, but they are organized under the nonprofit Confederated Tribes of Lower Rogue. In 2003, the Coquille Indian Tribe began to work with Gilbert Towner as well to start language revitalization efforts. Both communities, Coquille and the Confederated Tribes of Lower Rogue, worked with him until his death in 2009. Today, there are classes and language projects occurring in four different communities: Confederated Tribes of Siletz, Coquille Indian Tribe, Tolowa Dee-ni Nation, and Confederated Tribes of Lower Rogue. My family and several others are committed to awakening Nuu-wee-ya' by raising children in the language. We are becoming learner-speakers, that is, speakers who are learning as we go.

The experiences of the communities revitalizing Nuu-wee-ya' are shared by communities across North America and around the world. The National Breath of Life Archival Institute for Indigenous Language is a program that helps community members access language materials that are held in the archives in Washington, DC. In four iterations, this institute has provided such access to community members of over seventy Native American languages. Other Breath of Life workshops have also occurred at various other archive repositories. The initial Breath of Life workshop started in Berkeley, focusing on California languages; this workshop has been occurring every even-numbered year since 1996, each time bringing over sixty community members and thirty linguists to work together (Baldwin et al. 2018). The participation in Breath of Life institutes and workshops shows that many people are engaging with archival materials to learn their language, which in turn demonstrates the relevance of this work to a broader community than Nuu-wee-ya'.

Today, many traditional, Indigenous, and/or minority languages have become sleeping languages. Like extinct languages, they have stopped being spoken, but unlike them, they have archival language materials (Leonard 2011). Analysis and description of such archival materials can allow modern learner-speakers to learn how to speak their language. In North America, these archival materials were previously gathered by linguists, explorers, and researchers who traveled to reservations to elicit data. These archival materials are often hard to read and are incomplete, but they are invaluable to communities awakening their languages because they provide a link from long-gone speakers to modern community members. They contain all the patterns and vocabulary from which modern speakers can learn.

When a language is sleeping or endangered, the process of supporting its use has been called language revitalization (Hinton & Hale 2001; Hinton 2003; Tsunoda 2005; Fishman 2006). Over the last few decades, there is a steadily growing movement in which communities are undertaking language revitalization; alongside this movement, researchers both contribute to and study this work (Hinton & Ahlers 1999; Campbell 2011; Hinton 2011; Olthuis et al. 2013; Zahir 2019). One crucial element that has a major impact on the nature of language revitalization work is whether the community still has access to L1 speakers. When a language has no

speakers, it must be learned from the analysis of archival materials, a process that recently gained its own name, 'language reclamation,' particularly in work done in Australia (Amery 2016). This term has taken a deeper meaning by some to include all components of a "larger effort" (Leonard 2012) needed to support the right to speak one's own Indigenous language after a point in time that it has been taken away (Leonard 2007). There is a clear relationship between the two uses of this term, as the "larger effort" needed to undertake all the aspects of language reclamation requires archival research so that a particular community or speaker can learn and use their language. Language reclamation is a subtype of revitalization work (Pérez Báez et al. 2018: 466). This process requires a great deal of linguistic analysis of the archival materials. Doing linguistics for the sake of language reclamation can differ from other forms of linguistic analysis because the questions, methodological process, and findings are all driven by social justice and the community goals of language acquisition rather than by theoretical interests. In this paper, I refer to this type of research as 'archive-based research for revitalization,' a type of research in the field of 'Native American philology.'

4. The archive and the impacting factors of language revitalization This section describes the Nuu-wee-ya' archival language materials and provides an analysis of the impacting factors of conducting research for the sake of language revitalization from archival sources, as well as methodological approaches to these factors.

4.1 Nuu-wee-ya' archival materials Nuu-wee-ya' archival materials were collected from many speakers by various researchers from the 1850s to the 1960s. Some materials have records of who was the language authority, but many do not.[4] Some of these materials are short word lists, whereas others fill thousands of pages and hours of recordings, including a large amount collected by both J. P. Harrington and J. O. Dorsey. Materials have been collected on the varieties from all three dialect regions. Some of the materials contain elicited word lists, whereas others contain texts.

From this large and varied corpus, I selected the data set for this analysis from materials given by Ida Bensell, a speaker and language authority of the Euchre and Sixes varieties of the northern dialect of Nuu-wee-ya'. The work was done at the Siletz Reservation sometime in the 1930s. I look specifically at one notebook, Notebook 108, collected by Elizabeth Jacobs. Jacobs provides over 1,000 pages of archival materials organized in her research notebooks and slip notes. She was married to Melville Jacobs, a linguist who also collected large amounts of linguistic materials on languages throughout the Pacific Northwest. Both of their materials are housed in the Jacobs Collection in Seattle (Seaburg 1982).

Notebook 108 consists of 195 pages of handwritten elicitation, with 1,977 tokens consisting of single-word elicitations (e.g., verbs, numbers, postpositions, and pronouns) and phrases. The data set for this paper contains 1,218 tokens, as it is limited to entries that were single-clause verbs. I selected Notebook 108 because it is a single document that contains a large sample of verbs, giving me a large amount of

[4] *Language authority* is a term with more positive overtones than the term *language informant*.

data to explore while controlling for dialect and orthographic differences.

4.2 Impacting factors and methodological approaches to language reclamation The purpose of this section is to explore some unique factors of archive-based research for revitalization and to discuss some approaches to these factors. This section begins with a background to the field of Native American philology and archive-based research for revitalization to provide context for the description of the unique factors that impact such research. This is followed by a discussion of methodological approaches that accommodate these factors. I hope to facilitate a deeper communal understanding of the issues regarding this work, as well as to feed the discussion of best methodological practices.

Native American philology for the purpose of language reclamation is a burgeoning field, led by individuals and communities who have pioneered the process of extracting language information from archival materials in such a way that an individual or community may use them. This work has been led by the Baldwin family and David Costa on Myaamia (Baldwin et al. 2013; Baldwin et al. 2016; Baldwin & Costa 2018), Jesse Little Doe Baird (2013) on Wampanoag, Megan Lukaniec (2018) on Wendat, and Kayla Begay (2017) on Wailaki. It has also been supported through events such as the Breath of Life workshops, mentioned earlier in §2.2. As the field has grown over the last thirty years, the focus has remained on producing language for learner-speakers, with little discussion of the methodological processes and particularities of doing philological research for the purpose of language reclamation. This lack of discussion does not reflect lack of interest but rather the urgent need to focus on producing materials that learner-speakers needed yesterday. The movement is growing large enough to support a critical analysis of how and why this work is done.

4.2.1 Factors in language revitalization research Here, I focus on four different yet related factors associated with conducting archive-based research. The first is actually a conglomerate of factors that are related to the fact that this research is connected intimately with a particular community of people. The second factor is the challenge of learning and researching the structure of a language with no or limited L1 speakers available to answer questions. The third factor is the methodological challenge of working with the archival materials themselves – that is, how to process, analyze, and synthesize the materials as a prerequisite to disseminating information about the language or internalizing and ultimately using the language. The fourth factor is the huge investment of time and energy to get the materials in an analyzable state. There are multiple community-related factors that come with archive-based research for revitalization. I discuss several below.

The first – and primary – factor is that this type of work is around because of a community. It is inspired by the desire to support a community's use of its language, and indeed, it would not exist without a need for it in the community. This is a multifaceted factor that includes the residual impact of the historical inequality and oppression that have occurred to communities needing reclamation. Inequality and oppression have led to social and personal trauma that can impact the ability

of modern community members to learn and develop a relationship with their language. As such, this work is a form of social justice, and much consideration should be given to align the work with respect to community beliefs and culture.

Another community-related factor is the researchers' own relationship with the community. Whether a person is from the community or not, this relationship provides inspiration and motivation to accomplish the work. An additional factor is the need to prioritize the community's linguistic needs in the research framework by designing research questions around topics that are challenging for learner-speakers.

Turning to the second factor, learning a language with no L1 speakers means, at least initially, that there are no language experts to consult with throughout the linguistic analysis process. There is no intergenerational transmission by a language authority and, crucially, no one to consult on an ongoing basis. In addition, there are few teachers or learning materials. To construct enough reliable resources, learner-speakers must return to the source archival materials and painstakingly sift through the bits of language that have been recorded to find linguistic patterns. Any teaching materials must be developed, created, and produced by the very people learning the language. Additionally, usually descriptive work done on a language is designed to explain a linguistic phenomenon to other linguists, not to inform how to use and talk in a language. In particular, descriptive linguistics does not answer speakers' questions of how to use the structures to communicate accurately.

The third factor follows directly from the second factor: In the absence of speakers, the defining element of sleeping languages is that we have only archival materials from which to gain language knowledge. The challenge of working with archival data is really about having both too much and yet not enough data. The sheer amount of work it takes to digitize one handwritten note or one minute on a cassette means that it requires a deep investment of time and effort to even compile the resources to begin looking for linguistic patterns, and until you process the material, you cannot assess what it is that you have. Further, once you get it processed, the data are full of gaps, like partial paradigms and other incomplete patterns, and with no speakers left, this is all researchers and learner-speakers have to learn from. At the same time, we cannot ask a speaker to offer their perspective on the overwhelming variation present in the data, leaving no straightforward way to determine whether variation represents reliable (but irregular) patterns, dialectal or idiolectal variation by speakers, or even transcription errors by the linguist. Such unexplained variation is often too much for beginning learners who are trying to make conscious sense of patterns, seeking explanations about why or how irregularity exists.

Language archival materials in North America were collected by quite a few researchers and explorers at the start of the twentieth century. Most of these individuals had distinct (from each other) ways to write down a language. Many languages have records from multiple dialects represented in archives. Additionally, the researchers who wrote these materials do not always distinguish meaningful sounds. Sometimes this means that the materials contain too much information, giving noncontrastive sounds a symbol in their orthography. Other times, this means that sounds that are hard for English speakers to distinguish are not included. Therefore, the records can either contain too much information, such as when the transcriptions record details

of idiolects for various speakers, or too little, such as when the transcriptions do not record some of the contrastive sounds in a language's inventory. The differences in orthography and the differences in dialect and/or idiolect, plus any inconsistencies, idiosyncrasies, or mistakes written by the linguist, create a massive amount of variation across any particular corpus of a language.

Of course, to be able to analyze archival materials, one must gain access to them. It requires a lot of time and energy to find, sort, and digitize them, as well as to take any other steps needed to make the materials analyzable. For some communities, this means someone going into the archives, taking photos of each original handwritten page, then typing the numerous pages into digital files, while keeping track of the original location of each token in the archival materials. It is a huge hinderance to reclamation work that it requires such an enormous investment to take the first step.

4.2.2 Methodological approaches to language revitalization In this section, I discuss six different methodological approaches that can help archive-based research for revitalization. Some of these approaches apply to multiple factors. The six approaches are 1) design research with the community in mind, 2) prioritize digitizing materials, 3) address variation at early stages of the research, 4) seek both the typicality and the reality in the data, 5) use episodic and cyclical research models, and 6) keep a positive attitude.

4.2.2.1 Designing research with the community in mind Just as there are multiple types of community-related factors that impact this research, there are multiple approaches to designing and implementing research with the community in mind. My purpose here is not to describe all the ways to do this but rather to discuss two ways of approaching research that can be beneficial.

First is for the researcher to consider their own relationship to the community and how that impacts their work. Whether or not they are of that community, any researcher working with a community both impacts and is impacted by the community. When the researcher reflects on these impacts, they can be more conscious of what types of synergy are actually occurring. While this type of reflection is not always necessary to report in published materials, to a future speaker-learner, such reflection can help frame why a researcher makes a particular choice in their research design. Of course, there are researchers who have been doing this for a long time. It is just a point to say that it is at least important to ponder.

Second is for the researcher to explore epistemologies and research models meaningful to the community and, when possible, to incorporate their features into the research. Every community has ways of interpreting information in their environment and determining what is important to consider when analyzing a situation. Previous studies on Indigenous methods suggest focusing on respect to all involved, an awareness of the relationality of what the researcher brings, an acceptance of Indigenous peoples' expanded models of knowledge systems, reciprocity, and support to the collective (Singh & Major 2017: 9). Acknowledging and using the epistemological and research models of a community can help maintain respect for the culture as well as ease frustrations that are felt in some communities as a result of past

linguistic work. It can also inform the research process by bringing different ways of looking at information. Fundamentally, it creates a more inclusive research style. I must point out that while this is important for all researchers to consider, the work of acknowledging the epistemological and research models of a community must be led by those in the community with awareness of Indigenous research methods.

I am a member of a network of extended communities active in modern Indigenous culture. I am part of this network because my father felt it important that I know about our Indigenous culture. This was hard for my father to teach – he did not know our culture either because his father did not think it was important. I am the seventh generation since the last fluent speaker in my family. My family is not certain which Indigenous people we originally belong to. Due to family stories and archival materials, I now believe that we are a blend of Chasta Costa from the Rogue River in Oregon and Karuk from the Klamath River in California. However, because careful records were not kept, there is no way to know for certain.

What I do know is that people in my family spoke a Nuu-wee-ya' dialect. When I do language research, it impacts me because as I analyze the words, I feel a connection to my ancestors, a connection that I otherwise would not feel. When I see the words, I hear the voices of family members speaking in my mind, some of whom are gone now. This means that while I work, I am distracted by joy and sorrow. I started language work as a learner, a member of a community trying to bring back a language and use it together. I do this work while talking in Nuu-wee-ya' with my children, which impacts me, because more than anything I want to be able to talk with them in our language. The desire for connection has been my greatest inspiration for this research because it is the only pathway to learning to say the things I want to say. This is why my work is centered around how to convey linguistic information to my community.

I explain this here to illustrate how community factors can impact research. None of these factors make a clear physical difference, but along with others, they affect the decisions I have made. I believe that my expressing this here helps you better understand my motivation for asking the questions I ask.

To incorporate Indigenous research methods in my research, I maintain awareness of the impact of our historical trauma on all aspects of modern Indigenous life, I acknowledge the impact my experience has on my research, and I design my research and results with the community's gain in mind, attempting to ensure reasonable understandability of even my most technical findings as I focus my efforts on topics that will help learners speak. Throughout my research, I maintain respect for our ancestors, our departed speakers, as well as our future generations. I also acknowledge that metaphysical clues can be a method to support understanding of a phenomenon (Deloria 1997). Ultimately, I acknowledge that this research is a ceremony for me, my journey into the wilds, crying for a vision to bring to my people, so that they may live better.[5]

[5] 'Crying for a vision' is referencing Indigenous vision quest ceremonies. The Lakota word for vision quest is *haŋblec'eya* (Ingham 2013: 262), literally 'crying for a vision.'

4.2.2.2 Initial prioritization of digitizing materials Initially, the most critical part of this research process is getting the materials digitized as soon as possible. This process is time-consuming and, at times, overwhelming, as it requires priority of energy and funding because until digitized, materials are not readily available for analysis and cannot be easily shared. While factors like funding and other responsibilities can impede this process, perseverance will provide resources that can be used by many. Additionally, for those learning their language, the process of digitizing materials allows the researcher to gain more time and experience with the language, helping the learning process. I have found that the most valuable way to get through the mountain of digitization is with a team of like-minded, interested people, passionate to create access to language materials.

The language materials used in this research were digitized through an NSF-DEL grant. This grant supported a team of two PIs and three transcribers to work for three years, allowing us to digitize a vast portion of the Nuu-wee-ya' language materials and enter them into a database in the Indigenous Language Digital Archive (ILDA).[6] This ILDA database is searchable, and each digital record is linked with the original image from scanned field notes or the audio file from which it was transcribed. At this stage of the project, we have processed 30,000 pages of handwritten notes and 50 hours of audio recordings from multiple sources over nearly a century of time so that they are now available for analysis. This step had to happen before the research described in the remainder of this paper could be done. It took our team more than 2,500 hours over three years to create the online archival database of our materials.

