Constructing Language Revitalization Resources:

The Niiĝuĝim Tunuu Picture Dictionary

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Abstract

Field research estimates that at least 43% of the 6-7,000 languages in the world are in danger of extinction (UNESCO 2010), but in recent times, language revitalization programs and resources have sprung up around the globe to combat this rapid loss. This article details one such language—Aleut, spoken by Alaska Natives originating from the Aleutian Islands—and assesses what learners need based on the current state of language revitalization within the community. Afterward, it will discuss the creation of a resource to match as closely as possible learner needs, culminating in the production of *The Niigugim Tunuu Picture Dictionary*.

Constructing Language Revitalization Resources:

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Background

The Unangax, or Aleut¹, are the Native peoples living in the Aleutian Islands, the Pribilof Islands, and the Alaska Peninsula west of Stepovak Bay. Their language, Unangam Tunuu, belongs to the Eskimo-Aleut language family. Historically, the Unangax people were divided into nine subgroups, or tribes, and spoke nine dialects; however, today, only two dialects exist— Eastern and Western Aleut (Qawalangim Tunuu and Niigugim Tunuu, respectively). This decrease in speakers began after Russia's first contact with the islands in the late 18th century, when 80 to 90 percent of the population died of abuse or disease, and continued when the United States took control of the islands in 1867 and forced Unangax children into boarding schools to be reeducated as English monolinguals². This practice was still continuing in 1946, when my grandmother was forcibly removed from her home and placed in one such boarding school, where she was corporally punished for speaking Aleut. Even so, the Unangax language and way of life did not disappear. A 1944 surveyor of Unangam Tunuu commented that "the Aleut tongue is alive and flourishing. There is a hardy, vital core in this people which resists extinction" (Geoghegan 1944).

However, today the Aleut language is "severely endangered", according to the UNESCO *Atlas of the World's Languages in Danger*, with only 150 fluent speakers remaining, all of which are bilingual (UNESCO 2010). In a gathering of Aleut language learners convened in the summer of 2018, and which I personally attended, the number of current speakers of both

¹ Throughout this paper, I will use the terms "Aleut" and "Unangax̂" interchangeably to refer to the people group, as well as "Aleut" and "Unangam Tunuu" interchangeably to refer to the language spoken by this people group.

² From Bergsland 1997, 1994, Bergsland & Dirks 1990, and Oleksa 1992.

Eastern and Western dialects was estimated at fewer than 100. The Aleutian Pribilof Island Association (APIA), the federally-recognized tribal entity representing Aleuts, places the number under 90 (APIA 2019). This state of emergency calls for swift and calculated community measures, taken with the goal of producing more fluent speakers in the younger generations.

Efforts to encourage the revitalization of Aleut language began in the 1970s after the Bilingual Education Act (Bergsland 1994). Before this, virtually all materials on Aleut were linguistic and ethnological documentation—valuable in themselves, but hardly serving to pass down fluency from one generation to the next. Some of the first specifically revitalizationoriented materials were a series of beginner readers on simple subjects (e.g., *Alaux Tutat*? [What do you hear?]) produced by the Bilingual Education Department of Alaska and written in large part by Moses Dirks, Nadesta Golley, and the linguist Knut Bergsland. Following this, two of the main contributors to Aleut educational material became Knut Bergsland and Moses Dirks, who put out two school grammars and one dictionary over the course of four years (1978-1981). In 1982, Bergsland received support from the Alaska Native Language Center to produce a much larger work, Aleut Dictionary/Unangam Tunudgusii, which Dirks also played a significant role in producing. Bergsland released this comprehensive, 755-page dictionary in 1994. In 1997, one year before he passed away, Bergsland published Aleut Grammar/Unangam Tunuganaan Achixaasix (Bergsland 1997, Simonsen 2014). Moses Dirks largely continued his work in 2008 with Anna Berge in their publishing of How the Atkans Talk/Niigugis Mataliin Tunuxtazangis, one of the first Aleut workbook-type educational materials. Berge published the Eastern version of the book, Pribilof Angagigan Tunungin/The Way We Talk in the Pribilofs several years later (2016). Since then, Liza Mack has used Berge's material to teach a summer course on Eastern

dialect Aleut through the University of Alaska at Fairbanks (UAF), although this was a one-unit online course.

