# Behind the Map: The reification of indigenous language boundaries in Alaska

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All maps have a story to tell. There is at least as much art as science in map-making. In the case of language maps this is doubly true. Languages are not physical entities which can be surveyed with more or less precision. Nor are languages political entities whose boundaries are duly recorded in legal documents. Rather, languages are multi-faceted social entities which are more alike or more differentiated from one another, depending on which aspects of those languages are emphasized. For those willing to explore further, the story behind the map reveals a rich, interconnected web of multilingualism within which Alaska's Native peoples settled this great land.

#### 1 The Map

Since its original publication more nearly four decades ago, the Native Peoples and Languages of Alaska Map (Krauss 1974b, hereafter "the Map") has become an iconic symbol of indigenous Alaskan landscape. As battles have raged on regarding territorial claims, subsistence hunting and fishing rights, and resource rights, the Map has stood unchallenged as a representation of Native Alaskan territories as defined by language. Even those who would challenge certain Native legal rights make no attempt to dispute the linguistic facts represented by the Map. The State of Alaska fought hard against the subsistence fishing rights of Ahtna elder Katie John (State of Alaska v. Babbitt), but no one disputed the fact that she was fishing in the traditional territory of the Ahtna language.

In Alaska today the Map is ubiquitous. It is found in nearly every government office and school. It is copied on websites and adapted for museum exhibits. Even less-than-accurate reproductions remain faithful to the original Map as their definitive source. The Map has become ingrained in the public consciousness, both Native and non-Native. At least in part this is due to the Map's striking visual appearance, an example of cartographic art reminiscent of colorful geological maps of major mountain ranges (see Figure 1). Languages are represented on the map in various shades and hues of color according to their linguistic relationship to each other. Alaska's two major language families—Eskimo and Athabaskan—are represented in blue and red, respectively, and within these families shades of color are assigned according to relative relationship to each other. Whenever the Map is simplified for presentation in exhibits, newspapers, or schoolbooks, the Eskimo languages are invariably blue and the Athabaskan languages red. In the eye of the Alaskan public the Map has given color to Alaska Native languages.

<sup>&</sup>lt;sup>1</sup> A second edition of the Map in 1982 included revisions to population and speaker statistics and some minor changes in the representation of villages but introduced no significant changes to language boundaries.

It is said that a picture is worth a thousand words, and so it is that the Map has a long and complicated story to tell. However, discovering the story behind the map can be difficult, because the Map was published with very little accompanying interpretive material. An inset shows a family tree of Alaska languages with population and speaker statistics for each

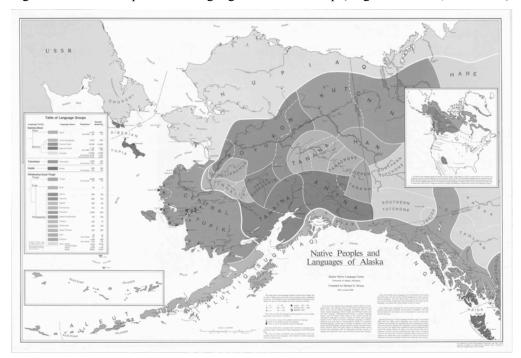


Figure 1: Native Peoples and Languages of Alaska Map (original in color, 36" x 48")

language, but no attempt is made to explain or justify the languages and language boundaries asserted on the Map. Lacking knowledge of the criteria used to determine language boundaries, the Alaskan public has tended to make two different types of assumptions regarding those boundaries, neither of which is accurate.

The first type of assumption is that language boundaries are somehow preexisting facts on the ground, flowing across the Alaskan landscape like rivers or mountain ranges. Just as rivers may change course through time, language boundaries may also move around, but those boundaries shouldn't be difficult to locate. In this view language boundaries are essentially static givens requiring nothing more than a simple survey in order to be represented on the a map. No discovery techniques are required; languages exist as entities. Koyukon is a language in the same way that Kodiak is an island and North America is a continent. We know those entities exist, but the details of the discovery of their edges, their boundaries, are not particularly important.