4.2.2.3 Managing language variation in the archives Before any linguistic interpretation can be done on the archival material, a researcher must be able to determine what variation is meaningful and what is nonmeaningful. Meaningful variation is what makes dialects different. Nonmeaningful variation comes from inconsistencies made by the linguist, especially due to attention to detail (whether excessive or insufficient) and speaker idiolect. Such variation introduces complexity of form to the written record but does not change the meaning of a word or reflect a distinctive dialect.

In previous research (Hall 2021), I conducted a detailed analysis of the differences in how one linguist wrote cognate stems in nine varieties of our three dialects. That research revealed that some sound changes were consistent between dialects, whereas others were not. This preliminary analysis identifies meaningful variation based on regular sound patterns and, at least initially, considers all other variation as a distraction, which can essentially be put out of the picture. This step makes it possible to describe and honor the variation that belonged to the distinctive dialects and then to regularize the inconsistent sound changes, which I analyzed as reflecting

[6] NSF-DEL Award #1562859, PIs Janne Underriner and Scott DeLancey. This work would not have been possible without the tenacity, ingenuity, and vision of my teammates, Jerome Viles and Carson Viles, and the guidance and support of our PIs, Janne Underriner and Scott DeLancey. Without our team, we would not have this database. Shu' 'aa-shu'-la!

only the nonmeaningful type of speaker or linguist variation. With the distracting variation removed, it is much easier to move on to grammatical analysis.

4.2.2.4 Identifying typicality versus reality Second language teaching often focuses on explicitly teaching the regular patterns (typicality) before moving on to teach the irregularities (reality) of the patterns. The function of the distinction between 'typicality' and 'reality' is to distinguish uses that are straightforward from uses that are not clear. This is to provide learners with typical information as well as to frame future research questions on the reality of the data.

In this research, I define 'typicality' as the intersection of the form-function correspondences that are most regular and most common. By common, I mean most frequent in the corpus, but of course, most sleeping languages (including Nuu-wee-ya') do not have the kinds of large corpora of naturalistic speech that would allow estimation of the true frequency of forms in use. This forces us to make hypotheses about typicality based on the frequency of occurrence in given data sets, hypotheses that can be tested and refined as further processing of the archival records builds up a fuller corpus. By regular, I mean being able to recognize combinations of forms and then to predict, or at least to understand, their meanings as resulting from combining the expected meanings of their parts. I identify regularity in form-function correspondences based on my reading of the linguistics literature and my own intuition as a learner-speaker. I define 'reality' as including the typical data, plus all the different uses of a form that appear weird or irregular, uses that do not conform with the typical patterns.

In philological language reclamation work, perceiving our data and findings in terms of typicality versus reality can be helpful. Since we cannot ask a speaker to offer their perspective on the overwhelming variation present in the data, there is no straightforward way to determine whether variation represents reliable (but irregular) patterns, dialectal or idiolectal variation by speakers, or even transcription errors by the linguist. Such unexplained variation is often too much for beginning learners who seek explanations about why or how irregularity exists. From this perspective, seeking typical patterns helps build an initial foundation, to which we can later add irregular patterns.

This is not to say that the reality of the data is too much to handle over time, just too much initially. The need to produce materials quickly for learner-speakers means that we must begin to articulate findings before all the data have been analyzed. Starting with typicality helps disseminate what is currently understood to the community, but investigating the reality uncovers the elements of the language that require more study.

4.2.2.5 Using an episodic and cyclical research model To maintain a focus on the needs of learner-speakers, I recommend an episodic and cyclical approach in which research occurs in concentrated bursts, with time in between to consult with communities of learner-speakers and linguists. Data and questions are revisited in a cyclical manner as research and understanding progress. This approach addresses the needs of seeking typicality in the midst of the variability of reality in a large cor-

pus whose analysis is extremely time-consuming. Each episode of research can revisit the same questions while expanding questions via new findings, taking time between each episode to reflect on the findings and engage with learner-speakers. The cyclical approach is to revisit the same data and questions after new understandings are attained. In the current research, I focus on the verbal morphology of a single dialect, with the intention that the next episode of research will expand the scope to address other dialects as well.

4.2.2.6 Keeping a positive attitude The nature of this work can be discouraging, so positive attitudes are necessary to be successful. In particular, this includes accepting gaps in the data and sometimes having to relearn, as new analyses lead to new understandings. It is important to celebrate the small steps and to recognize the work being done, as well as to bear in mind that the possibility of bringing a language back to use after it has slipped into a state of slumber is miraculous. It is also important to keep the purpose focused on social justice and in support of the community's language needs and interests.

In my work, I find the positive focus challenging at times, especially when managing the pressure of all the work still left to do. I find my positive focus by reminding myself that every time I or my children speak in our language, it is more than what would have been spoken if we were not doing this work.

I have written here about these factors and methodologies and my approach to the research because, as a learner-speaker and a linguist in training, when I embarked on this research journey, these are things nobody told me. This section has not been easy to write, in part because there are so few models for sharing the personal aspects of our research journeys. I turn now to the linguistic analysis that was enabled by the preparation of the database.

5. A note about orthographies and examples In the Nuu-wee-ya' language revitalization process, many different writing systems have been used. The Tolowa Dee-ni Nation developed an orthography that is being adopted as a standard way to write Nuu-wee-ya' (Collins 2008). In this paper, examples are written in both the modern orthography and the International Phonetic Alphabet (IPA).

To aid the reader, I would like to clarify the format of the examples. It is first important to note that the modern orthography uses dashes (-) differently than in standard linguistic glossing practices. The first line in (1) is written in the modern speech form, where the dashes mark syllable boundaries. The second line is in IPA, where the dashes indicate affix boundaries. In the modern speech form, open, non-word-final syllables are written with two vowels to help learner-speakers to identify and articulate vowel length accurately. This vowel lengthening is not a contrastive feature of morphemes but rather a feature of the prosody. This is why it is not reflected in the IPA form of the line. You can see this in the difference between the first part of the second word on lines one and two. In line one, it is *nee-*, whereas in line two, it is [ne-].

(1) *wvn nee-srisht-'aa-te*

wən	ne-	ʂri-	ʃ-	t-	'a	-te
for	ne.TH-	ʔ-	1S.SUB-	d.CL-	think	-FUT[7]

'I will think about it' [EJ 230:10:1]

Examples are labeled with their location in Jacobs's notebook. This is indicated on the far-right side of the last line. This document is accessible on the online ILDA Nuu-wee-ya' database.[8] Examples are cited with EJ (to represent Elizabeth Jacobs) followed by a series of three numbers separated by a colon. These numbers indicate the original page, line, and phrase number of the example in the document. These numbers can locate the example in the database by using the 'Go to' function of ILDA, selecting 'Melville and Elizabeth Jacobs Collection,' and then adding the three numbers to the fields 'page,' 'line,' and 'phase.' Some grammatical information is cited from another of Elizabeth Jacobs's notebooks (Notebook 110), which is not yet on ILDA. Because this is undated, this is cited as (Jacobs 110). When discussing meanings of morphemes, I rely heavily on the glosses of Jacobs (108; 110) as well as my own experience and intuition as a learner-speaker.

6. The structure of the Nuu-wee-ya' verb The purpose of this section is to provide background information about the verb and the prefixes examined in this paper. Here I provide context on the verb structure and how the meaning of the verb is formed, as well as to introduce how the subset of prefixes examined in this research has been previously described in Nuu-wee-ya' and other Dene languages. A common theme in the literature across the Dene language family is the fascination, description, and pursuit of understanding a complex system, along with the acknowledgment that there is much more to understand (Sapir 1914; Hoijer 1945; Golla 1976; Kari 2000).

6.1 How Dene verb structure conveys meaning Across the Dene family, verbs are composed of a word-final stem with a variable number of prefixes (Mithun 2001: 361). Enclitic particles convey functions such as nominalization, location, and past and future tense. Dene verbal prefixes can be organized into distinct function categories that can be described by a position template chart. Golla (1976: 221) presents the order of the Tututni prefixes from left to right as outer adverb or postposition (sometimes with an argument prefix); object, deictic subject, plural, inner adverb;

[7] Abbreviations: 1 - first person, 2 - second person, 3 - third person, 3O3 - third person acting on third person, ADVL - adverbializer, AREAL - areal-situational, AUG - augmentative, CL - classifier, COMP - completive, DET - determiner, FUT - future, IMPF - imperfective, INC - inceptive, INCH - inchoative, INDF - indefinite, LOC - locative, NEG - negative, NOM - nominalizer, OBJ - object, OPT - optative, P - plural, PEG - peg-element, PERT - pertaining to, PFV - perfective, PL - plural, PLU - pluractional, POSS - possessive, PROG - progressive, PROH - prohibitive, PROM - prominence, PST - past, Q - question, REC - reciprocal, REF - reflexive, REP - repetitive, S - singular, SP - stative perfective, STAT - stative, SUB - subject, TEL - telic, TH - theme, ? - unknown

[8] https://mc.miamioh.edu/ilda-nuuweeya/

aspect marker; first- and second-person subject markers; classifier; stem.[9] This first template leaves some room for a finer-grained ordering, which requires deeper analysis than has been done on Nuu-wee-ya'.

There are two major categories of verb prefixes. I define these categories not based on the functions of the prefix, but rather on how they contribute meaning to the verb. The defining feature of the first category is the ability to co-lexicalize with the stem and contribute to the lexical meaning of the verb. I call this category 'lexicalized prefixes.' They express a range of semantic functions, including adverbial information about the direction or position of the verbal situation as well as Aktionsart, noninflecting aspectual information about the underlying timing of the verb, such as inceptive or repetitive action (Axelrod 1993: 33). The second category of prefixes provides information about the arguments and the aspect, mode, and tense system of the verb. I refer to these as the 'inflecting prefixes.' Two different types of aspect are conveyed in Dene verbs. Lexicalized aspect conveys information about the core nature of the verb and is an essential part of how a particular verb is expressed. Inflecting aspect conveys if the action is imperfective, perfective, or progressive and does not impact the core meaning of the verb. This paper only examines lexicalized prefixes. This section introduces how they interact with the verb stem and contribute to verb meaning.

Cook & Rice (1989: 34) describe layers of Dene verb structure and associated meaning. These layers of the verbal word are 1) the verb stem alone, 2) the verb theme, and 3) the verbal word (defined morphologically). The verb theme "is equivalent to the basic lexical entry – it includes all the material that must be present no matter what derivational and inflectional morphology is performed" (Rice 2000: 15). The term *verbal word* refers to a complete form that contains all the morphemes needed to use the verb in speech (Cook & Rice 1989: 34). This is a valuable way to conceptualize the difference between lexicalized and inflecting prefixes: lexicalized prefixes belong to the verb theme, whereas inflecting prefixes are added to the verb theme to make a verbal word. Table 1 illustrates this layering of prefixes in the verbal word *naa-dv-ghvsh-t'u* /na-də-ʃ-t'u/'I already bathed' (EJ 108 281:9:1).

Table 1. Layers of the verbal word

				t'u bathe	**Verb Stem**
naa- ITERATIVE-	*dv-* REFLEXIVE-			*t'u* bathe	**Verb Theme**
naa- na- ITERATIVE-	*dv-* də- REFLEXIVE-	*ghvsh-* ɣə- PVF-	ʃ- 1S.SUB-	*t'u* t'u bathe	**Verbal Word**

[9] While the use of the term *postposition* on a morpheme on the left edge of a word might seem incorrect to those unfamiliar with Dene linguistics, this term is accurate, as the postposition is found with its argument preceding it either as a prefix or a separate lexical item.

Dene languages are unique in that inflecting and lexicalized prefixes are interspersed, meaning that lexicalized prefixes are found in all regions of the prefix template with inflecting prefixes in between different lexicalized prefixes and the stem. This means that morphemes that contribute to the verb meaning and are the elements of the verb theme, are not necessarily adjacent. Holden (2013: 447) aptly describes the verb stem as a "lattice," which would include the word-final stem and lexicalized prefixes, upon which other "grammatical features" can be "interlaced." For more information on the lexicalization process of Dene verbs, refer to Kari (1989; 1992) and Rice (2000). As mentioned previously, the focus of this work is on a subset of the lexicalized prefixes. Lexicalized prefixes are not uniform in how they contribute meaning to the verb. The next part of this section will discuss the three main ways lexicalized prefixes relate meaning to the verb.

6.2 Types of lexicalized prefixes Again, lexicalized prefixes are the prefixes that co-occur with the verb stem to convey a particular verbal meaning. I find there to be three main ways that a lexicalized prefix can be connected with a verb to create meaning, in other words, three ways that prefixes contribute to the verb theme: 1) alternating, 2) fixed, and 3) possibly thematic. These three categories are defined by the type of semantic contribution they provide to the verb theme. Crucially, the designation of the type of a lexicalized prefix is not based only on the prefix but on how the prefix and stem combine together and what happens to the meaning if a different prefix is combined with the stem. This means that as the type of lexicalized prefix is determined by the combination of stem and prefix, a particular prefix form can have an alternating, fixed, or possibly thematic use depending on the verb theme in which it is used.

In a best-case scenario, there would be speakers who can provide their perspective and guide me on the range of uses of lexical morphemes. However, in the case of this archive-based research, that is not possible. Thus, categorizing morphemes into these three types must be done by analyzing the behavior of each prefix within the archival data in comparison, as well as how the meanings change when the prefix is replaced by a different prefix. I categorize each type of lexical morpheme by examining if a particular prefix does or does not provide semantic detail to the verb as evidenced in the translations (thematic); if they do provide semantic information, I examine whether they consistently provide the same information (fixed) or if they provide different information depending on which verb stem they are paired with (alternating).

The first two ways lexicalized prefixes can be part of the verb meaning, 'alternating' and 'fixed,' denote how the use of a prefix in a verb theme changes the overall meaning of the verbal word. This is indicated by looking at what happens when different prefixes are combined with the same stem. With 'alternating' lexical prefixes, the verb theme keeps its general meaning, but the semantic meaning changes somewhat. The semantic difference might convey timing or direction of the same verb, such as 'toss up' or 'toss down' in English. With 'fixed' lexical prefixes, the use of the lexicalized prefix changes the underlying meaning of the verb, such as how the use of 'up' in English when combined with the word 'throw' creates an entirely new

meaning in the phrase 'throw up' that is distinct (although possibly idiomatically traceable) to the word 'throw' meaning 'to toss something in the air with one's hand.'

As a learner, a major challenge in my process of learning to speak Nuu-wee-ya' has been understanding how the lexicalized prefixes work. Understanding when a prefix is functioning in a fixed, alternating, or possibly thematic way is my primary reason for undertaking this particular research question because as a learner, not understanding this has been a major impediment to my speaking ability.

When a prefix has an alternating use in a verb theme, it can be replaced by other lexicalized prefixes without changing the overall verb meaning. For example, both (2) and (3) have the stem *ya*, which means 'one person/animal goes,' as well as the completive prefix *ni*.[10] However, (2) has *da-* 'movement in inwards direction,' whereas (3) has *tr'e-* 'movement out through.' The prefixes *da-* and *tr'e-* have the same type of function, indicating direction of movement. Neither *da-* nor *tr'e-* changes the overall meaning from 'go.' Rather, each just adds a piece of information that can be swapped for another piece of information to create a semantic difference.

(2) *daa-nii-ya*
da-	ni-	ya
in-	COMP-	go.1
'he came in'		[EJ 171:9:1]

(3) *mat-k'wvsh-nu' tr'ee-nii-ya*
matk'wəʃnu'	tʂ'e-	ni-	ya
door	out-	COMP-	go.1
'he went through the door'			[EJ 306:2:1]

In contrast, when a prefix has a fixed use, the overall meaning of the verb stem is different. In (4), the inceptive prefix *te-* and the optative *nu-* combine with the same verb stem as *ya* in (2) and (3), but now the combined verb theme is translated as 'be tired' by Jacobs.