The most recent language revitalization efforts for the Aleut language have been instigated by APIA. In 2015, APIA partnered with Where Are Your Keys (WAYK), an organization dedicated to helping communities build language revitalization programs particularly for Native communities (WAYK 2019). The WAYK program has continued every year since then and has expanded its reach into new communities. In 2019, APIA hired Thornton Media—a company that partners with Native tribes to produce language-learning media—to produce a language app for the two extant dialects of Aleut. The apps were released the following summer and have since been advertised to various Unangax̂ communities as educational tools.

The Where Are Your Keys (WAYK) Program

By far the most productive recent effort in Unangam Tunuu language revitalization has been the introduction of WAYK. Funded by the Administration for Native Americans and the Aleut Corporation, WAYK has sought to create programs for both Eastern and Western dialects of Aleut centered around engaging current speakers, creating new speakers, and building learning materials. WAYK's activities have thus far taken place on St. Paul Island (Eastern), Atka Island (Western), and Anchorage (both Eastern and Western).

The model for WAYK and corresponding philosophies are highly developed and constitute the current dominant framework for language revitalization in the Unangax̂ community; thus, they are crucial to understand. WAYK is designed to be able to operate with very few native speakers, capitalizing not on the pedagogical capacities of speakers (who are

quite elderly and untrained as educators) but on the learners' drive. Learners are trained to elicit speech from speakers productively by looking for important grammatical paradigms or useful vocabulary terms. The process of monolingual elicitation provides a miniature immersion space for a language lacking its own immersive region. The learners then independently write up a lesson plan and teach off this lesson plan to other learners. The lessons are entirely monolingual and look much like the monolingual elicitation session conducted with the speaker. Each lesson passes through several iterations of review, both by native speakers and fellow learners, and eventually is incorporated into an ever-growing curriculum for the language. In this way, learners simultaneously acquire language and produce language-learning materials for future learners.

The philosophies behind this model greatly shape the culture of WAYK learners. For example, because learners gather new language entirely through monolingual elicitation, the principle of "no translation" is crucial to keep the program working and learners themselves are extremely hesitant to use English while interacting with Unangam Tunuu. Monolingual elicitation simulates immersion and defines the relationship between speaker and learner, as speakers must simplify their language usage while learners must approach the speaker on the terms of the target language. Training WAYK learners in monolingual elicitation techniques involves training them how to prevent speakers (who are all bilingual) from simply translating terms and phrases. To make this point compelling for learners, the WAYK program equates translation to "killing a fairy":

Immersion environments are magical bubbles that are difficult to create and maintain. Once they're made they lead to comprehension and fluency. When you translate, a fairy dies. A small piece of the language loses its magic. (WAYK 2019)

Each learner comes to treat the simulated immersion experience as sacred, avoiding all English equivalents wherever possible. This attitude extends outside of sessions with speakers, as lessons among learners themselves are monolingual.

Since translation is taboo in WAYK learner culture, other methods must help learners to acquire Krashen's i+1—that is, a slight amount of language just beyond that which is comprehensible (Krashen 1985). One of the central tools within WAYK thus becomes what is called the "set-up": a controlled environment that clearly presents i+1 in a salient way. Learners are taught to present paradigms in such a way that they are immediately apparent, using props or performing actions that differ along the line of i+1. Learners then ask a series of basic questions about the props to speakers. The simplicity of the "set-up" requires the speakers to use i+1 in



A WAYK set-up for color

learners' questions. Once a basic dialogue containing *i*+1 is established, the learner repeats it until the new terms are familiar, and then records the new lesson. This lesson consists of the dialogue and

responding the

instructions on how to reproduce the "set-up".