An opposing view holds that the language boundaries on the Map are the subjective creations of the Map's author. In this view language boundaries are not facts on the ground but rather more or less whimsical representations. This view, which has been gaining ground lately,

seems to result from a misunderstanding of the subtleties of linguistic science. Ironically, the seed of this idea may have been planted by Krauss himself. Writing just before the original Map was published Krauss notes that "...the Athabaskan 'languages' as now known ... are very largely mythical and arbitrary groupings" (1973b: 943). Of course Krauss is referring here not to a kind of geolinguistic voodoo by which boundaries are divined, but rather to the difficulty of applying the standard family tree model of language groupings to the Athabaskan family (see also Krauss 1964). Nevertheless, readers unfamiliar with the methodology of historical linguistics would be hard pressed to make this inference. The characterization of language boundaries as "mythical and arbitrary" is further reinforced by the broad sweeping lines on the Map. Members of the GoogleEarth generation know that "real" data is fuzzy. The availability of precise satellite data shows us that the boundaries of a forest fire or a volcanic ash cloud are rough and irregular, not like the smooth curving language boundaries found on the Map.

In fact neither of these assumptions regarding language boundaries on the Map is entirely accurate. The truth lies somewhere in between. That is, language boundaries do exist, as in the first view, but they also require some subjective interpretation, as in the second view. The difference between this and the first view is that the discovery of the boundaries is not a simple matter but one which requires the analysis of a vast array of linguistic data from Native speakers across Alaska. The difference with respect to the second view is that while determination of the boundaries does rely on analysis, that analysis is principled and structured, drawing on firmly established principles of linguistic science. The boundaries on the Map are interpretations of linguistic data rather than a simple plot of who speaks what where.

The easiest way to make a language map would be to simply survey speakers, asking "What language do you speak here?" Unfortunately, that method only works in regions with highly centralized political entities such as the European city-states which gave rise to labels like French and German. The situation in Alaska—and indeed most of the world—is much more complex. No Alaska Native language has a label which clearly distinguishes the name of the language from language in general. Language is simply language. One can refer to the way someone speaks in Healy Lake versus the way someone speaks in Tanacross, but there is no general indigenous terms which unites these language varieties as Tanacross language. Indeed, until the Map appeared no one had ever heard of the term Tanacross language. There was no way for a map maker to ask, "Do you or do you not speak Tanacross language?" How is it then that a language like Tanacross can be represented on the Map, if not by arbitrary fiat?

To answer this question requires us to delve into the intricacies of linguistic science in order to understand the subtle ways that languages vary in the pronunciation of certain sounds. We can't ask someone whether or not they speak Tanacross, but we can ask them whether or not they pronounce certain words with high or low tone. Or whether they pronounce certain words with a "ts" sound or a "ch" sound. And so on. Putting all of this information together we arrive at a picture of language boundaries as represented on the Map. Of course, the trick is figuring out which questions to ask and how to combine all the answers. But in the end the boundaries drawn on the Map are interpretations of linguistic data. That is, the Map is a visualization of linguistic data points and as such represents a compromise between multiple competing possible visualizations of that data. In fact, the Map could have been different. To understand how this

could be so requires us to understand something of the nature of language relationships and the prehistory of languages in Alaska.

#### 2 Language relationships

One undisputed fact about human languages is that languages change over time. The causes of this change are various and complex, but they are ultimately unconscious and unstoppable. In essence, small variations in the pronunciation of words and grammatical patterns can lead to significant differences as speakers become separated from each other. Over time these differences may become so large as to impede understanding, at which point linguists begin to refer to the two varieties as different but related languages. Such languages are related in the sense of being descended from a common ancestor, so linguists often use kinship terminology to describe this relationship, referring to languages related in this way as members of the same language family.

In some cases of language change evidence of the parent language survives as clear evidence of language history. Latin is a case in point. Latin spread across Europe as the language of the Roman Empire, becoming especially entrenched in southern Europe. As the empire crumbled in the 5th century AD and independent states re-emerged, speakers of these various forms of Latin had less formal contact with one another, and their ways of speaking began to diverge. These divergent forms eventually became different languages. Today dozens of languages trace their ultimate origin to Latin, including well-known languages such as French, Spanish, Romanian, and Portuguese; less-known languages such as Fala, Catalan, Sicilian, and Occitan; and extinct languages such as Dalmation, Auregnais, and Mozarabic. The linguistic history of these languages is easy to trace, in part because of the extensive written records of the parent language. Although the Latin spoken on the streets of the Roman Empire two thousand years ago already differed substantially from the formal written form of the language, it is still possible to trace the sound changes by which classical Latin begot its individual descendent languages.