(4) *dis-ne tee-nul-ya*
disne	te-	nu-	l-	ya
man	INC-	OPT-	l.CL-	be tired
'he is tired'				[EJ 259:7:1]

In (4), the stem *ya* is glossed in (4) as 'be tired' and not as 'go' as it was in (2) and (3) because it is combined with the lexicalized prefixes *te-*, *nu-*, and *l-*, creating a distinct verb theme with a specific meaning. We do not know if the form in 'go' or the form in 'be tired' originated as the same stem and then drifted apart (possibly due to metaphorical extension) or if they originated as two separate stems that, by chance, ended up with the same form. Future comparative work might uncover if

[10] Thanks to a reviewer's suggestion, I am clarifying the use of the term *completive*. It is not meant to mean 'momentaneous' as used by Li (1930).

stems of the same form originated from the same source or not, but for the problem at hand, it is helpful to think of this type of prefix as derivational without placing importance on the origin of the stem(s). If these do originate from the same source, the verb theme for 'tired' could be as a morphological idiom, that is, when there is an idiom made up by morphemes that is somewhat clear to speakers (Holden 2013). Without speakers or more archival evidence, I do not want to label anything as a morphological idiom, yet; I await future analysis to fill in holes, and only then will I be able to determine if it will be possible to interpret what is a morphological idiom and what is not.

To reiterate, the term *alternating* refers to the relationship that a set of lexicalized prefixes can have to a given verb stem with a relatively consistent meaning, whereas *fixed* refers to the relationship between lexicalized prefixes and a verb stem to create verb themes with unpredictably different meanings. If a prefix use creates an 'alternating' meaning difference, the prefixes can be swapped out to provide a specific range of adverbial or aspectual information about the verb. If a prefix use creates a 'fixed' meaning, then the use of that prefix (or set of prefixes) results in an entirely different verb meaning that is not necessarily expected.

The third type of lexicalized prefixes, 'possibly thematic' prefixes, include instances in which a particular verb stem is found with only one lexical prefix (or particular set of thematic prefixes). Due to the lack of L1 speakers, we cannot be sure whether a stem is truly thematic or whether it can take other prefixes that just were not recorded. We also do not know if other prefixes would create a fixed or alternating relationship with the verb stem. Thus, I am using the term *possibly* because our understanding of the use of prefixes with these verb themes might develop as research continues. Since the entire corpus is not yet analyzed, we might yet find examples to prove that a given prefix is not thematic (i.e., the only one allowed with a specific stem). In a way, the use of this term is to simply flag the instances in which a particular verb stem has no instances of verb themes made with different lexicalized prefixes.

In (5), we see the stem *svt* 'wake up' with the directional *tr'e-* meaning 'out' and the completive prefix *ni-*. The prefix *tr'e-* is found with all four examples of *svt* 'wake up' in the data set. In (6), the stem *yvxw* 'whisper' combines with the form *nuu-*, whose meaning is undetermined at this time. This is the only example of *yvxw* 'whisper' in the whole data set. Therefore, the prefix *tr'e-* (5) and *nuu-* in (6) are possibly thematic.

(5) *tr'ee-nii-svt*
tr̨'e- ni- svt
out- COMP- wake up
'I woke up' [EJ 236:7:1]

(6) *nuu-yvxw*
nu- yəxw
nu.TH- whisper
'whispering [EJ 112:6:2]

Dene verb prefixes can be organized into categories of meanings that follow a specific template. Sometimes a prefix form can represent two different prefix categories and template positions. This means that when describing the semantic functions of prefixes, I have to assume that different functions of a particular form could be functions of distinct morphemes in certain prefix positions, rather than a different function of the same morpheme. Likewise, there are verbs found in the data set with the same stem but different attributed meanings. For both prefix and stem, I use the term *form* to refer to a certain sequence of sounds and the term *prefix* or *stem* when referring to a specific morpheme.

7. Methods The purpose of this section is two-fold: The first is to explain the steps taken to do this analysis, to frame how the analysis fits into a larger research framework. The second purpose is to explain how the analysis is presented.

This analysis was born out of questions I started asking as a learner nearly two decades ago about how the verbs worked. When I finally had a large enough body of archival materials on which to conduct analysis, my initial goal was to describe the semantic functions of all the lexicalized prefixes and look at how they collocate with verb stems.

To isolate and focus on my particular research questions, I limit the data set to single-clause verbs in which I examine only the verb stem and lexicalized prefixes, setting aside consideration of inflectional prefixes or enclitic particles. After coding the data set for the stem form and lexicalized prefixes, I assign 'typical glosses' to each thematic prefix. However, even though the total number of examples for most prefixes is not great, there is no shortage of confusing counterexamples; this makes the task of explaining the 'reality' of all the prefixes rather daunting.

After describing the many functions of the lexicalized prefixes, it became apparent that the idiosyncratic ways the prefixes worked, along with the limited data, did not provide me with clear evidence to describe these prefixes to a linguistic audience because most prefixes had too many counterexamples to make it possible to describe all the semantic functions and explain the oddities. Thus, I narrowed my analysis to focus on a subset of similar forms that are challenging to gloss but at least readily identified. These forms are challenging primarily because a form can have a function expected from other forms in the subset or it can have no apparent semantic function at all. To describe the 'reality' of these prefixes, I separated them by form [*ni-, na-, nu-, ne-,* and *nv*]. I then charted their semantic functions. Then I closely examined each use to determine the typical uses and separate them from the nontypical uses. Having concluded my explanation of how I do this work, I turn now to the findings regarding the various semantic functions associated with the forms.

8. Analysis of semantic functions This section describes the semantic functions of the forms [*na-, ni-, nu-, ne-,* and *nv-*]. I begin by reporting the number of tokens and types of each form (§8.1). After discussing the frequency of each prefix, I will describe each prefix form in turn, discussing first how they have been defined for

Nuu-wee-ya' and presenting cognate findings, and then I will discuss my analysis on the findings in the data set from Notebook 108 (Jacobs 108).

The prefix of *na-* (§8.2) seems to fit the broad aspectual category of PLURACTIONAL (as defined in Mattiola 2019). In contrast, both *ni-* (§8.3) and *nu-* (§8.4) have multiple meanings that are more difficult to combine into a single abstract category. The form *ni-* is found to indicate completive action, states, and the position 'inside'; also, its use is obligatory with a particular set of adverbial prefixes. In some examples, the form *nu-* clearly indicates the physical location of an argument of the verb and, in others, optativity, but in an equal number of examples, it is not clear what contribution *nu-* makes to the meaning of the verb. The prefix *ne-* (§8.5) remains confusing, but there are a few examples where semantic contrasts suggest a value of telicity and possibly agentivity. Finally, it is not clear if the form *nv-* (§8.6) is actually a distinct morpheme given that in all but one example, it is possible to consider it an allomorph of one of the other four prefix forms.

For each prefix, after I present how it has been discussed previously, I present examples of the typical uses. I divide typical uses into the categories of alternating, fixed, and possibly thematic (discussed in §6.2). At the end of each section, I discuss and summarize the use of the undetermined examples. These are the elements of the data that do not fit into the typical analysis and that still await explanation. These summaries provide a basis for future research.

8.1 Frequency of prefix forms The subset of prefixes analyzed in this paper is found in 33% of the entire verb data set (Figure 2). Of all the verbs in the data set, the form *na-* was found in 13%, *ni-* in 8%, *ne-* in 7%, *nv-* in 3%, and *nu-* in 2%.

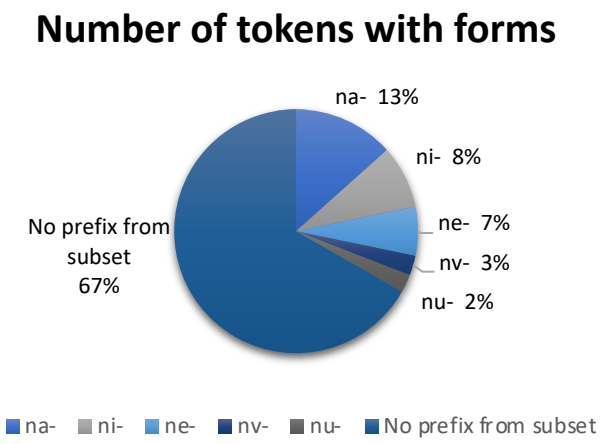

Figure 2. Number of tokens with forms

Table 2 indicates the number of tokens and distinct verb themes in which each prefix form is found. Recall that a 'verb theme' is a combination of stem and lexicalized prefix(es) that yields a particular meaning (see §6.1).

Table 2. Number of tokens and verb themes

Prefix	Number of tokens	Number of verb themes
na-	162	47
ni-	101	48
nu-	78	20
ne-	28	15
nv-	32	20
Total in data set	1217	623

This data set has 1,217 tokens of verb words, each containing 623 verb themes. The prefix form *na-* (line 1) is found in 162 different verbal tokens and with 47 distinct verb themes. The prefix form *ni-* (line 2) is found in 101 different verbal tokens, with 48 distinct verb themes. In line 3, the prefix form *ne-* is found in 78 different verbal tokens and with 20 distinct verb themes. The prefix form *nu-* (line 4) is found in 28 different tokens and with 15 distinct verb themes. The prefix form *nv-* was found in 32 different tokens with 20 distinct verb themes.

8.2 Lexicalized prefix na-: Typically pluractional Of the prefixes considered in this paper, the prefix form *na-* is the most frequently used, occurring in 162 examples with 44 stems. This finding is parallel to what Bommelyn (1997: 22) finds for the southern dialect, when he states that the prefix *na-* is found with many different verb stems, particularly 'movement' verbs. Golla (1976: 225) defines two meanings for *na-*, 'iterative/thematic' and 'motion/direction action.' Sapir (1914: 303) refers to *na-* as indicating 'indefinite movement on ground and water' and 'back.' Jacobs (110) lists four different meanings: 'iterative' (p. 79), 'motion' (p. 83), 'movement down or up' (p. 84), and 'back' (p. 85). In other Dene languages, this form is always found with iterative meaning, sometimes in combination with other meanings. In Wailaki (Begay 2017: 202), *na-* has been described as 'iterative,' 'repetition of action,' and 'reversal.' In Hupa (Golla 1970), it is analyzed as 'inversion' (p. 124), 'down' (p. 125), 'around in a circle' (p. 125), 'drawing along a line' (p. 134), and 'thematic non-directional motion' (p. 134). In Slave (Rice 1989: 432), it is analyzed as 'continuative' and 'customary.' In Witsuwit'en (Hargus 2007: 438), there is a prefix described as 'iterative,' with the *ne-* form. In Mattole, *na-* is defined as 'indefinite or continuous movement,' 'down to the ground,' 'again,' 'iterative,' 'referring to the eye,' and 'reaching out' (Li 1930: 58).

Given the range of glosses that *na-* has received, it is important to note that it is challenging to determine the particular use of this prefix form. One task in this section is to determine which of these glosses might be combined into a single more abstract

category, that is, whether they are indeed different glosses or there is one gloss that could envelop all the different uses described. When it comes down to setting glosses, this is a question as to whether it is better to be a splitter or a lumper. While splitting the hairs of glosses can be helpful for linguistic analysis, any chance to lump can be helpful for second-language learners. The two justifications for giving multiple glosses for the same form would be either that different meanings correlate with the form occurring in different positions or that the meanings are just too semantically different to lump together. In recent work, Mattiola (2019) identifies a large, more abstract category of pluractional that includes, among the typically attested core meanings, iterative and spatial distributive. The latter is a clear label for the motion over land and water that has been described as a second function of *na-*. We will first look at the pluractional examples and then at the state examples.

8.2.1 *na-* 'pluractional' In this section, we begin with examples in which the use of *na-* appears to be alternating, such that a verb stem with *na-* has a pluractional meaning that is absent without *na-*. Then we look at examples where the use of *na-* seems to have a fixed use, creating an entirely different verb. Finally, we consider examples in which the stem is only attested with *na-*. Such examples are potentially thematic, meaning that the prefix form is required for the meaning of the verb to be conveyed.

We begin with examples that illustrate the alternating aspectual use of *na-* to indicate simple repetitiveness of action, which is traditionally glossed as iterative. In examples (7) and (8), the stem *srvd* 'touch' without *na-* indicates a single act of touching.

(7) *ch'aa-dv-ghvshlh-srvd*

tʃʾa-	də-	ɣə-	ʃ-	ɬ-	ʂəd
REP-	REF-	PFV-	1.SUB-	lh.CL-	touch

'I touched it' [EJ 143:13:1]

(8) *ch'aa-dv-ghvl-srvd*

tʃʾa-	də-	ghə-	l-	ʂəd
REP-	REF-	PFV-	l.CL-	touch

'he touched it' [EJ 143:14:1]

In (9), the same stem found in (7) and (8) with *na-* indicates continuous or repetitive touching by a first-person subject.

(9) *ch'aa-naa-dvshlh-srvd*

tʃʾa-	na-	də-	ʃ-	ɬ-	ʂəd
REP-	PLU-	REF-	1.SUB-	lh.CL-	touch

'I keep touching it' [EJ 143:15:1]

Note, however, that in (10), with a third-person subject, *na-* does not occur even though the translation indicates the same continuative/iterative semantics.

(10) *jaa-chu chaa-dvl-srvd*

dʒa	-tʃu	tʃa-	də-	l-	ʂəd
here	-AUG	REP-	REF-	l.CL-	touch

'he keeps touching it' [EJ 143:17:1]

A more prototypical pluractional function can be seen in (11–13) with the stem *xwi* 'vomit.' 'Vomiting' fits Mattiola's (2019: 33) definition of an EVENT-INTERNAL PLURAL: "a situation which is internally plural because it is composed of several repetitive sub-situations that are reciprocally intertwined (not discrete) and, thus, difficult to distinguish from each other." In the next few examples, we can see this in examples with different aspect. In (11), the reading is imperative.

(11) *łhaa naa-ghat-xwi'*

ɬa	na-	ɣa-	d-	xwiʔ
PROH	PLU-	PFV-	d.CL-	vomit

'don't vomit' [EJ 249:8:1]

However, in (12), we see a completed action. Presumably, both examples are involving internal iterations. The use of *na-* here is not changing regardless if the action is completed or not.

(12) *naa-ghaa-svst-xwi*

na-	ɣa-	sə-	s-	d-	xwi
PLU-	PFV-	STAT-	1S.SUB-	d.CL-	vomit

'I vomited' [EJ 385:5:1]

In contrast, the progressive form in (13) contains the thematic prefix *ya-* 'up,' highlighting the pathway of caused motion rather than the repetitive nature of the event.

(13) *yaa-ghvsht-xwi*

ya-	ɣə-	ʃ-	d-	xwi
up-	PFV	1.S.SUB	d.CL-	vomit

'I vomit' [EJ 385:4:1]

In (14) and (15), we see the stem *k'wasr* 'fall' in (14) with the prefix *ee-*. This prefix has a wide semantic meaning that seems to indicate direction towards a referent specified in a noun phrase. Golla (1970: 132) defines this form in Hupa "as (nominal

[11] As you can see, the stem *xwi* changes form, found as *xwi'* in (11) and *xwi* in (12) and (13). This is a result of a semiproductive stem form variation that reflects aspectual differences. The irregularity of this system has not yet been explored greatly in Nuu-wee-ya' and therefore is not indicated in the glosses. There can also be stem variations that do not seem to reflect aspect. Stem form variation is not the focus of this paper, but readers should be aware that stem variation is normal, if not understood.

phrase) is or does." In (14), the noun phrase is 'the bank', indicating a single directional act of falling in the direction of the bank.

(14) *k'wee-yuu-s'e 'ee-ghii-k'wa'sr*

k'weyusʔi	ʔe-	ɣi-	k'waʔɬ
bank	PEG-	PFV-	fall

'he fell down the bank' [EJ 276:11:1]

In contrast, in (15) with *na-*, it means to 'fall on ice,' an action which has lots of iteration (and movement in space).