The WAYK methodologies are unique, but center on familiar ideas such as monolingual elicitation and i+1 (Creed 2017). The program is currently the most widespread method used for language revitalization by the Unangax, spanning Atka Island (a significant location for the Western dialect), St. Paul Island (a significant location for the Eastern dialect), and Anchorage (a significant population center for Aleuts). This paper will not discuss whether or not WAYK is the most effective learning method for Aleuts. It will instead use WAYK as a launching point for further revitalization efforts under the assumption that it is the most-used tactic among Aleut language-learners today.

The Need for Further Educational Materials

Thus far I have made repeated reference to learners and their training. Who are the current learners of Unangam Tunuu? In understanding what these learners need, it is crucial to understand who they are and what they already have access to.

Because WAYK has held summer-long programs in Atka, Anchorage, and St. Paul, the primary centers for language-learning are in those three locations. In Anchorage and St. Paul, particularly, the number of learners is higher. In each location, a core team of dedicated learners represents the WAYK participants in the area. This team, empowered by the WAYK organization itself, promotes language learning by hosting two main kinds of programs: summer-long language intensives, and language camps, which last one to two weeks. On top of these activities, the core team may lead other forms of outreach; for example, the Anchorage core team puts on a weekly event called Community Language Night. Camps and Language Nights serve to promote language-learning among the wider population of Aleuts, as well as draw more

members into the core team. Summer language intensives, meanwhile, constitute concentrated time spent on monolingual elicitation and lesson-building.

The learners themselves represent a diversity of ages and backgrounds. Within each core group, learners typically range from middle-school-age to their early twenties, and each learner lives in either Atka, Anchorage, or St. Paul. The camp attendees, however, bring a much wider pool of people. Toddlers, elders, and entire families of children and parents attend these camps from around the country. At a small two-week language camp in Anchorage in 2018, attendees came from nine different communities in Alaska and five different communities outside of Alaska. One of the concerns raised by learners at this camp was how they could continue to practice their Unangam Tunuu after they had returned to their respective communities.

Due to the hands-on nature of WAYK, learners have few ways of taking home with them what they have learned. The method centers around setting up language concepts using props and solidifying knowledge through verbal repetition—two things which are not particularly portable. A few especially dedicated learners might receive a set of props which are typically used in the creation of "set-ups", but little reference material exists to remind learners what precisely they learned during camp.

In fact, reference materials do exist, as mentioned previously. However, the extensive literature on the Aleut language detailed in the first section serves the current population of learners very little, for two main reasons. The first is that most of the literature is linguistic—that is, it concerns itself more with the technical documentation of Aleut for linguists than with the production of resources for language learners. Even Knut Bergsland's monumental *Aleut Dictionary*, published in 1994, is rarely opened. As a learner myself, I once attempted to find

the components of my given Unangax̂ name—*Ayagam Uniikazaa*, a woman storyteller—in Bergland's dictionary. After an extensive period of searching, I became frustrated and gave up because the sections did not seem alphabetically ordered and each lexeme entry listed dozens of possible words. While I did not know this at the time, Bergsland's dictionary grouped letters that varied frequently between dialects, meaning that I would find words beginning with *ha*interspersed with *a*-initial words the *A* section, among other idiosyncrasies (Bergsland 1994). Additionally, beneath each lexeme Bergsland lists not only every dialectal variation of a word, but also all the forms of a word existing in documents spanning from the 1700s to the present. While extremely useful for academics, this information is overwhelming to learners, many of whom are in high school or younger.