In Alaska this task is complicated by the lack of written records. Nevertheless, using the methodology of historical linguistics it is possible to bootstrap a hypothesis about the parent language from knowledge of existing languages. The heart of this process involves the determination of isoglosses, and isoglosses are the foundation of the Map. Isoglosses are nothing more than the representation of the geographic distribution of a particular linguistic feature. In the case of the Map most isoglosses are based on historical sound changes. One example that many people will be familiar with is the sound in the Eskimo words for 'person'. The old Eskimo sound \*ŋ is pronounced variously as n, ñ, s, c, or y. Thus, we find words for person such as *inuk*, *iñuk*, *suk*, *cuk*, and *yuk*. A single isogloss is usually not sufficient to determine a language. For example, an isogloss of the pronunciation of the English words *cot* and *caught* shows that these words are pronounced identically in Eastern New England, Western Pennsylvania, Canada, and the American West. But the speakers of these different regions do not represent different

<sup>&</sup>lt;sup>2</sup> The asterisk indicates that the sound is a reconstructed, hypothetical form in the parent language.

languages. Usually (though not always) more than one isogloss is required in order to define a language.

## 3 Previous maps

The innovative nature of the Map becomes clear when we consider previous maps of Alaskan languages. The Map was not the first map of Alaska Native languages; that honor goes to Grigorii Ivanovich Shelikhov, an entrepreneur with the Russian-American company. His ethnolinguistic map of Alaska appeared more than two hundred years ago (Shelikhov & Pierce 1981). Shelikhov's map distinguishes five ethno-linguistic regions, labeled as follows: KO-NIA-GI (Yup'ik / Alutiiq); KE-NAI-TSY (Dena'ina); CHU-GA-CHI (Sugpiaq); UGA-LAX-MIU-TY (Eyak); and KO-LIU-ZHI (Tlingit).

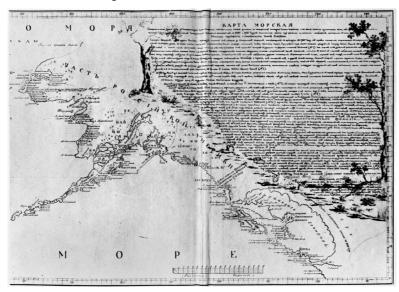


Figure 2: Detail of Shelikhov 1796

Aleut is omitted from the Shelikhov map, perhaps taken as a given by Shelikhov, as that was the language with which the Russians had had most contact and hence didn't require mapping (Krauss 2006). The next language map of Alaska to appear was produced by the Russian naval officer Fedor Karlovich Verman (Tikhmenev 1863). It was published in color and distinguishes six languages: Aleut, Eskimo, Tlingit, Ahtna, Kenai (Dena'ina), and Kolchan (referring to interior Athabaskan languages other than Ahtna).

Although the period following the American purchase of Alaska was marked by extensive exploration of the Alaskan interior, little progress was made on language mapping. Dall's (1877) report carries the promising title "Distribution and Nomenclature of the Native Tribes of Alaska," but the accompanying map is inferior to that produced by Verman in the previous decade. As Krauss (2006) points out, the most egregious error on Dall's map is the lumping of Eyak with "Southeastern Innūit," an omission which likely reflects Dall's ignorance of the Verman map. Dall's map also does little to enlighten our knowledge of the distribution of the Athabaskan languages. His report distinguishes nine Athabaskan groups in Alaska (Koyū'-kūkh-otā'nā, Un'ā-kho-tānā, Tehanin-kūt-chin', Tenăn'-kūt-chin', Tennūth'-kūtchin',

Kŭtchā kŭt-chin', Nātsit'-kŭt-chin', Hăn-kŭtchin', Ah-tena'), but the boundaries ignore significant linguistic distinctions. With respect to Koyū'-kŭkh-otā'nā—a grouping which includes Deg Hi'tan, Holikachuk, Upper Kuskokwim, and the lower dialect of Koyukon—Dall reports that he "feel[s] quite confident, that, until further knowledge is attained, no division of this group or tribe is necessary or even desirable" (1877: 26). Unfortunately, it would be quite some time before further knowledge was attained.