(15) *xwvt-tvn k'wvt naa-ghvt-k'wasr*

xwətən	k'wət	na-	ghə-	d-	k'waɬ
ice	on	PLU-	PFV-	d.CL-	fall

'he fell on the ice!' [EJ 292:4:1]

In (16–18), the stem *ts'ilh* 'grease' usually takes a direct object to indicate the item that ends up covered in grease (16–17).

(16) *xv-nvs ch'v-k'a ghii-ts'ilh*

xənəs	tʃ'ə-	k'a	ɣi-	ts'iɬ
canoe	INDF-	grease	PFV-	grease

'he greased his canoe' [EJ 312:5:1]

(17) *ch'v-xa mee ch'v-ghii-ts'ilh*

tʃ'ə-	xa	me	tʃ'ə-	ɣi-	ts'iɬ
INDF-	dish	in	INDF-	PFV-	grease

'he greased the dish' [EJ 312:2:1]

In contrast, in (18), there is no object specified and the prefix *na-* emphasizes the repetitive nature of the action rather than the item that is affected by that motion.

(18) *ch'v-k'a naa-yislh-ts'ilh*

tʃ'ə-	k'a	na-	yi-	s-	ɬ-	ts'iɬ
INDF-	grease	PLU-	3O3-	STAT-	lh.CL-	grease

'he greased it' [EJ 312:1:1]

Examples (19–21) show a similar distinction with three of the four attested stems for 'throw': *nelh*, *selh*, and *galh*. In (19), the directional prefix *ta-* 'into' combines with *selh* 'throw' to indicate that the rock is being thrown into the water, and in (20), the directional prefix *ya-* 'up' combines with *galh* 'throw' to indicate that the stick is being thrown upward.

(19) *chʌn yaa-ghishlh-galh*

chən	ya-	ɣi-	ʃ-		ɬ-	gaɬ
stick	up-	PROG-	1S.SUB-	lh.CL-	throw	
'I throw a long stick up'				[EJ 244:14:1]		

(20) *see taa-ghilh-selh*

se	ta-	ɣi-	ɬ-	seɬ
rock	water-	PFV-	lh.CL-	throw
'I threw a rock [in] water'				[EJ 244:11:1]

In contrast to these verbs, which profile a specific direction of caused motion, in (21), the addition of *na-* to the stem *nelh* 'throw' emphasizes the repetitiveness of the action (i.e., that something is being thrown 'around'). Note that 'around' is also compatible with a possible directional reading of *na-*, in which the action is spatially distributed.

(21) *dʌ-waa naa-yee-nelh*

dəwa	na-	ye-	neɬ	
maybe	PLU-	3O3-	throw	
'is he throwing something around?'				[EJ 368:8:1]

Note that (21) is also our only example of the stem *nelh* 'throw,' which would ordinarily cause this use of *na-* to be considered possibly thematic. However, as a group, these stems seem to show the same kinds of patterns as the stems we have just seen, so it seems reasonable to assume that each could occur with a similar range of prefixes.

With the stem *nʌk* 'tell,' *na-* is used for telling a story (22), which definitely has event-internal plurality.

(22) *tʂ'ʌs-da shʌlh-nas-xwil-nʌk*

tʂ'əsda	ʃə-	ɬ-	na-	s-	xwi-	l-	nək
story	1S.OBJ-	with-	PLU-	STAT-	AREAL-	l.CL-	tell
'tell a story'	[EJ 252:13:1]						

In (23), *na-* is used for telling something indefinite, perhaps suggesting that something be repetitive or have internal plurality.

(23) *de shilh-naa-xwil-nʌk*

de	ʃi-	ɬ-	na-	xwi-	l-	nək
something	1S.OBJ-	with-	PLU-	AREAL-	l.CL	tell
'tell something'	[EJ 252:12:1]					

In (24), without *na-*, the verb indicates a specific direction of speech, towards the addressee 'you.' Once again, with *na-*, the emphasis is on the internal complexity of the event with no specification of a particular direction.

(24) *tv-xwii-dvn nvlh-xwvl-nvk*

təxwi	-dən	nə-	ɬ-	xwv-	l-	nək
every	-LOC	2S.SUB-	with-	AREAL-	l.CL-	tell

'he tells you everything' [EJ 369:9:1]

In (25–32), we look at examples of the stem *sri* 'make, cook.' Obviously, it is possible to describe cooking as an activity with many iterative internal subevents, but this is not the only way to conceptualize it. Therefore, it is not surprising that this stem occurs with an alternating use of *na-*. In (25) and (26), with first-person singular and plural subjects, *na-* is used to talk about future cooking (note that only (26) has the future-tense marker *-te* following the stem).

(25) *srtaa nashlh-sri*

ʂta	na-	ʃ-	ɬ-	ʂi
food	PLU-	1S.SUB-	lh.CL-	make

'I will cook' [EJ 210:7:1]

(26) *nee srtaa naa-ghil-srii-te*

ne	ʂta	na-	ɣi-	ɬ-	ʂi	-te
1P.PRO	food	PLU-	PROG-	lh.CL-	make	-FUT

'we will cook' [EJ 210:11:1]

Even though it has the same future translation as (26), (27), with a second-person subject, has no *na-*; this might be more of a command (i.e., to begin cooking).

(27) *nvn srtaa 'ilh-sri*

nən	ʂta	ʔi-	ɬ-	sri
you	food	IMPF-	lh.CL-	make

'you will cook' [EJ 210:10:1]

In (28), the simple form 'cook' takes the indefinite subject prefix *tr'v-* and does not profile the multiple actions of cooking.

(28) *srtaa tr'vlh-sri*

ʂta	tʂ'ə-	ɬ-	sri
food	INDF-	lh.CL-	make

'cook' [EJ 210:2:1]

In (29), the combination of *na-* and *sri* translates as an old word for telling a story, and here, the use of *na-* is parallel to its use with *nvk* 'tell, storytelling.'

(29) *shvlh-naa-silh-sri*

ʃə-	ɬ-	na-	si-	ɬ-	ʂi
1S.SUB-	with-	PLU-	STAT-	lh.CL-	make

'old word for telling story' [EJ 369:3:1]

Turning to the reading of *sri* as 'make,' in (30), *na-* occurs with 'making shoes,' which could indicate that repetitive actions are involved in making shoes or could indicate another core semantic value associated with the pluractional, that of PARTICIPANT PLURALITY (Mattiola 2019: 26), used here because the outcome of the act of making is a plural object.

(30) *xe naa-yis-xa*

xe	na-	yi-	s-	xa
shoe	PLU-	3O3-	STAT-	make

'he made shoes of it' [EJ 204:8:1]

In contrast, there is no *na-* in 'making a face' (31), an action that is both more punctual and sent in a specific direction – both meanings that have already been seen with the absence of *na-*.

(31) *ni'-srvn yeslh-sri*

niʔ	-ʂən	ye-	s-	ɬ-	ʂi
face	-stink	3O3-	STAT-	lh.CL-	make

'he made a face at me' [EJ 251:13:1]

The absence of *na-* in (32) could be because the object, 'hammer,' is singular, or it could suggest the hypothesis that making a hammer is an inherently less iterative activity than making shoes.

(32) *lhch'il-t'ish yislh-sri*

ɬ-	tʃ'i-	l-	t'ish	yi-	s-	ɬ-	ʂi
with-	REP-	l.CL-	hit	3O3-	STAT-	lh-CL-	make

'he made a hammer of it' [EJ 305:3:1]

We turn now to verbs of movement, which most clearly represent the 'motion' gloss identified by previous researchers. Like many verbs of motion in Dene, *t'u* 'swim.sg' (33–34) and *tl'it* 'go.pl' (35–36) have suppletive stem forms depending on both number of the subject and aspect of the verb, and both have the option of occurring with *na-*. In (33), *t'u* occurs with *na-*, and the reading does not specify a direction of movement, just the iterative activity of bathing or swimming.

(33) *naa-dvsh-t'u*

na-	də-	ʃ-	t'u
PLU-	REF-	1S.SUB-	swim

'I swim or bathe' [EJ 384:2:1]

In (34), the prefix *ch'e-* 'across' specifies a direction of motion and imposes a telic endpoint on the activity.

(34) *ch'e-xv-ne maa-ne ch'ee-sis-t'u*

tʃ'e-	xəne	mane	tʃ'e-	si-	s-	t'u
INDF-	stream	across	across-	STAT-	1S.SUB-	swim

'I swim across stream' [EJ 365:8:1]

In (35), *tl'it* occurs with *na-*, and even though the direction of movement is specified as being to the north, there is no endpoint imposed on the movement.

(35) *de'-'i naa-sii-tl'it*

deʔi	na-	si-	tl'it
north	PLU-	STAT-	go.3

'we went north' [EJ 277:8:1]

In (36), the translation suggests only the initiation of movement, which has no internal complexity and so no reason to expect *na-* (or a more specific directional). While one might consider these uses of *na-* as more adverbial in that they seem to be in contrast to directionals rather than to iterative aspect, they do not seem very different from any of the examples above.

(36) *tii-tl'vt*

ti-	tl'ət
INC-	go.3

'we're all going (starting out)' [EJ 344:2:1]

However, in (37) and (38), we see clear examples of *na-* indicating spatial distribution. In (37), *na-* combines with the adverb to indicate 'everywhere.'

(37) *t'v-xwii-t'aa-t'i naa-ɣha*

təxwita	-t'i	na-	ɣa
everywhere	-PERT	PLU-	go.1

'everywhere he went' [EJ 344:3:1]

In (38), the quality 'naked' is expressed idiomatically as 'his blanket-place walks around,' in which only *na-* indicates 'going around.'

(38) *st'e'-'ee-dvn naa-ɣha*

st'e	-ʔe	-dən	na-	ɣa
blanket	-POSS	-LOC	PLU-	go.1

'he was naked' [EJ 309:8:1]

The stem *mas* 'roll' can be used both for simple and caused motion, with which

na- might be construed as more directional than aspectual. However, in (39), the single example with *na-*, the direction suggested in the translation is 'down,' which is the only direction in which a rolling item could continue to roll without help from an external agent. That makes a pluractional aspectual reading seem quite plausible.

(39) *naa-ghvt-mas*
na- ɣə- d- mas
PLU- PFV- d.CL- roll
'it rolled down' [EJ 252:5:1]

Examples (40–44) show that *mas* 'roll' is identical to the other stems in this section in excluding *na-* when an adverbial prefix specifies a telic goal of motion. In (40), the location is 'in the middle.'

(40) *tv-ne lhelh-saa-xwe nii-mas*
təne łełsaxwe ni- mas
road middle COMP- roll
'it rolled in the middle of the road' [EJ 291:14:1]

In (41), the referent is rolling off the road, and the directional *ch'a-* is used instead of *na-*.

(41) *tv-ne ch'aa-nii-mas*
təne tʃ'a- ni- mas
road off- COMP- roll
'it rolled off the road' [EJ 291:13:1]

In (42), the reciprocal *lh-* is used to indicate the thread is rolling up together, and in (43), the prefix *se-* is used to indicate direction towards 'the side.'

(42) *dv-si lheshlh-mvs*
dəsi łe- ʃ- ɬ- məs
rope REC- 1S.SUB- lh.CL- roll
'I'm rolling up the thread' [EJ 361:3:1]

(43) *k'wvs-se see-ghii-mas*
k'wəse se- ɣi- mas
side up- PFV- roll
'it rolled to one side' [EJ 291:12:1]

In (44), there is no *na-* because the combination of the inceptive *te-* and the stative *s-* creates the meaning 'it entered a state of rolling.'

(44) *tes-mas*

te-	s-	mas
INC-	STAT-	roll
'it rolled'		[EJ 252:6:1]

In (45), the translation 'it rolled' would make one think that it should take the *na-* prefix. The translation seems especially incongruent with a completive gloss for *ni-*. It is for examples like this that the prior knowledge of the speaker-learner can be especially important – in fact, based on my intuition, a better translation might be 'it completed an episode of rolling,' in which the item did not roll to any given endpoint but merely stopped rolling, such that the period of rolling has an endpoint that makes it perfective.

(45) *nii-mas*

ni-	mas
COMP-	roll
'it rolled along'	[EJ 291:11:1]

Examples (44) and (45) illustrate the challenge of working with recorded translations of a piece of language where you cannot ask for clarification; the given translations are surely correct as far as they go, but equally surely, they are not the only possible translations. These are the examples that force us to bear in mind that language analysis is not algebraic equations with a single correct answer, that there will be inconsistencies that will have to be interpreted using whatever base of experience one has.

There are ten verb themes where a given stem is only attested in combination with *na-*, which could represent cases where *na-* is thematic, because the stem does not occur without *na-*, or it is an alternating prefix for which we simply lack examples of the stem without *na-*. In most of these examples, the meaning is consistent with the pluractional reading, so I suspect most are alternating in nature.

The first example is *xa* 'fight,' which is only attested in combination with *na-* (46–47). The meaning 'fight' is one of the alternating cases of event-internal plurality, which in some languages is always explicitly marked with a pluractional. In (46), we see a stative verb in the past tense: he already completed the action of fighting.

(46) *naa-xus-xaa-laa*

na-	xu-	s-	xa	-la
PLU-	AREAL-	STAT-	fight	-PST
'he fought'		[EJ 316:9:1]		

In (47), we see a somewhat nominalized form of 'fight' indicating 'war.' This is still a verb, but the addition of the *d* classifier is read as the concept of 'war.'

(47) naa-xwvt-xa

na-	xwv-	t-	xa
PLU-	AREAL-	d.CL-	fight
'war'	[EJ 235:3:1]		

However, as seen in (48), a different stem with apparently the same meaning, *ne* 'fight' does not use the *na-*. As the stem *ne* is also 'bite,' the nature of the fighting might be different, perhaps with less internal-complex action, or the verb stem might not work with the prefix *na-* in the same way as the prefix *xa-* due to historical use of the verb stem.

(48) *lhe-daa-ghil-ne*

łe-	da-	ɣi-	l-	ne
REC-	in-	PFV-	l.CL-	bite
'we fought'	[EJ 316:11:1]			

Examples (49–57) show the remaining verbs in this data set that only occur with *na-* ('paddle' is found with *ne-*, which appears to be an allomorph of *na-*; cf. §8.5). None of these verbs has a precise direction. It is assumed that if one wanted to use these verbs in a particular direction, they might be able to be used with different prefixes. That said, some might actually be thematic. In (49), we have the verb 'to work.'

(49) *naa-dvshlh-nish*

na-	də-	ʃ-	ɬ-	niʃ
PLU-	REF-	1S.SUB-	lh.CL-	work
'I work'	[EJ 368:7:1]			

In (50), we see the word for 'washing.' In this example, we also see another example of the challenge of interpreting the translations. The phrase was translated by Elizabeth Jacobs as 'you washing,' where the phrase obviously has the noun 'hand' in it, indicating that 'you are washing hands.' As there are other examples of 'wash' without 'hand' but with *na-*, we can assume that the noun 'hand' is not just part of the word for 'wash.'

(50) *laa naa-chilh-de*

la	na-	tʃi-	ɬ-	da
hand	PLU-	REP-	lh,CL-	wash
'you washing'	[EJ 369:1:1]			

Example (51) is the verb 'play,' whereas (52) is 'divide meat.' Assumedly, someone playing will be moving in various directions or doing multiple actions. Also, the action of dividing meat into piles or distributing it out (as it is not clear which meaning is meant in this example) also requires multiple actions over space.

(51) *naa-xwvshlh-ye*

na-	xwv-	ʃ-	ɬ-	ye
PLU-	AREAL-	1S.SUB-	lh.CL-	play

'I'm playing' [EJ 368:6:1]

(52) *ch'vs-svn' naa-yus-nish*

tʃ'əsən	na-	yu-	s-	niʃ
meat	PLU-	3O3-	1S.SUB-	divide

'he divided the meat' [EJ 321:2:1]

Both (53) and (54) contain words involved with communication. In (53), 'write' requires both movement of the hand over space and repetitive motion, whereas (54) requires the repetitive motion over time; both actions need to be done multiple times for the action to be completed.