However, not all materials are purely for linguistic documentation. As mentioned before, a number of people, including Bergsland himself, have produced workbooks and grammars designed to teach Unangam Tunuu. Yet these too go mostly unused, as they do not adhere to the principles of WAYK learning. Learners avoid such materials because of the "no translation" principle; if they peek into a dictionary they will be "killing a language fairy" and destroying the immersion-based learning they strive to build up with speakers. This taboo is so strong that learners would prefer spelling words wrong in lessons over spell-checking using a dictionary. Thus, learners described the language app produced by Thornton Media as "a fairy massacre"—that is, the app, focused on listing Aleut phrases and their English equivalents, replaced nuanced understanding of Unanga[°] and English words. According to WAYK methods of teaching, using the app will keep learners rooted in English and prevent them from

adopting a wholly Unangax point of view when speaking, as they will naturally resort to translation.

Regardless of the effectiveness of the grammar books or the validity of the WAYK philosophy, these are the realities of the current revitalization situation for the Unangax̂. Coreteam members lack reference materials, and learners who come to language camps lack resources to keep up their language outside of camp. The need thus exists for Unangax̂ materials that are geared toward learners and that complement WAYK philosophy.

The Niiĝuĝim Tunuu Picture Dictionary

In the production of a resource to aid the Unangax community revitalization efforts, I established the following goals:

Accessibility. Because learners are non-linguists, and because many are high-school age and younger, it is crucial to avoid pedantic explanation or technical vocabulary.

No translation. Learners should have access to materials that encourage their learning method. Wherever possible, the language must be explained through "set-ups", as opposed to using English terms.

Relevance. The concepts in the resource should reflect the concepts taught in the beginner lessons of the WAYK curriculum.

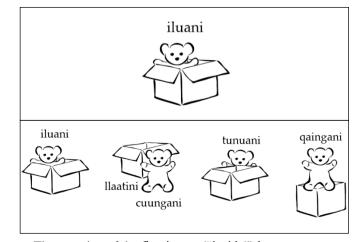
Practicality. Learners should learn language they can use. The resource should focus on the most important vocabulary and aspects of the language—those which are foundational and most useful—instead of thoroughly describing grammatical minutia and impractical vocabulary. It should constitute a launching-point for the learner, encouraging him to engage in the larger language revitalization effort, rather than isolate his learning.

On top of these goals, I gave myself the following limitation: I would focus on producing a resource for Niiĝuĝim Tunuu, the Western dialect, as opposed to both dialects. This is because a) I have the most experience with Western Aleut and therefore am more qualified to design materials for this dialect, and b) once a Western dialect resource is made, it can be easily adapted to suit the Eastern dialect, given the syntactic and lexical similarities between the two.

In considering my goals, I decided that the best course of action would be to produce a picture-based monolingual dictionary, which would describe useful vocabulary and grammatical affixes through images rather than verbal explanations. Pictorially representing concepts, especially purely grammatical ones, is a difficult task, and I turned to the inspiration of a similar picture dictionary produced for another Alaska Native language: Alutiiq.

In 2012, Alisha Drabek published *Qik'rtarmiut Alutiit'stun Niugneret KRaasiirkii*, an Alutiiq picture dictionary intended to double as a coloring book. Rather than organizing words alphabetically and depicting them each with a picture, Drabek categorized them into 48 themes, such that each page contains related words. Some of the themes are more salient than others (e.g., "*Canamasqat*" [Shapes] versus "*Nunakuartut*" [They are walking the land]), but overall the

strategy is much easier for readers on two counts. The first is that readers can flip through the dictionary and easily find a word by locating its themed section. Thus, the learner does not need to know the Unangax̂ spelling or English translation of the word to locate it; this adheres to both accessibility and "no

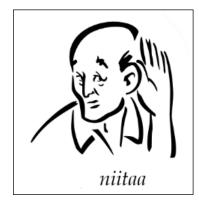


The meaning of the first image ("inside") becomes more apparent in the presence of other adpositions (images from Drabek's 2012 picture dictionary)

translation". The second is that while some concepts may be difficult to depict pictorially (e.g., adpositions), their meaning is much clearer in the presence of like-meaning words. This partly draws on the idea of a "set-up": concepts become more salient in context.