Not until the twentieth century does a detailed map of the Athabaskan languages of the interior appear. Osgood's (1936) map lists 8 of the 11 languages on Krauss' Map. Missing from Osgood are Holikachuk, Tanacross, and Upper Kuskokwim. Osgood simply did not collect sufficient language information in order to distinguish these languages using linguistic criteria. He explicitly acknowledges this in at least some cases. For example, Osgood lumps Upper Kuskokwim with Deg Hit'an (which he calls Ingalik), while acknowledging that it is "arbitrarily included on the basis of available evidence and may, after further field study, prove a distinctive group" (1936: 13). Tanacross is included with Tanana, though Osgood acknowledges that Allen (1887) was aware of more subdivisions within the languages of the Tanana valley.

What distinguishes Krauss' Map from previous Alaska language maps is its use of linguistic criteria and its reliance on established linguistic methodology to analyze those data. Previous map makers were able to distinguish broad categories of language communities, based on a sense of which groups of people could understand each other, but these authors lacked knowledge of the underlying variations in pronunciation which cumulatively serve distinguish one language from another. Before one can map languages one must first map the isoglosses which underlie those language boundaries.

# 4 Defining isoglosses

The task of defining isoglosses requires both meticulous attention to detail and inductive insights. The creator of the Map had both of these skills. Krauss arrived Alaska in 1960 having already done an extensive review of existing proposals for language relationships in Alaska. He thus had some basic hypotheses from which to form diagnostic tests for isoglosses. With these tests Krauss began a long-term project to collect data points for language isoglosses. Over the decade of the 1960's Krauss was engaged in a number of other projects, most notably the documentation of the Eyak language. However, he never missed an opportunity to ask a speaker from a region with which he was not familiar how certain words were pronounced. In this way, speaker by speaker, village by village, he assembled a database of language features distributed according to location. That is, a geographic language database. Roughly half of the data were collected at a hospital in Anchorage, where speakers from across the state came for medical treatment. In the years approaching the publication of the Map, Krauss could often be found wandering the halls of the Alaska Native Hospital, greeting patients and asking them his diagnostic isogloss tests.

The differences between language families are not difficult to discern. Eskimo and Athabaskan languages differ so radically both in terms of words and grammatical structure that it is a relatively simple matter to determine the boundaries between the two families. Krauss was interested in the more difficult questions of language boundaries within the major families, and

the questions he asked were based on sophisticated hypotheses about language history. For example, Krauss was interested in the evolution of the Athabaskan consonant series represented by \*ts, \*č, and \*č<sup>w</sup>. Some speakers maintained a difference between all of these sounds (just as some speakers of English maintain a difference between *cot* and *caught*). But other speakers merged two or three of these sounds together. Each of these mergers represents an isogloss, and by mapping out the distribution of these isoglosses an initial picture of Alaska Athabaskan languages emerges. Let's consider for the moment the evolution of just the three aforementioned Athabaskan consonants, as shown in Table 1.<sup>3</sup>

	*ts	*č	*č <sup>w</sup>
Koyukon	tł	ts	ts
Holikachuk	tθ	ts	ts
Deg Hit'an	tθ	ts	tr
Dena'ina	ts	č/ts	č/ts
Ahtna	ts	ts	ts
Upper Kuskokwim	ts	ts	tr
Tanana	tθ	ts	tr/ts
Tanacross	tθ	ts	ts
Upper Tanana	tθ	ts	ts
Han	tθ	ts	tr
Gwich'in	tθ/k	ts	tr

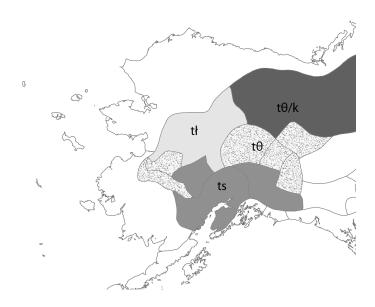
Table 1: Development of initial consonants in Alaska Athabaskan (after Krauss 1963)