(53) nashlh-tl'u

na-	ʃ-	ɬ-	tɬ'u
PLU-	1S.SUB-	lh.CL-	mark

'I write' [EJ 368:9:1]

(54) *dis-ne na'-'a*

disne	naʔ-	ʔa
man	PLU-	talk

'he is talking' [EJ 257:1:1]

In (55), we see the verb for 'gamble,' an activity that requires multiple actions over time as well.

(55) *naa-tr'vl-ye*

na-	tʂ'ə-	l-	ye
PLU-	INDF-	l.CL-	play

'he gambles' [EJ 309:4:1]

The next two examples are not as clear, although 'rest' (56) does require time to occur and 'calling' could indicate a repetitive kind of call, as in repeating to get one's attention.

(56) *naa-shvl-yish*

na-	ʃ-	l-	yiʃ
PLU-	1S.SUB-	l.CL-	rest

'I'll rest'[EJ 204:8:1]

(57) *shtaa xwaa-naa-xv-nisht-yish*

ʃ-	ta	xwa-	na-	xv-	ni-	ʃ-	d-	yiʃ
1S.POSS-	father	AREAL-	PLU-	ʔ-	COMP-	1S.SUB-	d.CL-	call

'I am calling father' [EJ 329:1:1]

In some examples, the use of *na-* seems to create a different verb altogether, rather than specifying the iterative nature of the action. In (58–62), we see various ways that the stem *'a* is used. This stem usually means 'handling a round object.' In (58), *na-* is referring to the habitual or generalized imperfective nature of possession. If you have something, it is not just for a moment, and if it is gone, it is yours for as long as it is yours.

(58) *daa-wii-la na'-'a tr'vtʔ*

dawila	naʔ-	ʔa	tr'ət
how much	PLU-	handle.ROUND	money

'how much money have you?' [EJ 322:1:1]

In (59), we see the addition of the *s-* stative aspect to this phrase to indicate 'pick it up.' Perhaps this means to 'put in a state of having.'

(59) *naa-sish-'a*

na-	si-	ʃ-	ʔa
PLU-	STAT-	1S.SUB-	handle.ROUND

'I pick it up' [EJ 252:8:1]

In (60), we see the same form as in (58), but in this case, it is 'talk.'

(60) *dis-ne na'-'a*

disne	naʔ-	ʔa
man	PLU-	handle.ROUND

'he is talking' [EJ 257:1:1]

The next two examples show how the verbs look without the *na-*. In (61), *se-* indicates placement in an upward direction.

(61) *hat see-ghish-'a*

hat	se-	ɣi-	ʃ-	ʔa
there	up-	PFV-	1S.SUB-	handle.ROUND

'I put it on top' [EJ 280:3:1]

In (62), *ghi-* is the progressive aspect, as the referent stayed in the state of handling the hat.

(62) *t'aa-mish ghilh-'a*
t'amish ɣi- ɬ- 'a
hat PFV- lh.CL- handle.ROUND
'he kept the hat' [EJ 319:1:1]

In (63) and (64), we see the word 'to know someone' both without (63) and with (64) a thematic prefix. In (63), *ts'it* 'to know' does not take the iterative *na-*.

(63) *'ushlh-ts'it*
ʔu- ʃ- ɬ- ts'it
towards- 1S.SUB- lh.CL- know
'I know him' [EJ 316:5:1]

However, in (64), when the *na-* is added, the word changes to 'recognize someone.' While this might not be iterative per se, to 'recognize' someone implies prior 'knowledge' or more than one time of 'knowing.'

(64) *naa-'ushlh-ts'it*
na- ʔu- ʃ- ɬ- ts'it
PLU- towards- 1S.SUB- lh.CL- know
'I recognized him' [EJ 316:4:1]

8.2.2 *na-* achieving a state (inchoative) There are some uses in which the *na-* seems to indicate the achievement of a state. In (65), it is used with 'be strong.'

(65) *nashlh-ne*
na- ʃ- ɬ- ne
INCH- 1S.SUB- lh.CL- strong
'I am strong' [EJ 204:9:1]

In (66) and (67), it is used with 'feel better' and 'not sick anymore,' respectively.

(66) *naa-svst-li*
na- sə- s- d- li
INCH- STAT- 1S.SUB- d.CL- be
'I feel better' [EJ 204:10:1]

(67) *duu-ja tr'ii-de nad-li*
du- dʒa tʂide na- d- li
NEG- here sick INCH- d.CL- sick
'I'm not sick any longer' [EJ 317:6:1]

In (68), the *na-* is used to indicate 'getting warm.'

(68) *naa-yit-selh*
na- yi- d- seɬ
INCH- 3O3- d.CL- warm
'he got warm' [EJ 267:8:1]

In 'he broke it in small pieces' in (69), the verb does not mean break, rather 'make to be.' The first word means 'gravel,' so this means 'make to be the state of gravel.'

(69)*sv-ghe naslh-li*
səɣe na- s- ɬ- li
gravel PLU- 1S.SUB- lh.CL- be
'he broke it in small pieces' [EJ 291:2:1]

8.2.3 Undetermined *na-* The stem '*vn* 'stop someone' occurs both with (70–71) and without (72) *na-*, with no clear distinction in meaning that can be attributed to the presence versus absence of *na-*. In these cases, I continue to gloss the *na-* as 'pluractional.' In (70), the example appears to be imperative.

(70) *na-nvsh-'vn*
na- nə- ʃ- ʔən
na.TH- COMP- 1S.SUB- S top
'stop them'[12] [EJ 379:04:01]

In (71), it appears to be a failed attempt of 'stopping him.'

(71) *nan-ghish-'vn*
na- n- ɣi- ʃ- ʔən
na.TH- COMP- PFV- 1S.SUB- stop
'I tried to stop him' [EJ 379:05:01]

However, in (72), the action of 'stopping' was successful.

(72) *'un-ghisht-'vn*
ʔun- ɣi- ʃ- d- ʔən
towards- PFV- 1S.SUB- d.CL- stop
'I stop him' [EJ 379:03:01]

Perhaps if we had context for (70–72), we would know if there was more to the story. Perhaps the *na-* is not needed in (72) because it only took one time to stop him, or perhaps it is not needed because it was successful.

12 This example is cited in the document as coming from Sapir.

8.2.4 Summarizing the use of *na-* In this section, we have seen that *na-* has two main functions, the first to indicate a range of pluractional meanings and the second to indicate inchoative or entering into a state. If we construe this second function as achieving something via a pluractional event, then the two functions might be considered subtypes of a single function.

8.3 Lexicalized prefix *ni-*: Typically completive The prefix form *ni-* is found quite frequently in the Nuu-wee-ya' data set (101 tokens and 48 verb themes). Golla (1976: 223) defines *ni-* as 'perfective' and 'completive' aspect. Sapir (1914: 310) lists two allomorphs, *ni-* and *n-*, and defines them as 'cessative.' In the eastern dialect, Hoijer (1966: 326) defines a set of four allomorphs, *ni-, n-, di-,* and *d-*, as 'perfective.'[13] Jacobs (110) finds *ni-* and *n-* to mean 'completion,' terminative action,' and 'duration' (p. 72); 'adjective-making' (p. 98); and the direction/position 'in' (p. 113).

This form is found in Hupa (Golla 1970) to signify 'approaching' (p. 124) and 'surface, tactile qualities' (p. 138), and the form *nin-* is found as 'perfective' (p. 61). In Wailaki (Begay 2017), *nin-* also signifies 'perfective' (p. 178), whereas *ni-* means 'approaching' (p. 189) and 'tactile description' (p. 191). In Slave (Rice 1989), *ni-* is defined as 'terminative' and 'to a point'; *ni-* is also seen with extension verbs, such as 'off, out' or 'up' (p. 724). In Mattole (Li 1930), *ni-* is defined as 'terminative' (p. 65) as well as momentaneous/completive, perfective, and imperfective (p. 66). It is also defined as 'at' (pp. 54, 59) and 'adjectival' and is associated with the verb 'to think' (p. 59).

In this data set, most of the *ni-* forms seem to mark completive/perfective, some to mark state, and a few to mark the direction/position 'in.' It is important again to note that these findings are hard to interpret as the meanings can be rather vague or opaque. These findings represent the clearest understanding of this lexeme form at this point.

8.3.1 Completive/perfective *ni-* Of the examples in which *ni-* conveys completive/perfective, there are two examples where the stem is only attested with *ni-* (possibly thematic), a few where *ni-* appears to be alternating, and one where the meaning is unpredictable (fixed).

In some examples, *ni-* appears to alternate with other aspect markers, indicating completeness of an event or stable presence in a state resulting from an event. For example, in (73), the stem *svt* 'wake' does not have *ni-*, and the subject has not yet awoken, meaning the action is not completed.

(73) *'an-du' tr'ee-svt-te*

ʔan	-duʔ	tʂ'e-	səɬ	-te
still	-PERT	out-	wake up	-FUT
'he will wake up later'			[EJ 236:9:1]	

[13] As laid out in Hall (2021), denasalization of *n* to *d* is one characteristic of eastern dialect Galice. Denasalization is not found in the northern dialect, the one analyzed in this paper.

In contrast, when *ni-* co-occurs with *svt*, the predicate describes the subject having completed the event of waking up (74) or being in the state that results from having already woken up (75).

(74) *da' tr'ee-nii-svt*

daʔ	tʂ'e-	ni-	sət
already	out-	COMP-	wake up
'he's awake'	[EJ 236:10:1]		

(75) *tr'ee-nii-svt*

tʂ'e-	ni-	sət
out-	COMP-	wake up
'I woke up'	[EJ 236:7:1]	

Although the stems are not the same, (76) and (77) show that for a completed act of giving something away, *ni-* is used (76), whereas it is absent when the act is still in progress (77).

(76) *da' xwaa-nish-ya*

daʔ	xwa-	ni-	ʃ-	ya
already	AREAL-	COMP-	1S.SUB	go
'I gave it away'	[EJ 242:10:1]			

(77) *xwvsh-'vsh*

xwə-	ʃ-	ʔəʃ
AREAL-	1S.SUB	handle.ROUND
'I am giving it away'	[EJ 242:12:1]	

A final illustrative set of alternating examples is with the stem *ch'vs* 'push,' where the contrast between (78–80) suggests that *ni-* indicates the completed action (78), whereas the stem without *ni-* has a progressive reading (79).

(78) *yii-nilh-ch'vs-la*

yi-	ni-	ɬ-	tʃ'əs	-la
3O3-	COMP-	lh.CL-	push	-PST
'he pushed it'	[EJ 265:6:1]			

(79) *xv-nvs mii-taa-tr'v-ghilh-ch'vs*

xənəs	mi-	ta-	tʂ'ə-	ɣi-	ɬ-	tʃ'əs
canoe	in-	water-	INDF-	PROG-	lh.CL-	push
'a boat is being pushed into the water'				[EJ 213:10:1]		

Interestingly, in (80), the verb does not contain *ni-*, but the gloss indicates that the action is complete. Looking more closely at the verb phrase, we see the preceding adverbial phrase *tvs-xu* 'hard-like' and the inceptive prefix *te-*. Either a more accu-

rate gloss would be 'he began pushing it hard' or the completive reading could come from the combination of the adverbial phrase and inceptive marker.

(80) *tvs-xu yii-tee-ch'vs-la*

təs	-xu	yi-	te-	tʃ'əs	-la
hard	-ADVL	3O3-	INCEP-	push	-PST
'he pushed it hard'		[EJ 265:9:1]			

In one case in the data set, the addition of *ni-* to a stem changes the entire meaning of the word in a way that is not predictable but is consistent with a completive/perfective reading. In (81), the stem *lat* 'sink' takes a different aspectual prefix, *gh-* 'progressive.'[14]

(81) *xuu-tee-ghish-lat*

xu-	te-	ghi-	ʃ-	lat
AREAL	water-	PROG-	1S.SUB-	STEM-float
'I am sinking in the water'		[EJ 365:2:1]		

Compare this to (82), where the same stem in combination with *ni-*, yields the translation 'drown,' a natural outcome if a person were to sink 'completely.'

(82) *xuu-tee-nish-lat*

xu-	te-	ni-	ʃ-	lat
AREAL-	water-	COMP-	1S.SUB-	float
'I drown'	[EJ 365:3:1]			

8.3.2 Reversative *na-ni-* sequence In a few examples, the *ni-* is found combined with the 'pluractional' *na-*. This only occurs when it is indicating a reversal of action as seen in (83).

(83) *ja' naa-nish-dvsh-te*

dʒaʔ	na-	ni-	ʃ-	dəʃ	-te
here	PLU-	COMP-	1S.SUB-	come	-FUT
'I will come back'		[EJ 295:4:1]			

8.3.3 Locative *ni-* A third use of the prefix *ni-* is to indicate 'movement/location inside' as seen in examples (84–86). It is clear that the locative prefix is distinct from the completive prefix of the same form because in two of these examples (84–85), the two co-occur. The locative *ni-* often co-occurs preceded by the postposition *me-/men* 'in,' which is present in all three of these examples.

[14] Nuu-wee-ya' has two aspectual prefixes that start with *gh*. One indicates PERFEECTIVE, and the other PROGRESSIVE, leading to some confusion in glossing and reliance on the translation. This is why in some examples you will see the form labeled as PERFECTIVE and in others the same form as PROGRESSIVE.

(84) *xwen' mee-nii-nii-ya*

xwənʔ	me-	ni-	ni-	ya
fire	in-	in-	COMP-	go.1
'he put it in the fire'			[EJ 359:1:1]	

(85) *mee-nii-nii-'a*

me-	ni-	ni-	ʔa
in-	in-	COMP-	handle.ROUND
'to put inside'		[EJ 308:9:1]	

In (86), the single *ni-* is the completive, which is conditioned by the directional prefix *'uu* 'towards,' showing that the postposition does not condition the locative *ni-*.

(86) *men' 'uu-nish-'a*

menʔ	ʔu-	ni-	ʃ-	ʔa
in	towards-	COMP-	1S.SUB-	handle.ROUND
'I put it inside'		[EJ 280:7:1]		

8.3.4 Stative *ni-* A fourth common *ni-* prefix is with stative verbs that indicate dimension, feelings, or possession. It has an allomorph *nn-*, which the other *ni-* prefixes do not show, which indicates that this could be a separate morpheme and not just a semantic extension of the completive/perfective. Beginning with dimensions, examples (87–89) show the prefix *ni-* 'stative perfective' all immediately followed by the first-person subject marker *sh-*. In (87), it is used with 'big,' and in (88), with 'tall.'

(87) *łhti' nish-cha*

łtiʔ	ni-	ʃ-	tʃa
very	SP-	1S.SUB-	big
'I'm too big'		[EJ 358:1:1]	

(88) *nish-nes*

ni-	ʃ-	nes
SP-	1S.SUB-	tall
'I am tall'	[EJ 263:1:1]	

In (89), we see it with 'short,' again with the first-person *sh-* prefix.

(89) *nish-tukw*

ni-	ʃ-	tukw
SP -	1S.SUB-	short
'short'	[EJ 360:2:1]	

In (90), we see 'short' but this time without the first-person prefix *sh-*. This example shows the *nn-* form with no subsequent person marker.

(90) *dii-nn-dvkw*

di-	n-	dəkw
PROM-	SP -	short
'short'	[EJ 206:5:1]	

We can see in (91) that a different dimension verb 'wide' is also seen in the *nn-* form when there is no first-person prefix.

(91) *nn-telh*

n-	teɬ
SP-	wide
'wide'	[EJ 348:4:1]

The use of the *n-* prefix in 'short' and 'wide' could potentially be related to a gender/noun class indicating 'round' (Kari 1990: 285; Rice 2000: 326). However, if this were the case, the other dimensional prefixes, such as 'long' (88) or 'big' (87), may or may not have the same gender class remnant (although it is possible with 'big'). While there is no conclusive evidence in this data set, my experience as a learner is that 'big' in the third person is *nn-cha* and 'tall' is *nes*. This is a distinction that will require further study in the archival data.