The theme-grouping strategy demonstrated in Drabek's work thus is helpful for the project at hand. In fact, upon first seeing *Qik'rtarmiut Alutiit'stun Niugneret KRaasiirkii*, I thought I might be able to simply adapt the same work for Unangam Tunuu—indeed, Alutiiq and Aleut are even culturally related, and many of the Alutiiq-specific vocabulary presented in Drabek's book would apply to Aleuts as well. However, after closer inspection of the picture dictionary, I became dissatisfied. While still an excellent resource, the book fails to do more than present vocabulary—the reader is provided with no information regarding how to use this vocabulary.

For example, the page delineating adpositions, titled "*Naama Taquka'angcuk*?" [Where is teddy bear?], depicts possible responses such as *iluani* [inside], *tunuani* [behind], and *quliini* [over], but the components of the question title, the relationship of the adpositions to these components, and indeed, whether or not the adpositions are prepositions or postpositions,

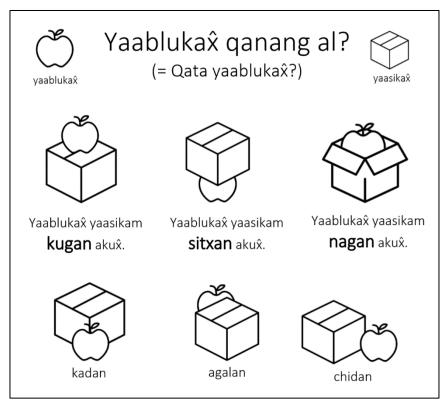


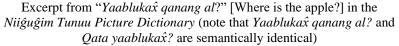
Does *niitaa* mean "to hear", "he hears", "hearing", or "sound"? (image from Drabek's 2012 picture dictionary)

remains unclear. Learners must have prior knowledge of Alutiiq grammar and vocabulary to understand the page and to properly use the words presented. Another page, "*Ellpeklluku*" [To sense (feel) it], presents sensory words to the reader, but it is unclear if these words are verbs, nouns, or something entirely different. Depicting "to hear" differently from "hearing" through an image is difficult, if not impossible, without further context; here, however, the context provided by theme-grouping is not sufficient.

Users of the Alutiiq Picture Dictionary must understand the morphological differences between lexical classes before understanding what the words in *"Ellpeklluku"* mean. This violates the goal of practicality, since learners cannot use the language they learn.

The WAYK notion of the "set-up" provides a neat solution to this problem, as a set-up focuses on a single basic question with various, customizable answers. Rather than randomly introducing related lexical items together on a page, I decided to restrict the words to solely those which could answer the same question. Therefore, each page was headed by a single question, followed by at least one example of a complete utterance that answered the question. Within each answer, a single word was bolded. Below these example utterances, were images for other possible answers, each of which could take the place of the boldened word to achieve a grammatical sentence. As a result, the learner has access to a question, a series of grammatical





answers to the question, and a mechanism for adding indefinite grammatical answers to his repertoire. This last point hinges on the fact that the layout teaches not only collections of words, but specific questions that can elicit novel responses. Hypothetically, the learner could approach a speaker of

Unangam Tunuu with such a question to acquire language not presented in the dictionary. This fits in neatly not only with the WAYK set-up model, but also with its goal of getting learners and fluent speakers to interact more. The dictionary thus not only teaches learners, but gives them the tools to learn by immersion.