The evolution of these consonants could potentially define several different types of isoglosses. One approach is to focus simply on the phonetic value of a particular consonant. In at least one case this approach sufficiently defines a language on the Map. For example, the sound \*ts evolves to either tł, tθ, k, or it simply remains ts. A map of this evolution defines four distinct areas, but as shown in Figure 3 only one of these corresponds exactly to a language on the Map. The area shown on the Map as Koyukon—that is, the area which we today view as Koyukon territory—is precisely the area in which the Athabaskan sound \*ts is pronounced as tł. However, the remaining three shaded areas in Figure 3 lump languages together or even split languages apart. The area in which \*ts is pronounced as ts with no change includes Dena'ina, Ahtna, and Upper Kuskokwim. That is the \*ts isogloss does not distinguish these three languages.

The other two sounds, \*č and \*č<sup>w</sup>, fail to distinguish any of the languages on the Map. The sound \*č remains as č in only part of the area now known as Dena'ina on the Map. In the Upper Inlet dialect, spoken in the Susitna river drainage, this sound is pronounced ts, as it is

<sup>&</sup>lt;sup>3</sup> In some cases two sounds are listed, separated by a forward slash. This represents the fact that in some cases different sounds are reflected in different dialects or in different environments. The symbol th represents the th sound in English 'thin', and the č symbol represents the ch sound in English 'chin'.

Figure 3: Distribution of reflexes of \*ts in Alaska Athabaskan languages (after Krauss 1962)



everywhere else in Alaska Athabaskan.<sup>4</sup> Thus, the Dena'ina region excepting Upper Inlet is the only region where the word for 'cry' is pronounced with a č- sound, *chegh*.

Another approach to defining isoglosses is to map out the pattern of changes rather than the actual sounds reflected in the changes. In this holistic approach Koyukon and Holikachuk pattern together, because the sounds \*č and \*č merge together with a single presentation, while the sound \*ts is kept distinct. We can see these patterns of mergers more clearly by replacing the actual sounds in Table 1 with abstract symbols, say, A, B, and C. In this way Koyukon and Holikachuk both show the ABB pattern, since the second two sounds are pronounced alike, but different than the first sound.

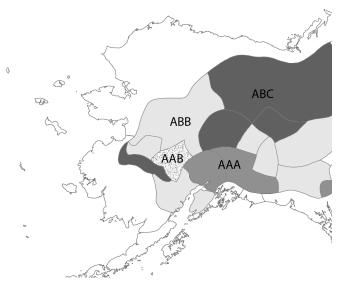
<sup>&</sup>lt;sup>4</sup> Technically, the pronunciation of \*č in the Upper Inlet dialect varies between ts and č. The crucial distinguishing factor is that there is no distinction between ts and č sounds in Upper Inlet. The fact is not always captured by the practical orthography.

Table 2: Patterns of mergers of initial consonants in Alaska Athabaskan

	*ts	*č	*č <sup>w</sup>
Koyukon	A	В	В
Holikachuk	Α	В	В
Deg Hit'an	Α	В	C
Dena'ina	Α	A/B	A/B
Ahtna	A	A	A
Upper Kuskokwim	Α	A	В
Tanana	A	В	C
Tanacross	Α	В	В
Upper Tanana	Α	В	В
Han	A	В	C
Gwich'in	Α	В	C

We can recognize four distinct patterns in Table 2: AAA, AAB, ABB, and ABC. That is, all three sounds may merge together (AAA); either the first two (AAB) or the last two sounds (ABB) may merge; or all three sounds may be kept distinct (ABC). This approach uniquely defines one of the languages on the Map. As shown in Figure 4, Upper Kuskokwim is the only language to show the AAB pattern. The AAA pattern is found in Ahtna and the Upper Inlet dialect of Dena'ina; the ABB pattern is found in Koyukon, Holikachuk, most of Dena'ina, Tanacross, and Upper Tanana; and the ABC pattern is found in Deg Hit'an, Tanana, Han, and Gwich'in. The pattern approach to defining isoglosses is employed much more often in the Map than is the approach based on actual pronunciations.