In (92), we see another dimension verb taking the *nn-* form.

(92) *nn-dvt-t'a*

n-	dət'a
SP-	thick
'thick'	[EJ 348:5:1]

However, we do see *ni-* also occurring with nondimensional states, such as 'be,' 'smell/bad,' and 'have.' In (93), *ni-* 'stative perfective' occurs with a first-person subject as seen in (89) with the verb stem *t'e* 'to be.'

(93) *'uu-'e jii 'aa-nish-t'e*

ʔuʔe	dzi	ʔa-	ni-	ʃ-	t'e
this way	this	for-	SP-	1S.SUB-	be
'that's the way I am'		[EJ 357:1:1]			

In (94), it is seen with the verb stem *srvn* 'to smell,' when this verb is indicating the state of something. This verb stem can also be seen in constructions that are transitive – 'to smell something' without the *ni-*.

(94) *shu' 'aa'-nishlh-srvn*

ʃuʔ	ʔaʔ-	ni-	ʃ-	ɬ-	ʂən
good	for-	SP-	1S.SUB-	lh.CL-	smell

'I smell good' [EJ 355:9:1]

In (95), we see *ni-* occurring with a second-person subject for the copula *li* 'to be.' In (96), it is occurring with the state of having an item with the stem *ch'ilh*.

(95) *du xwvs xee-nii-li*

du	xwəs	xee-	ni-	li
NEG	cough	AREAL-	COMP-	be

'you are not sick' [EJ 317:7:1]

(96) *dvt-je daa-wii-la ch'aa-nilh-ch'ilh*

dətʃe	dawila	tʃʼa-	ni-	ɬ-	tʃʼiɬ
berry	how.many	to-	SP-	lh.CL-	have

'how many berries have you?' [EJ 323:4:1]

Finally, in (97), the *nn-* 'stative perfective' takes the allomorph *nn-* with the only third-person subject.[15]

(97) *lhi' lhti' nn-srvn*

ɬiʔ	ɬtiʔ	nn-	ʂən
dog	very	SP-	bad

'he's a bad dog!' [EJ 346:10:1]

8.3.5 Prefix-conditioned *ni-* aspect marker In addition to the semantically motivated uses of the aspectual prefix *ni-*, the data set also contains verbs that only sometimes take *ni-*, but without necessarily indicating a semantic value of completive/perfective. In Golla's (1970: 121–128) Hupa grammar, certain 'adverbial' prefixes condition which of the three perfective prefixes can occur on the verb: Some require *gh-* 'perfective,' some *ni-* 'perfective,' and some *s-* 'perfective.' The adverbial prefixes only select which perfective marker the verb will use, as they can be found with other markers like *gh-* 'progressive'[16] and *ʔu-* 'optative.' In Nuu-wee-ya', seven prefixes are found to condition the *ni-* 'perfective' in the absence of the semantic value of perfective/completive. Five of these are clearly cognates to adverbial prefixes that condition the *ni-* perfective in Hupa. Table 3 lists the thematic prefixes that always co-occur with *ni-* in this data set, as well as their glosses.

[15] I am encouraged with this analysis because I have seen *nii-li* 'to be,' shown in line 1, as *nn-li* in other areas of the corpus not included in this data set.

[16] It is just the nature of this language that verbs can use the same sound to indicate both perfective and progressive (Golla 1976: 223–224). Probably the prefixes originally had distinct vowels that have morphed to many different vowel forms, so it is hard to determine by the form if it is perfective or progressive.

Table 3. Thematic prefixes co-occuring with *ni-*

Nuu-wee-ya'		**Hupa (Golla 1970)**	
Prefix	Gloss	Prefix	Gloss
da-	'in'	*da-*	'inside' (p. 125)
k'e/ k'we-[17]	'off'	*k'ɣa-*	'separating from' (p. 128)
t're/t'se-[18]	'towards/out'	*č'e-*	'out of an enclosure' (p. 128)
'uu-	'towards'	---	---

I now illustrate each of these prefixes individually. First, consider example (98), where the dual stem for 'go' *delh*, does not take any adverbial prefixes, only *gh-* 'progressive.'

(98) *ghit-dɬlh*
ɣi- d- dəł
PROG- d.CL- go.2
'we (2) are going you and I' [EJ 249:1:1]

In contrast, in (99–101), the three suppletive stems for 'go' – *ya* 'go.SG,' *delh* 'go.DUAL,' and *tl'ilh* 'go.PL' – all take the sequence *da-ni-*. In (99), we see it with the dual stem *delh*.

(99) *daa-nit-delh*
da- ni- d- deł
in- COMP- d.CL- go.2
'when we (2) come in' [EJ 271:11:1]

In (100), we see it with the plural stem *tl'ilh*.

(100) *daa-nilh-tl'ilh*
da- ni- ł- tɬ'ił
in- COMP- d.CL- go.3
'when they (pl) come in' [EJ 271:13:1]

[17] This variation is conditioned by the referents.

[18] It is not clear whether this is a real difference or just a transcription variant.

Finally, we see in (101), this prefix series used in the singular form of *ya* 'go.'

(101) *daa-nii-ya*

da-	ni-	ya
PROG-	d.CL	GO.I

'when he comes in' [EJ 271:9:1]

There is nothing in the morphology of the verbs in these three examples (99–101) to suggest an adverbial phrase, so the presence of 'when' in the translations is unexplained. However, it is true that right when someone enters, an action is completed. These examples suggest that the prefix *da-* 'in' adds a telic endpoint to an action, which is then consistent with the completive prefix *ni-*.

A similar pattern emerges with the prefix *k'e-/k'we-* 'off,' which also conditions *ni-*. In this case, we have four pairs of verbs, one with *k'e-/k'we-* and one without. Although there is not always an aspectual difference, every instance of *k'e-/k'we-* is immediately followed by *ni-*, and in three of the examples, the readings appear to be more telic.

In (102), we see the stem *t'a* 'cut' using the adverb *k'a* 'in two,' and it does not take the *ni-* morpheme and the reading does not seem to be completive.

(102) *ch'v-k'ashlh-t'a*

tʃ̓ə-	k'a-	ʃ-	ɬ-	t'a
INDF.OBJ-	in two-	1S.SUB-	lh.CL-	cut

'I cut wood' [EJ 261:1:1]

In (103), we see the suppletive form of 'cut' *t'as* with a different adverb *k'we* 'off.' In this example, it does have *ni-* and does seem to have a completive reading.

(103) *k'wee-nish-t'as*

k'we-	ni-	ʃ-	t'as
off-	COMP-	1S.SUB-	cut

'I cut it off' [EJ 252:7:1]

In (104), the stem *gvsh* 'cover' is nominalized to refer to a tablecloth (lit. 'something that covers'), whereas in (105), the same stem plus *k'we-ni-* refers to a completive act of attaching a skin cover to something.

(104) *k'wvt dash-gvsh*

k'wət	da-	ʃ-	gəʃ
on	REF-	1S.SUB-	cover

'something thrown over table' [EJ 380:5:1]

(105) *ch'v-srvsr k'we-ni nii-gvsh*

tʃ'ə-	ʂəʂ	k'weni	ni-	gəʃ
INDF-	skin	over	COMP-	cover

'he covered it with skin' [EJ 307:5:1]

Now in (106), we have a perfective form of 'bite' that uses the stative perfective, indicating that it is completed.

(106) *yislh-k'u*

yi-	s-	ɬ-	k'u
3O3-	STAT-	lh.CL-	bite

'he bit it' [EJ 363:7:1]

However, in (107), when the adverb *k'e* 'in two' is used, the prefix *ni-* is used also with a completive meaning.

(107) *k'ee-nilh-k'u*

k'e-	ni-	ɬ-	k'u
in two-	COMP-	lh.CL-	bite

'he bit it in two' [EJ 363:6:1]

Finally, in (108) and (109), two different stems for 'break,' *ch'vlh* and *srvt*, have the same translation for 'he broke it,' leaving us unable to determine the contribution of the *k'we-ni-* present in (109) but absent in (108). However, we do see that again with the use of the *k'we-* adverb. In (109), the 'completive' *ni-* is used, whereas in (108), the 'stative' *s-* is used without this adverb. Both 'completive' *ni-* and 'stative' *s-* are considered perfective markers (Golla 1976: 224–225).

(108) *dis-ne yislh-ch'vlh*

disne	yi-	s-	ɬ-	tʃ'əɬ
man	3O3-	STAT-	lh.CL-	break

'he broke it' [EJ 225:5:1]

(109) *k'wee-nii-srvt-la*

k'we-	ni-	ʂət	-la
off-	COMP-	break	-PST

'he broke it' [EJ 264:5:1]

In (110), the stem *'vs* 'run' describes the activity of running around the house, whereas in (111), the same stem plus *tr'e-ni-* describes having completed the act of starting to run.[19]

[19] It is not entirely clear whether *ts'e-* in (111) is a variant of *tr'e-*, a mistranscription of *tr'e-*, or a distinct morpheme with a very similar shape and meaning.

(110) *mvn'-ne svslh-'vs*

mənʔ	-ʔe	sə-	s-	ɬ-	ʔəs
house	-POSS	STAT-	1S.SUB-	lh.CL-	run

'I ran around the house' [EJ 286:19:1]

(111) *ts'ee-nishlh-'vs*

tʂ'e-	ni-	ʃ-	ʔəs
out-	COMP-	1S.SUB-	run

'[I run] if I have already started' [EJ 374:8:1]

In (112), the stem *ya* 'go' with its other morphology expresses the activity of going through the woods.

(112) ch'v-t'v-ghe 'ee-ghii-ya

tʃ̓ət'eɣe	ʔe-	ɣi-	ya
woods	PEG-	PFV-	go.1

'he went through the woods' [EJ 308:4:1]

In (113), the same stem with *tr'e-ni-* 'out-completive' refers to a completed telic act of stepping through a door.

(113) *mat-k'wvsh-nu' tr'ee-nii-ya*

matk'wəʃnuʔ	tʂ'e-	ni-	ya
door	out-	COMP-	go.1

'he went through the door' [EJ 308:2:1]

Although Golla (1970) does not report this prefix in Hupa, in (114–117), we see two verbs with the prefix *uu-* 'towards' conditioning a subsequent *ni-* perfective. In both examples, the *uu-* is preceded by the prefix *y-*, indicating a third-person subject acting on a third-person object, and in both examples with *uu-* 'towards,' the object is the goal towards which the subject aims something, a rock in (115) and a shot in (117).

In (114), the adverb is *te-* 'down' and the aspect is marked with the *gh-* 'progressive.' In (115), the aspect is *uu-* 'towards' and has the *ni-* perfective.

(114) *te'-'vn tee-ghish-selh*

teʔən	te-	ɣi-	ʃ-	seɬ
down	down-	PROG-	1S.SUB-	throw

'I throw [a rock] down' [EJ 244:12:1]

(115) *see mvlh yuu-nii-selh*

se	mə-	ɬ	y-	u-	ni-	seɬ
rock	3.OBJ-	with-	3O3-	towards-	COMP-	throw

'he threw a rock at him' [EJ 251:1:1]

In (116), the adverb is *se-* 'up,' with no aspect marked. The translation could read as perfective or imperfective.

(116) *ch'ash dee-ti selh-ghi*

tʃ'aʃ	deti	se-	ɬ-	ɣi
bird	small	up-	lh-CL-	shoot

'he shot many small birds' [EJ 292:11:1]

However, in (117), the *ni-* 'completive' is used again with the *uu-* adverb 'towards.' The reading of this translation as perfective or imperfective is also ambiguous.

(117) *yuu-nii-lha*

y-	u-	ni-	ɬa
3O3-	towards-	COMP-	shoot

'he shot at her' [EJ 251:4:1]

While the last section shows a pattern of specific adverbials co-occurring with specific aspectual markers, without speakers to inform us of the actual adverbial state, we do not know if the *ni-* 'completive' is present when the verb is not perfective.

8.3.6 Undetermined *ni-* Examples (118–121) all illustrate the category of 'possibly thematic' in that these stems are not attested without this prefix, although the semantic value of completive/perfective does not characterize the verb. In these examples, I still gloss the *ni-* as 'completive' due to a lack of a better term.

In these examples, the stems *yish* 'call' and *dash* 'dance' are only attested with *ni-*. While they are only attested with this prefix, you can see that (118) and (119) are progressive.

(118) *taa-ha xwaa-xv-nii-yish*

ta	-ha	xwa-	xv-	ni-	yiʃ
father	-Q	AREAL-	ʔ-	PFV-	call

'you are calling father' [EJ 329:3:1]

(119) *sh-taa xwaa-naa-xv-nisht-yish*

ʃ-	ta	xwa-	na-	xv-	ni-	ʃ-	d-	yiʃ
1S.POSS-	father	AREAL-	PLU-	ʔ-	COMP-	1S.SUB-	d.CL-	call

'I am calling father' [EJ 329:1:1]

In (120), you can see the same prefix in a future sense.

(120) *jii-xvlh-tr'i xwaa-naa-xv-nish-yish*

dʒi-	xvɬtʂ'i	xwa-	na-	xv	ni-	ʃ-	yiʃ
DET-	night	AREAL-	PLU-	?-	COMP-	1S.SUB-	call

'I will call him tonight' [EJ 329:6:1]

Similarly, *nii-dash* (121) is the normal form in the northern dialect for 'dance' (pronounced *nee-dash* in the southern dialect).

(121) *nii-dash*

ni-	daʃ
COMP-	dance

'he dances' [EJ 381:3:1]

8.3.7 Summarizing *ni-* In this body of data, there appears to be three different prefixes with the form *ni-*. The most common prefix is the perfective/completive aspect marker. While the semantics are not completely understood, it is likely that the prefixes that condition *ni-* change the verbs so that they are more telic and thus more compatible with completive aspect. The second *ni-* is a locative or a locative prefix meaning 'inside.' The third *ni-* is used to indicate states of being and has the allomorph *nn-* with third-person subjects.

8.4 Lexicalized prefix nu-: Typically locative or optative The prefix *nu-* is much less discussed, described only by Jacobs (110) as meaning 'terminative' (p. 73), 'completion' (p. 85), and 'at' (p. 85). Without the initial nasal, the prefix *u-* has been described by Golla (1976: 224), Sapir (1914: 310), and Jacobs (110: 81) as indicating 'optative' mood and by Bommelyn (1997: 19) as meaning 'conative' aspect. In this case, optative and conative are both irrealis in that the action has not yet succeeded, referring to the situation of saying 'let it be,' 'may he V successfully,' or 'try to V.' Golla (1970: 124) lists *no-* as 'to completion' in Hupa. In Mattole, it is defined as 'down' and 'to the limit' (Li 1930: 59).

In this particular data set, we see clear uses of *nu-* as a locative (§8.4.1), some uses in optative examples where the prefix appears to be *nu-* rather than the expected *u-* 'optative' (§8.4.2), and some stems in which the semantic value of *nu-* is not clear (§8.4.3).

8.4.1 Locative use of *nu-* In examples (122–126), *nu-* occurs consistently with the stems *'a* 'put,' *ash* 'put,' and *talh* 'stand.' In (122–124), the verb is identical to *nuunish-'a* 'I put it at X,' with the location specified in the preceding word. In this case, it appears that *nu-* is indicating 'general location' or perhaps 'towards.'

(122) *mvn'-'e nuu-nish-'a*

mənʔ	-ʔe	nu-	ni-	ʃ-	ʔa
house	-POSS	LOC-	COMP-	1S.SUB-	handle.ROUND

'I put it behind' [EJ 280:8:1]

(123) *naa-svt nuu-nish-'a*

nasət	nu-	ni-	ʃ-	ʔa
in front	LOC-	COMP-	1S.SUB-	handle.ROUND

'I put it in front of' [EJ 280:9:1]

Other locative prefixes can be used instead of *nu-* as seen in (124) in which *se-* is used to indicate an 'upward placement.'