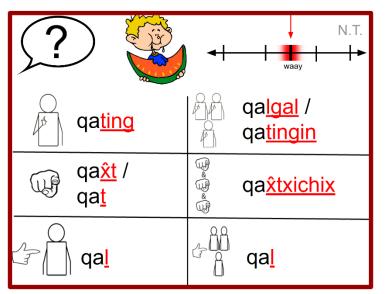
The specific questions defining each section were chosen based on their relevance and practicality. First, I wanted learners to have a material they could reference after attending a language camp to be reminded of the language they acquired. Thus, I made sure that most of the lessons from the first units of the current curriculum for Niiĝuĝim Tunuu were present in the book. Pages such as "*Wan alqu î al*?" [What is this?], "*Kiin al*?" [Who is it?], and "*Alqutat*?" [How are you?] are examples of such lessons. Other questions I included to introduce vocabulary which a learner might use on a daily basis; these are pages such as "*Alqu î chu îta î*?" [What are you wearing?] and "*Alqu î qa î*?" [What are you eating?], to introduce clothing and food items, respectively. Such words will give the learner more flexibility in his range of discourse.

However, simply assembling questions and answers would not provide the learner with a sufficiently expansive toolset for producing novel utterances. Niiĝuĝim Tunuu is rife with morphological inflection necessary for daily communication. On an elementary level, Niiĝuĝim Tunuu predicates take one of five tenses, vary by mood (either indicative or interrogative), agree in person and number with the subject, and possess unique endings for negation. To depict verb conjugations and other grammatical patterns, such as noun suffixes denoting possession, I used a series of paradigm charts which once more sought to conform to the standard of no translation. The paradigm charts were designed by Kai Minosh Pyle and myself during a language intensive

for Aleut in the summer of 2018. Below is an example of the morphological inflection available to a verb in the present, omitting postbases (which will be discussed subsequently).

	Indicative		Interrogative		Negative indicative/interrogative	
	Sg.	Pl.	Sg.	Pl.	Sg.	Pl.
1 st	-kuq	-lgaku <i>x̂/-</i> kus	-ting	-tingin	-lakaq	-lakas
2 nd	-kux̂t	-kux̂txichix	$-(\hat{x})t$	-x̂txichix	-lakax̂t	-lakaxtxichix
3 rd	-kux̂	-kus	-l	-l	-lakax̂	-lakas

Presenting this information to a new learner, which requires both English and some degree of linguistic understanding, would be overwhelming and counterproductive, especially since this is merely one tense in five. Thus, the series of paradigm charts devised for verb conjugations strives to simplify the material by making use of pictures, and splitting each tense chart into three manageable parts: indicative, interrogative, and negative. These three parts reflect the WAYK formula in script-based lessons: the teacher asks a question (interrogative), the students answer in the affirmative (indicative), the teacher asks another question (interrogative),

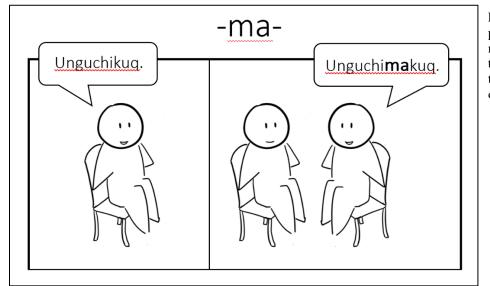


and the students answer in the negative (negative indicative/interrogative). Thus, the charts provide learners with the skeleton for a conversation using the WAYK model. Paradigm charts are particularly useful for Unangam Tunuu because of the language's surprising regularity; hardly any verbs

Paradigm chart for the present interrogative forms of *qal* [to eat]

violate the patterns generalized in the paradigms presented.

Aside from conjugation, other markings on verbs prove essential for basic language usage. Because Niiĝuĝim Tunuu is a polysynthetic language in the Eskimo-Aleut language family, it features hundreds of suffixes, specifically postbases, which can stack within verbs to alter their meanings. While some of the suffixes offer relatively subtle or specific meanings, others are vital to express notions such as desire, ability, or repetition. Grasping suffixes is crucial for even basic language generation, and suffixes constitute a major part of the current WAYK curriculum for Aleut. However, because the suffixes represent abstract notions such as desire, they are difficult to depict pictorially. Once more, I utilized the notion of a "set-up" to portray the meanings of these suffixes, placing verbs in context to convey i+1. An example is shown below.