Figure 4: Distribution of merger patterns for \*ts, \*č, \*č<sup>w</sup> (after Krauss 1962)



Crucially, the patterns exhibited by the various isoglosses are not random, but rather reflect regional tendencies, each shared by several neighboring languages. In many cases these patterns even cross language family boundaries. For example, many Alaskan languages make a

distinction between two types of "back" sounds, a more fronted velar sound and a more back uvular sound. These include the southeast Alaska languages Haida, Tsimshian, Tlingit, and Eyak; the Eskimo-Aleut languages Aleut, Alutiiq, Central Yup'ik, Siberian Yupik, Iñupiaq; and the Athabaskan languages Holikachuk, Deg Hit'an, Dena'ina, Ahtna, and most of Koyukon. The remaining Alaska Athabaskan languages do not distinguish velar and uvular consonants. These are: Upper Kuskokwim, Tanana, Tanacross, Upper Tanana, Han, Gwich'in, and the upper dialect of Koyukon. The area which fails to distinguish velar and uvular sounds occupies one contiguous region across the interior of Alaska.

# 5 From isoglosses to language boundaries

While isoglosses themselves are not arbitrary, the use of isoglosses to define language boundaries is always to some extent subjective. Isoglosses do not automatically determine language boundaries. Rather, the assignment of a language boundary reflects a conscious choice to favor some isoglosses over others. Assigning language boundaries in this way always involves inherent trade-offs between linguistic criteria, social factors, and even historical accidents, such as national boundary and religious denomination. Koyukon illustrates some of these tradeoffs. As we saw above, Koyukon is defined on the Map as the area where Athabaskan \*ts is pronounced as tł. This definition of Koyukon is unique to the Map; previous maps lumped Holikachuk with Koyukon. Indeed, we have seen that many isoglosses do group Koyukon with Holikachuk. But in terms of social cohesion, Holikachuk groups much more closely with Deg Hit'an, and most Holikachuk speakers today are bilingual in Deg Hit'an. By choosing to focus on the tł pronunciation, the Map allows the linguistic boundary to reflect social realities. But every choice comes with an inherent cost. In defining Koyukon as the area where \*ts is pronounced as tł, the upriver dialects in Rampart and Stevens Village are included, even though these areas identify more strongly with Gwich'in. These villages reflect important linguistic differences as well. It is precisely in this upriver region that the distinction between velar and uvular consonants is lost, as in neighboring Gwich'in and Tanana. Isoglosses cross-cut each other, but not all of them can be represented on a single map.

More than three decades after the publication of the Map it is difficult to imagine the Koyukon language area being anything but what it is on the Map. Nevertheless, it could have been different. Another scholar might have emphasized a different isogloss or combination of isoglosses. Availability of modern GIS technologies might have facilitated multiple views of the data, permitting cross-cutting isoglosses to be viewed simultaneously. For better or for worse, that did not happen. Koyukon and the Koyukon language area have become established in the public consciousness in the form found on the Map.

In other cases the linguistic features represented on the Map have had less effect on the public consciousness. The Tanacross language, mentioned in the introduction, is also defined by a single isogloss, in this case based on the presence of tone. Athabaskan languages can be divided into three categories based on the presence of distinctive high or low tone. The diagnostic for tone can be as simple as asking the words for father and mother. In some languages these are produced with the same pitch (no tone); in other languages these are produced with low tone on father and high tone on mother. Uniquely in Tanacross 'father' is pronounced with high tone, *shtá*', while 'mother' is pronounced with low tone, *shnąą*. The

uniqueness of Tanacross tone was not formally recognized until Krauss' seminal survey of Athabaskan languages (Krauss 1973b). The Map followed a year later and literally put Tanacross on the map. Yet speakers have been slow to adopt this term. More to the point, speakers have been slow to accept a distinction between their language and neighboring languages spoken in Tetlin and Northway. Contrary to most linguists' suspicions, the tone difference poses no barrier to communication. Speakers converse freely whether pronouncing father *shtá*' with high tone, as in Tanacross, or *shtà*', with low tone as in Northway. In the case of Tanacross the Map represents linguistic reality but not social reality.