(124) *hat see-ghish-'a*

hat	se-	ɣi-	ʃ-	ʔa
near	up.LOC-	PRF-	1S.SUB-	handle.ROUND

'I put it on top' [EJ 280:3:1]

In (125), the verb lacks *ni-* and the reading changes to 'make.' The stem for 'handle a round object' is in a suppleted form. I think the reading of this could be 'putting (handling) a house in a location.'

(125) *mvn' nush-'ash*

mənʔ	nu-	ʃ-	ʔaʃ
house	LOC-	1S.SUB-	handle.ROUND.IMPF

'I am making a house' [EJ 253:8:1]

In (126), the *nu-* could be locative or optative, which would be consistent with a mild imperative reading.

(126) *nuu-di-talh*

nu-	di-	taɬ
LOC-	PROM-	stand

'stand up' [EJ 360:3:1]

8.4.2 Optative use of *nu-* Optativity is expressed with *u-*. This form is never found word initially but only in combination with the consonant of the prior prefix, which is often *n-* 'completive,' as seen in 'I hope you drown' (127). The optative *u-* combines with the 'completive' *n-* to indicate the desire for someone to drown.

(127) *tee-nuu-lat*

te-	n-	u-	lat
INC-	COMP-	OPT-	sink

'I hope you drown' [EJ 387:12:1]

In (128), however, we see the contrast in 'you drown' without the *u-* 'optative.' It is important to note that it is not clear in (128) whether the translation is perfective or not. This could be an example in which the completed outcome is impacting the use of the *ni-* 'completive' prefix.

(128) *tee-nii-lat*
te- ni- lat
INC- COMP- sink
'you drown' [EJ 373:2:1]

8.4.3 Undetermined use of *nu-* There are about as many examples in which the use of *nu-* is just not clear as there are of the two clear meanings just described. Unlike the previous two sections, rather than using one of the glosses available for this form, I gloss the undetermined uses as 'nu.TH.'

There is one example (129) that is challenging on many levels as it seems to have a *u-* 'optative' alongside the *gh-* 'perfective,' as well as a *nu-*. There is nothing in the translation to expect a 'locative' interpretation of *nu-* here. In (129), the action is about to happen but has not yet.

(129) *xu' nuu-ghush-dalh*
xuʔ nu- ɣ- u- ʃ- dał
about nu.TH- PFV- OPT- 1S.SUB- go.2
'I'll go now' [EJ 320:8:1]

However, in (130), the action is still in the future. It is interesting that both examples have a first-person subject marker, yet both have the stem *dalh* 'two people go.' While it might be related to optativity, the meaning of *nu-* in (129) is unclear.

(130) *xu' naa-ghush-dalh-te*
xuʔ na- ɣə- ʃ- dał -te
about PLU- PFV- 1S.SUB- go.2 -FUT
'I'm about to leave' [EJ 270:3:1]

Both 'whisper' (131) and 'understand just a little' (132) could be seen as conative, indicating less success at carrying out the action.

(131) *nuu-yvxw*
nu- yəxw
nu.TH- whisper
'whispering' [EJ 305:6:2]

(132) *dis-tit yaslh-'e nushlh-ts'it*
distit yasłʔe nu- ʃ- ɬ- ts'it
only little nu.TH- 1S.SUB- lh.CL know
'I understand just a little' [EJ 272:2:1]

In fact, stretching this idea just a little farther, talking 'too much' (133) could also be seen as conative if the behavior leads to less successful communication. However, this translation is unexpected due to the presence of the negative marker. The translation might be better as 'do not let him talk,' with the emphasis on 'let,' if the *nu-* in this example indicates the optative.

(133) *du nuu-'ash*
du nu- ʔaʃ
NEG nu.TH- talk.IMPF
'talks too much' [EJ 272:9:1]

However, I see no way to explain the *nu-* found with 'be tired' (134). Perhaps this is a thematic form originally based on the optative.

(134) *shtee-nul-ya*
ʃ- te- nu- l- ya
1S.OBJ- INC- nu.TH- l.CL- tired
'I am tired' [EJ 259:6:1]

The consistent use of *nu-* with *t'alh* and *te,* both meaning 'go to bed' (135–137), could be locative, optative, or thematic. It is possible that the stem forms could be aspectual forms of the same stem, but without any clear semantic contrast in the examples, we cannot be sure. Note that (135–137) all have the same translation. We can see that in (135) and (136), there is the *talh* form along with *d-* 'reflexive' and *u-* 'optative.'

(135) *nuu-dush-t'alh*
nu- d- u- ʃ- t'ał
nu.TH- REF- OPT- 1S.SUB- go to bed
'I go to bed' [EJ 364:2:1]

While (135–137) all have the same translation, the prefix *da-* meaning 'in' is found only in (136) and (137).

(136) *daa-nuu-dush-t'alh*
da- un- d- u- ʃ- t'ał
in- nu.TH- REF- OPT- 1S.SUB- go to bed
'I go to bed' [EJ 364:3:1]

(137) *daa-nush-te*
da- un- ʃ- te
in- nu.TH- 1S.SUB- go to bed
'I go to bed' [EJ 364:1:1]

A final use of nu- is found with the stem 'elh 'be wet,' in both cases correlating with the inchoative meaning 'get wet' (138–140). In (138) and (139), both examples have the translation 'get wet' and have the prefix nu'-.

(138) *shnu'-ghilh-'elh*

ʃ-	nuʔ-	ɣi-	ɬ-	ʔeɬ
1s-	nu'.TH-	PFV-	lh.CL-	wet

'I got wet' [EJ 262:8:1]

(139) *nu'-yaslh-'elh*

nuʔ-	ya-	s-	ɬ-	ʔeɬ
nu'.th-	PL-	STAT-	lh.CL-	wet

'they got wet' [EJ 262:14:1]

However, in (140), without nu', the meaning is 'be wet.' As the examples in (138) and (139) also have a glottal stop (nu'- rather than nu-), it is likely that the meaning is distinct, perhaps representing a different prefix that talks about the completeness of an action.

(140) *daa-ghaa-ni ghii-'elh*

daɣani	ɣi-	ʔeɬ
clothes	PFV-	wet

'his clothes were wet' [EJ 243:5:1]

8.4.4 Summarizing use of *nu-* This data set shows less clarity regarding the prefix *nu-*. In a few examples, it clearly indicates placement of an item and, in a few others, optative mood, but quite a few examples do not fit into either of these categories. This form, while troublesome to completely describe, I believe gives us insight into the deeper tangle of grammar that is beyond the scope of this work. By describing what I can and marking the uncertainties with a clear gloss (nu.TH and nu'.TH), I signal the need to return to these questions in future research.

8.5 Lexicalized prefix *ne-*: Typically confusing The prefix *ne-* is not mentioned by Golla, Hoijer, or Bommelyn in their grammatical analyses. It is described by Sapir (1914: 304) as an 'unknown' prefix found with verbs like *nelh-'i* 'to watch.' Golla (1976: 225) lists examples using the form *ne-*, but he analyzes them as allomorphs of *nv-* 'completive.' Jacobs (110: 92–97) describes some uses of *ne-* along with her struggles in defining its meaning. She begins by saying that *ne-* is used as both a completive and a continuative. She is unhappy with this apparent contradiction, although she cites (p. 92) this same finding in Carrier by Morice (1932: 337), who uses *ne-* for both 'completive' and 'continuative action.' She writes that her best attempt at glossing this prefix would be as 'indefinite plurality of action' (p. 92), then she also describes its use as 'down' (p. 96). Because Nuu-wee-ya' vowels readily change form, to determine the functions of *ne-*, we must first weed out examples where *ne-* is an allomorph of a different prefix form, such as the *na-*, *ni-*, or *nu-* described in

the preceding sections. As a practical matter, we can only be sure we are seeing an example of *ne-* when the stem is found with the other prefixes and this is associated with a semantic difference.

This prefix has been described in many ways in other languages as well. Notably, in Slave, Rice (1989: 432) describes it as a thematic prefix with little semantic content and as 'imperfective.' In Witsuwit'en, Hargus (2007: 387) describes it as 'qualifier of round objects' and as a 'thematic' prefix (p. 442). In Witsuwit'en, this form is also found describing 'distributive/inanimate plurals' (p. 423), 'iterative/cyclic' (p. 438), and 'inchoative' (p. 592), all functions found with *na-* in Nuu-wee-ya'. In Mattole, *ne-* is defined as 'back to the original place or condition' ((Li 1930: 58) and 'on the ground' (59).

The use of the form *ne-* is very unclear – perhaps best exemplifying the challenge of interpreting the use of this set of prefixes. To grapple with the range of meaning found in the data, I divide examples of *ne-* into three different categories: probably thematic, possibly allomorphic, and meaningful. 'Possibly allomorphic' examples occur when the stem is found with *ne-* in some forms and a different 'n' prefix (*ni-, na-, nu-)* in other forms. Unless these different prefix forms correspond to different semantic uses, they are most likely allomorphs of a single morpheme. 'Meaningful examples' are when stems with *ne-* are in semantic contrast with other prefix constructions. These are the examples that can inform us as to the semantic value of *ne-*. 'Probably thematic' examples are those for which *ne-* is the only prefix found with a stem. Further analysis in the corpus may reveal other prefixes in opposition with these uses of *ne-*, which could in turn allow us to identify the semantic contribution made by *ne-*. For determining a typical value of *ne-*, we must base our analysis only on the 'meaningful' category. The following sections will look at these first two categories of examples ('probably thematic' and 'possibly allomorphic') and then describe the findings of the third 'meaningful' category to explore what gloss makes sense.

8.5.1 Probably variation of a different form For some verbs, there appears to be alternation between *ne-* in some forms and either *na-, ni-,* or *nv-* in other forms with no observable change in meaning. I take this to be allomorphic alternation and so not evidence of a distinct prefix *ne-*. After considering examples of verbs found with both *ne-* and *ni-*, I turn to examples of verbs found with both *ne-* and *na-*. The variation between *ne-* and *nv-* is explored in §8.6.3.

In examples (141–144), we can see both *ne-* and *ni-* used with the intransitive stem *ch'vt* 'be afraid' and the transitive stem *jit* 'be afraid of, fear,' *ni-* in (141) with *ch'vt*, and *ne-* in the remaining examples. I consider these to all be allomorphs of *ni-* 'completive.' Since we see no alternation with the transitive stem *jit* 'be afraid of, fear,' it is possible that in this case, *ne-* is the base form and a probably thematic prefix.

(141) *nishlh-ch'vt*

ni-	ʃ-	ɬ-	tʃʾət
COMP-	1S.SUB-	lh.CL-	afraid

'I am afraid' [EJ 255:1:1]

(142) *nvn-du' nel-ch'vt*

nən	-duʔ	ne-	l-	tʃʾət
2S	-PERT	COMP-	l.CL-	afraid

'you are afraid [EJ 255:2:1]

Note that in (143) with *jit*, there is another *ni-* prefix form, but this one is the second-person singular object prefix. In combination with the first-person singular subject prefix, it is clear that a more literal translation of this verb should be 'I fear you' rather than 'you scare me.'

(143) *nii-nee-sislh-jit*

ni-	ne-	si-	s-	ɬ-	dʒit
2S.OBJ-	N.TH-	STAT-	1S.SUB-	lh.CL-	afraid

'you scare me'[20] [EJ 299:8:1]

We see the third-person object marker *yi-* in (144) as well, making this read 'he was afraid of it.'

(144) *yii-nel-jit-'i*

yi-	ne-	l-	dʒit	-i
3O3-	N.TH -	l.CL-	afraid	-NOM

'he was afraid of it' [EJ 288:15:1]

In (145) and (146), we see two examples of *lvs* 'run,' one without (145) and one with (146) a *ne-* form. In (145), the referent is running to the door. It uses the *gh-* 'perfective' and the *ya-* adverb meaning 'upward.'

(145) *maa'-gwe-tr'vn yaa-ghv-lvs*

maʔgwe	-trʾən	ya-	ɣə-	ləs
door	-towards	up-	PFV-	run

'she ran to door'[EJ 292:8:1]

In contrast, (146) has the postposition *me* 'in (the river),' which Jacobs (110: 115) states is always found with the *ni-* locative prefix (discussed in §8.1.3). Based on this, I analyzed *ne-* in (146) as an allomorph of *ni* 'locative.' Notice that there is also the *gh-* 'perfective' in this example, so we would not expect the *ne-* to also indicate perfective.

[20] This translation would be more accurate as 'I am scared of him,' in which the object is a direct object rather than indicated with a prepositional phrase.

(146) *xu-ne-me nee-yv-ghv-lvs*

xune	-me	ne-	yə-	ɣə-	ləs
river	-in	LOC-	up-	PFV-	run

'he ran in the river' [EJ 289:8:1]

In (147–149), we can see *ne-* in alternation with *na-* for the stem *ts'ilh* 'grease, paint' and in (150–152) with *xe* 'paddle.' In (147), there is no thematic prefix, only the perfective marker *ghi-*.

(147) *xv-nvs ch'v-k'a ghii-ts'ilh*

xənəs	ʧ'ə-	k'a	ɣi-	ts'iɬ
canoe	INDF-	grease	PFV-	grease

'he greased his canoe' [EJ 312:5:1]

The alternation in question is seen in the next three examples, with (148) using *na-* 'pluractional' (cf. §4.2.1).

(148) *ch'v-k'a naa-yislh-ts'ilh*

ʧ'ə-	k'a	na-	yi-	s-	ɬ-	ts'iɬ
INDF-	grease	PLU-	3O3-	STAT-	lh.CL-	grease

'he greased it' [EJ 312:1:1]

However, it appears that (149) and (150) use *ne-* for what is apparently the same function.

(149) *t'aa-mish-she' nee-ghvt-ts'ilh*

t'amiʃ	-eʔ	ne-	ɣə-	d-	ts'iɬ
hat	-POSS	PLU-	PFV-	d.CL	grease

'he greased his hat' [EJ 312:4:1]

(150) *ni' nee-ghvt-ts'ilh*

niʔ	ne-	ɣə-	d-	ts'iɬ
face	PLU-	PFV-	d.CL-	grease

'he painted his face!' [EJ 292:1:1]

(151) and (152) are examples of the stem *xe* 'paddle a canoe,' with (151) illustrating the typical situation, where *na-* marks the iterative nature of paddling, whereas in (152), the prefix *ne-* appears with apparently the same function. Due to the prevalence of this verb with *na-*, I assume that this use of *ne-* is an allomorph of *na-*.

(151) *naa-xe*

na-	xe
PLU-	paddle

'you paddle' [EJ 386:1:1]

(152) *nee-ghet-xe*

ne-	ɣe-	d-	xe
PLU-	PL-	1P.SUB-	paddle
'we paddle'		[EJ 261:10:1]	

8.5.2 Alternating *ne-* Having cleared away the allomorphic *ne-*, we arrive at examples in which we can see a semantic contrast with other prefixes. In (153–155), we see three examples of the stem *'i-* 'look.' With *ghv-* 'progressive,' the verb is glossed as 'see' (153) and with the lexical postposition *k'e* 'as, like' (154).

(153) *ch'ash ghvsh-'i*

tʃ'aʃ	ɣə-	ʃ-	ʔi
bird	prog-	1S.SUB-	see
'I see a bird'		[EJ 287:4:1]	

In (154), the verb means 'look like' (154), using the postposition *k'e* 'similar/like' and the adverb *u-* 'towards' to create a meaning that reads as 'look towards/as similarity of referent.' As it is third person, the referent here (which is indicating what the subject looks like) is not marked. Often third-person postposition referents are unmarked.

(154) *k'ee 'ul-'i*

k'e	'u-	l-	ʔi
like	towards-	l.CL-	see
'looks like'		[EJ 287:1:1]	

With *ne-*, it means 'look at' (155), which is both less telic than 'see' and more agentive than either 'see' or 'look like.' This switches out with the *u-* to create a different meaning of 'see.' Without more conclusive evidence, I am simply glossing this form of *ne-* as 'at.'