Example of pictorially providing context to the meaning of suffixes; in this case, *-ma-*, translatable as "as well" or "also"

Lastly, one of the most important aspects of the Aleut language, or indeed any language, is its phonetics. During the production of *The Niiĝuĝim Tunuu Picture Dictionary*, many non-speakers asked me if there would be an audio component available, adding that such a component would greatly assist with their learning. Niiĝuĝim Tunuu has a number of sounds

which are very difficult to make or distinguish for an English speaker; for example, the difference between voiced uvular fricatives and unvoiced uvular fricatives is particularly challenging for learners to grasp, but absolutely crucial for language comprehension. Pre-aspirated nasals such as /^hm/, /^hn/, and /^hŋ/ also require extra effort on the part of the learner to realize. Furthermore, the polysynthetic nature of the language results in lengthy words, particularly verbs, which can be daunting in their written forms. Learners would thus benefit greatly from audio samples of each word in the dictionary, which they could imitate to practice. Needless to say, this is difficult to offer in book form, but an online version of the book could potentially feature point-and-click samples of audio for each word, accessible to anyone. As a result, the current plan for the picture dictionary is to introduce not only hard copies, but also an online version. The online version would particularly aid in the goal of engaging learners from across the country, who have limited access to fluent speakers and who might not be able to acquire a hard copy.

The Niiĝuĝim Tunuu Picture Dictionary thus contains sections on vocabulary (entailing the questions and answers), verb conjugations (entailing paradigm charts), and suffixes (entailing "set-up" illustrations). These sections account for a basic understanding of the language which will give learners a reference material for what they have learned, as well as gently introduce potentially new concepts and terms. The words encompassed by these sections were selected either because 1) they were culturally relevant words (e.g., $qawa\hat{x}$ [sea lion], $isu\hat{g}im \ chaduu$ [seal oil]), 2) they were useful words for daily life (e.g., $paltu\hat{x}$ [coat], $ana\hat{x}$ [mother]), or 3) they existed in a WAYK lesson (e.g., $unasniika\hat{x}$ [chef], $bumaagi\hat{x}$ [paper]). The words themselves were initially extracted from Bergsland's *Aleut Dictionary* (1994), from WAYK lessons spell-checked by speakers, and from my own personal knowledge. The words were then corrected by

a fluent speaker, Sally Swetzof. However, because *The Niiĝuĝim Tunuu Picture Dictionary* depends so heavily on pictures providing the meanings of words, it is important that fluent speakers check the completed version, to ensure that words are properly associated with pictorial meanings. Additionally, non-fluent speakers should assess the saliency of each lexical item and paradigm within the dictionary, to ensure that it is indeed an effective and clear resource. While I have received input from non-speakers—potential users of the dictionary—at every step of the way, and the current step is passing the dictionary through the approval of fluent speakers, who will check the language and appropriateness of the images. Work for the dictionary is thus not yet complete; some sections must still undergo correction. However, by the end of this year I hope to have a completed resource which WAYK learners in Alaska and across the country can use. In the more distant future, a collaboration with Eastern dialect learners could easily result in a similar dictionary for Qawalangim Tunuu.

Resource-construction does not stop at a picture dictionary. While working on this project, an advanced learner suggested to me that a WAYK workbook would additionally be useful, as learners would not only have a reference, but also be able to engage with the material to actively learn. *The Niiĝuĝim Tunuu Picture Dictionary* serves as an excellent foundation for this potential future project—it provides a framework for explaining linguistic concepts specific to Aleut without English intervention. It furthermore offers a wealth of pictures, charts, audio, and tested language to bolster such a project. Hopefully, the picture dictionary will serve as a mere launching point for the production not only of Aleut language resources, but also of a new generation of Aleut speakers. The process of language revitalization takes time and energy which only the efforts of an entire community can provide. My contribution, informed by the

experiences of my fellow learners, fluent speakers, and an entire learning philosophy, represents just one step toward this reachable goal.

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