If Tanacross could have been omitted from the Map, could other languages have been added? Certainly. Just as Tanacross was plucked from obscurity to create a new language between Lower and Upper Tanana, some have argued for the existence of a Middle Tanana language in the area of Salcha and Goodpaster along the Tanana River, between Lower Tanana and Tanacross. On the Map this area is considered a dialect of Tanana, but it does indeed exhibit several very distinctive features. In particular, unlike the Minto-Nenana dialect of Tanana (though like the Chena dialect), Salcha-Goodpaster does not maintain a distinction between \*ts and \*č\* (Krauss 1961). Thus, in Minto-Nenana the words for 'yellow' (*tsiyh*) and 'cry' (*trax*) start with different sounds, whereas, in Salcha-Goodpaster these words both start with ts, as in Tanacross. Kari notes several lexical differences, and Tuttle (1998) notes differences in prosody as well.

Of course social factors are important as well, and speakers of Salcha-Goodpaster were clearly better able to understand Chena and even Minto-Nenana than Tanacross. Related to this are issues of language maintenance. It could be argued that recognizing Middle Tanana as a distinct language could contribute to language maintenance by supporting a distinct identity for Salcha-Goodpaster. However, it could equally well be argued that including Salcha-Goodpaster as part of Tanana would encourage language revitalization by relieving the need to develop separate learning materials for Salcha-Goodpaster. These conflicting criteria are explicitly recognized by Krauss, who notes that the "[d]efinition of the Lower Tanana language as such is probably the most arbitrary and problematical sociolinguistic decision that must be made in delimiting the Alaska Athabaskan languages" (Krauss & Golla 1981). Unfortunately, with the passing in 1993 of Eva Moffit, the last speaker of the Salcha-Goodpaster dialect, this point has become largely moot.

A more contemporary case involves Cup'ik, a variety of Central Yup'ik spoken in Chevak. The Map doesn't recognize Cup'ik as a distinct language or even a distinct dialect, because linguistic criteria point to an alternate grouping of the Chevak variety with that spoken in Hooper Bay. Jacobson (1984) lists ten types of features which are shared by Hooper Bay and Chevak (and in some cases Nunivak Island) but not by other varieties of Central Yup'ik. These include such subtleties as the retention of "v" between vowels. Thus, Hooper Bay and Chevak (and Nunivak) speakers have *nuvak* for 'saliva' where other Central Yup'ik speakers have *nuak*. In contrast, the only significant difference between Hooper Bay and Chevak is the pronunciation of the initial "y" sound as "c" (pronounced "ch") in Chevak in some words. Though a small difference, this has large perceptual effect, since it changes the pronunciation of certain high-frequency words, including the word for 'person', pronounced *yuk* in Hooper Bay but *cuk* in Chevak. It is this word which results in the name *Cup'ik*, literally 'real person'. Ironically, the

ultimate cause of the tension between Yup'ik and Cup'ik is the use of an alphabet which is more often used for writing English. In reality, Yup'ik/Cup'ik has one sound which is pronounced by some speakers as "y" and others as "c" (and by still others as something in between). There is never a meaning difference associated with the difference between "y" and "c". But by using a letter from the English alphabet (whether "y" or "c") it is difficult not to subconsciously assign an English pronunciation, reflecting the difference in meaning which English attributes to these sounds. In theory, a Yup'ik/Cup'ik speaker could simply pronounce the letter "y" according to her own local dialect. In practice, for speakers bilingual and even dominant in English, this is much more difficult.

Both the Middle Tanana and Cup'ik examples drive home an important point regarding the Map. Namely, although social factors do have a role to play in understanding language boundaries in Alaska, the Map emphasizes linguistic criteria over social factors. The Map is not just a language map but also a linguistic map.

#### 6 Language names

While isoglosses can be used to determine language boundaries, they are of no use for assigning language names. In many cases the choice of language name is not at all obvious. To understand why this is the case it is necessary to first distinguish two types of language names. The first type of name is the autochthonous name, that is, the name used by Native speakers refer to the language in the language itself. The second type of name is an English name, that is, the name by which the language is referred to in English. These two types of names are not usually the same. For example, in English we refer to French, German, and Japanese rather than Français, Deutsch, and Italian (Nihongo).