(155) *nel-'i*

ne-	l-	ʔi	
at-	l.CL-	see	
'you (s) look at him'			[EJ 215:2:1]

In (156) and (157), we see two examples of *tsi* 'sit.dual.' In (156), the stem takes the prefix *ne-* and the phrase indicates a transitive, telic action with a clear agent subject, in which 'they sit him down.'

(156) *xv-nvs-me-tr'vn ts'v-nelh-ts'vt*

xənəs	-me	-tʂ'ən	ts'ə-	ne-	ɬ-	ts'ət
canoe	-in	-towards	INDF-	CAUS-	lh.CL-	sit.2.PRF
'they sit him down in end of canoe'			[EJ 290:3:1]			

In contrast, (157) is the standard intransitive activity, and it is marked with *da-*, the prefix that is found in all other examples of 'sit.'

(157) *t'v-xwii-dvn tr'e' daa-delh-ts'i*

t'əxwi	-dən	tɻ'eʔ	da-	de-	ɬ-	ts'i
all	-LOC	outdoors	on-	REF-	lh.CL-	sit.2.IMPF

'they're usually sitting outdoors' [EJ 316:6:1]

In examples (158–161), we see *ne-* used with the intransitive nonagentive stem *le* 'burn.' The three examples with *ne-* (158–160) all have a telic reading. In (158), the verb indicates the fire 'burned down.'

(158) *nes-lee-la*

ne-	s-	le	-la
TEL-	STAT-	burn	-PST

'it burned down' [EJ 267:3:1]

The same verb as in (158), with the addition of the adverb *xa* 'fast,' indicates the fire 'burned fast.'

(159) *xa' nes-lee-la*

xaʔ	ne-	s-	le	-la
fast	TEL-	STAT-	burn	-PST

'it burned fast' [EJ 267:5:1]

In (160), the same verb as in (158) and (159), except with the phrase 'only part,' indicates the fire burned 'partway down.'

(160) *tl'uu-sha nes-lee-la*

tl'u-	ʃa	ne-	s-	le	-la
part-	only	TEL-	STAT-	burn	-PST

'it partly burned down' [EJ 267:6:1]

The single example without the *ne-* (161) is not telic.

(161)*gus taa-ch'v-ghii-le*

gus	ta-	tʃ'ə-	ɣi-	le
potato	ta.TH-	INDF-	PROG-	burn

'the potatoes are burning' [EJ 269:4:1]

In (162) and (163), we see that *ne-* is used in the telic sense, although there is no clear example that provides us with a semantic contrast.

(162) *dis-ne nee-ghilh-se'-la*

disne	ne-	ɣi-	ɬ-	seʔ	-la
man	TEL-	PFV-	lh.CL-	dry	-PST

'he dried it' [EJ 265:1:1]

(163) lhtr'ii nee-ghilh-se'-la

ɬʈʂ'i	ne-	ɣi-	ɬ-	seʔ	-la
wind	TEL-	PFV-	lh.CL-	dry	-PST

'the wind dried it' [EJ 265:3:1]

These three sets of examples suggest that *ne-* contributes either an agentive reading to an existing argument ('look at'), a new agentive argument (transitive 'sit'), and/or a telic reading ('sit,' 'burn') to the meaning of a word.

8.5.3 Possibly thematic We conclude the discussion of *ne-* with some examples of stems that are only found paired with *ne-*. In (164), the stem *'a* 'think' takes the prefix combination *ne-sri-*. This is the only verb in the data set that takes *sri-* at all, and for every example where it means 'think,' both the *ne-* and the *sri-* co-occur. Golla (1976: 226) defines the prefix combination *ne-sri-* as 'think' and Jacobs (111: 97) defines *ne-si-* as 'mind.'[21] In (165), the stem *ye* combined with the areal locative marker *xwv-* and *ne-* means 'beat, defeat.' Both of the verbs in (164) and (165) occurred in multiple examples with different referents and aspects, and all contained the prefix *ne-*, suggesting it truly is thematic in these uses.

(164) *wvn nee-srit-'a jii*

wən	ne-	ʂi-	d-	ʔa	dʒi
for	ne.TH-	STAT-	d.CL-	talk	it

'he is thinking about it' [EJ 234:2:1]

(165) *nn-ch'a-xwv-nee-sishlh-ye*

n-	tʃ'a-	xwə-	ne-	si-	ʃ-	ɬ-	ye
2S.OBJ-	big-	AREAL-	ne.TH-	STAT-	1S.SUB-	lh.CL	play

'I beat you' [EJ 378:6:1]

[21] In her orthography, Jacobs did not note a difference between the /s/ and /sr/ phonemes.

In contrast, there is only one example in each of the verbs in (166) and (167), so while they are still in the probably thematic category, their status is less clear.

(166) *lhaa-nel-ye*

ɬa-	ne-	l-	ye
REC-	ne.TH-	l.CL-	put
'it put itself together'			[EJ 307:2:1]

(167) *xwʋn' nee-sʋs-ha*

xwənʔ	ne-	səs	-ha
fire	ne.TH-	fire out	-Q
'the fire went out'			[EJ 322:5:1]

8.5.4 Summarizing the use of *ne-* Considering the many examples where *ne-* is actually an allomorph of another prefix, plus the examples where it is not clear what component *ne-* contributes to the meaning of an attested word, the few contrastive examples that suggest *ne-* is a telic, causative, or agentive marker look rather unhelpful. On the one hand, the number of examples is not large enough to be definitive that this is the best gloss, and on the other hand, if our goal is to benefit learners, it seems rather unhelpful to assign a contingent gloss that most likely will change as the analysis grows beyond this data set. That said, simply labeling it as 'unknown' seems unhelpful, too, if we think we know what it is but we just do not know what to call it. Since this is an issue that can face any element of analysis, it seems pertinent to have a system in place to handle these semantic uncertainties until they can be understood. The system I used was to provide an informative gloss for each example that indicates a semantic contrast and to just use 'ne.TH' when the semantics are unknown.

As an interesting side note, Vajda (2010: 54) suggests that Dene *ne-* is cognate with the *ne-* classifier for round objects in Siberian Khet of the Yeniseian language family. If this is accurate, then the form is exceedingly old, and the amount of time available for its meaning to shift idiosyncratically in combination with each different verb stem might explain why it is so hard to describe a consistent modern meaning.

8.6 Lexicalized prefix *nv-*: Typically something else This is the final prefix discussed in these findings, as it is the least amenable to analysis. In fact, from the examples in this data set, it is not clear that *nv-* is a prefix by itself, as opposed to being an allomorph of the other prefixes. As it is a reduced vowel (ə), this is a likely hypothesis. The only previous accounting of this prefix is by Golla (1976: 225), who glosses it as completive. Since *ni-*, in particular, is also a completive prefix, this gives initial credibility to the suggestion that *nv-* is an allomorph of *ni-*, but there are also examples that link *na-* and *nv-* and *ne-* and *nv-*. In fact, there is only one example in which the use of *nv-* clearly carries a distinctive meaning, an example we turn to at the end of this section.

There are some examples in the data (168–169) in which *nv-* is the form *ni-* 'completive' occurring before the first-person subject marker *sh-*.

(168) *daa-nvsh-tesh*

da-	nə	ʃ-	teʃ
in-	COMP-	1S.SUB	go to bed
'I go to bed'		[EJ 378:8:1]	

(169) *daa-nii-tesh*

da-	ni-	teʃ
in-	COMP-	go to bed
'go to bed'		[EJ 385:8:2]

Looking at the data set, there are also some uses of *nv-* in which, to me, it is clear that it is a variant of *nn-* 'stative.' Consider the stem *li* 'be,' which combines with the second-person subject prefix to produce *ni-* (170) and then with first person to produce *nv-* (171).

(170) *du xwvs xee-nii-li*

du	xwəs	xe-	n-	i-	li
NEG	cough	AREAL-	STAT-	2S.SUB-	be
'you are not sick'		[EJ 317:7:1]			

(171) *duu-wi dii-nvn nvsh-li*

duwi	dinən	nə-	ʃ-	li
indeed	doctor	STAT-	1S.SUB-	be
'indeed I am a doctor!'		[EJ 299:2:1]		

I recognize that this is a situation in which it requires a leap of faith to conclude that this form is indeed the *nn-* 'stative.' Standard linguistics might not even try to account for these examples and just wait till more data are found. However, my analysis is based not only on these data but also on nineteen years (and counting) of experience as a learner-speaker. Thus, I know independently that the stem *li* is found with *nn-* and that *nv-* is an allowable alternant when found before the first-person subject marker.

Also, there are two examples in which it appears that the *nv-* is a variant of *na-*, with *de* 'wash' and with *nish* 'work,' both of which are inherently pluractional activities. In (172) and (173), the forms *na-* and *nv-* appear to be used interchangeably with *de* 'wash.'

(172) *nv-ghaa-dil-de*

nə-	ɣa-	di-	l-	de
PLU-	PL-	1P.SUB-	l.CL-	wash
'we wash ourselves'		[EJ 386:3:1]		

(173) *laa naa-chilh-de*

la	na-	tʃ'i-	ɬ-	de
hand	PLU-	REP-	lh.CL-	wash
'you are washing'			[EJ 369:1:1]	

This can be seen also in (174–176) with *nish* 'work.' This is another situation where my familiarity with the language informs me that *nv-* is an alternate pronunciation of *na-*. (174) has *nv-*, whereas (175) and (176) have *na-* in the same position.

(174) *dis-ne nv-ghaa-dvl-nish*

disne	nə-	ɣa-	də-	l-	niʃ
man	PLU-	?-	REF-	l.CL-	work
'the man is working'			[EJ 258:1:1]		

There is no distinction in meaning, but there is the unknown prefix *gha-* in (174) that is either impacting the phonology of the preceeding prefix and/or impacting the semantics of the verb in a way we do not yet understand.

(175) *naa-dvshlh-nish*

na-	də-	ʃ-	ɬ-	niʃ
PLU-	REF-	1S.SUB-	lh.CL-	work
'I work'		[EJ 368:7:1]		

(176) *shaa naa-dvl-nish*

ʃ-	a	na-	də-	l-	niʃ
1S.SUB-	for	PLU-	REF-	l.CL-	work
'he is working for me'		[EJ 324:1:1]			

Finally, the verb stem *ya* 'grab' appears to always have *ne-* (177–179), except in (180), where the prefix *nv-* appears in its place. In both (177) and (178), we see the telic *ne-*.

(177) *tr'aa-xe dee-nelh-ya*

tsaxe	de-	ne-	ɬ-	ya
woman	REF-	TEL-	lh.CL-	grab
'she grabbed him'		[EJ 314:7:1]		

(178) *lhee-nel-ya*

ɬe-	ne-	l-	ya
REC-	TEL-	l.CL-	grab
'they grabbed each other'			[EJ 314:5:1]

In (179), we see the telic *ne-* again. In this example, we also see *nu-* in its inflecting role of a first-person plural marker.

(179) *nuu-xwee-nelh-ya*

nu-	xwe-	ne-	ɬ-	ya
1P.OBJ-	AREAL-	TEL-	lh.CL-	grab

'they grabbed us' [EJ 314:8:1]

However, in (180), we see the *nv-* in the same position as the *ne-* 'telic' is in (177–179). In (180), the only difference is there are no other prefixes occurring before the *nv-*; this location is perhaps what is conditioning the change from *ne-* to *nv-*.

(180) *xuu-me nv-sil-ya*

xu-	me	ne-	si-	l-	ya
3PL-	in	TEL-	STAT-	l.CL-	grab

'we grabbed them' [EJ 314:9:1]

As described above and seen in (181), the stem *se* 'be dry' can occur with *ne-*, and in each case, the situation described is a telic change of state caused by an agentive subject, 'to dry something.'

(181) *lhtr'ii mvlh nee-ghilh-se'-la*

ɬtʂ'i	məɬ	ne-	ɣi-	ɬ-	seʔ	-la
wind	with	TEL-	PFV-	lh.CL-	dry	-PST

'he dried it in the wind' [EJ 265:4:1]

In a single example (182), the prefix is *nv-* and the meaning is stative 'I am dry.' This would apparently indicate that *nv-* is contrastive, indicating a state rather than agentive change of state. However, knowledge I have from attending community language classes informs me that the translation of (182) is also 'I am thirsty.' Also, this is an example in which no person marking is found. Normally, to indicate thirst, I would expect the subject to be indicated with a possession marker on the noun *si* 'head.'

(182) *si' nv-ghvl-se*

siʔ	nə-	ɣə-	l-	se
head	ne.TH-	PFV-	l.CL-	dry

'I am dry' [EJ 210:13:1]

Due to this second semantic meaning of 'to be thirsty,' I believe that the difference between *ne-* in (181) and *nv-* in (182) is not about the distinguishing an atelic state from a telic change of state, rather that it is a result of semantic spread and frequent use.

Therefore, we reach the end of our examples of *nv-* without having enough evidence to say that *nv-* is a morpheme separate from the other prefixes examined here. While, at this time, there are not enough data to set up definitive environment rules to explain how the different prefixes end up as *nv-*, we can say that it is common

to see this form when a prefix starting with an *n-* precedes the first-person subject marker, *sh-*.

9. Reflections This analysis unveils a scenario of great complexity partially obscured by the limitations of the attested examples, a scenario that is typical of language reclamation situations. To achieve some measure of understanding, I have operated in an Indigenous framework that charts findings in an episodic and cyclical manner, designed to meet the needs of the language community while also building up a linguistic analysis to further the study of Nuu-wee-ya', semantics, and Dene linguistics.

The specific analytical goal has been modest: to gloss each of the prefixes that begin with *n*. This is difficult because of the challenges of determining the form and identifying a consistent meaning to associate with each form. While modest, the findings presented here do support and possibly contribute to a lengthy conversation in Dene linguistics about how verb structure conveys semantic meaning and specifically how lexicalized prefixes contribute meaning to the verb theme.

The true uniqueness of this work comes from the perspective from which this research has been conducted. That I am a learner-speaker of Nuu-wee-ya' defines my research. How the research was dreamed up, constructed, conducted, and described has been fundamentally impacted by my experience with the language. In essence, the reason this paper was created was because of my need to understand how verbs work so that I can use them when I talk Nuu-wee-ya'. This research came about as the appropriate next step on a lifelong journey of learning and observing these verbs.

In many parts of the analysis, I was able to use my experience as a learner-speaker to inform my understanding of the happenings of this language. I found that these points occurred more when things were not clear from the data set, but I had information from my experiences with the language. This experience was most helpful in understanding the prefixes whose uses were least clear, such as the confusing *ne-* and the *nv-*, which is (mostly) a pronunciation variant of others. It was also essential for some cases to correctly interpret a limited or even mistaken translation in which Elizabeth Jacobs used an English translation that is not exactly wrong, but that does not structurally align with the Nuu-wee-ya' example.

Another result of this research, personally my favorite, is that I find my ability to use my language greatly increased. I believe this is particularly due to the amount of time needed to conduct the research. In my experience, doing linguistic analysis on a language can help one learn it if that is what they want to do. I know now that my understanding and familiarity with the verb structure are allowing me to jump over the hurdle that verbs have always posed for me and to become the speaker I dreamed I could be since I started learning. This results in me speaking more and allowing my children to hear it more on a daily basis.

I describe the role of my learner experience as encouragement for all learner-speakers. We are developing intuitions that are becoming the living spirit of our once sleeping languages. It is integral for the growth of our languages that, alongside seeking the traditional use of language forms, we allow for and trust these intuitions.

This research is just one step along a journey of analysis to provide learning materials for learners. The next steps will involve examining how the verbs work in texts and how these patterns occur in the other dialects. From these linguistic descriptions, we can build language materials to support use. For our speakers, I hope this paper shines a light on this little bit of the tangle of Nuu-wee-ya' verb morphology. Ultimately, this work grows out of my belief that Nuu-wee-ya' can and will be spoken again prominently in our communities and in the hope that those inspired by language revitalization and reclamation can continue to network, share, and support each other's projects through collaboration, conversation, and continuation.

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