In Alaska these two types of names are often confused. If a name sounds like a Native word, we tend to think of it as an autochthonous name, even though it may not be the name used to refer to the language in the language itself. Consider the name Yup'ik. This is clearly not an English word; the sense of foreignness is highlighted by the presence of the apostrophe. But nor is the word *yup'ik* the Native word for the Yup'ik language. Rather, *yup'ik* (and the synonymous term *yupiaq*) refers to a Yup'ik person, literally, 'true, real person'. A less well-known case is that of Ahtna. Here again this is clearly not an English word. In this case the sense of foreignness is highlighted by the presence of the "h" following the initial vowel, but Ahtna is not the Native word for the Ahtna language. Rather, it is the Ahtna word (more properly spelled 'atna) denoting the Copper River.

In addition to Yup'ik and Ahtna, twelve other language names on the Map derive from Native words. Like Yup'ik, Inupiaq and Sugpiaq both mean 'real, true person'. Tlingit, Tanaina (Dena'ina), and Haida derive from words meaning 'people'. Tsimshian derives from ts'mysyan 'inside the Skeena River', and Han means 'river'. Kutchin (Gwich'in) means 'people of a region'. Some names derive from words in neighboring languages. Ingalik derives from the Yup'ik word *Ingqiliq*, denoting Athabaskans, and Eyak derives from the Sugpiaq word *igya'aq*, referring to the outlet of a lake into a river. The name Koyukon has an even more complex history, deriving from the Russian spelling of a Yup'ik word based on the root *kuik* 'river'. The

name Aleut comes from Russian and is thought to have its ultimate source in an indigenous language of the Russian Far East.

Several language names on the Map derive from English place names, though these names do ultimately trace their origins to Native words. Holikachuk refers to a former village on the Innoko River. Tanacross is a reduced form of Tanana Crossing. The name Tanana itself, found also in Upper Tanana, is the English name for the river known variously in Athabaskan as *Tth'iitu'*, literally 'straight water'. Upper Kuskokwim is the English name for the river known in Yup'ik as *Kusquqvak*.

The fact that the English language names do not correspond directly to autochthonous names is not a mere case of colonial insensitivity. Indigenous concepts of language in Alaska tend to be much more localized and much less standardized than indicated by the English names on the Map. For example, the area defined as Tanacross shows a great variety of autochthonous language terms. Though one of the smallest language regions in Alaska there is no generally agreed indigenous term for the language. When pressed for a name, most speakers produce something based around the root -aanděeg' meaning 'language'. This might be Nee'aanděeg' our language' or Dihthaad Xt'een Iin Aanděeg' 'the language of the Mansfield Lake people' or some other phrase substituting Dihthaad with a term for a different band of people. It is difficult for people who trace their origins to other regions within the Tanacross area to associate themselves with Dihthaad. Yet on the other hand, in a very real sense speakers are very aware of the linguistic unity of the Tanacross region. Regardless of what phrase they might choose to describe their language, all Tanacross speakers are able to understand one another. Indeed, they are able to understand speakers from surrounding language regions to some extent as well.

Most of the language names found on the Map were well-established by the time the Map was published. Unfortunately, some are now considered pejorative. The name Ingalik was proposed by Osgood (1936), based on the Yup'ik word for Athabaskan people in general. Unfortunately, this Yup'ik word has its origin in a word meaning 'with louse nits', and this origin leads to the pejorative connotation of Ingalik today.<sup>5</sup> The terms Deg Xinag 'people's language' and Deg Hit'an 'people's place' have long since been preferred by the Native community and the Alaska Native Language Center, but changing the names on the Map has been hindered by the obsolete technology used to produce the original Map. Krauss was of course aware of the pejorative status of Ingalik, having already noted that it was "an opprobrious term, still resented by many of the group" (Krauss 1973b), but at the time the Map was published the name was already well established. The situation of Ingalik contrasts with that of Holikachuk, which Krauss now wishes had been named Innoko (Krauss 1990). This language had never appeared on a previous map, so it was up to the Map's creator to establish a name. Krauss chose Holikachuk because that was the only place the language was spoken when he encountered it in 1962. In the following year the village was relocated to Grayling on the Yukon River, so that the traditional language of the Innoko River now refers to an abandoned settlement on that river. While the Deg Hit'an community has been very pro-active in asserting an autochthonous language name, there has been no corresponding effort in favor of Innoko.

<sup>5</sup> A similar case is that of Eskimo, which in Canada is considered pejorative because it is mistakenly believed to originate from a word meaning 'eater of raw meat' (Goddard 1984).

Nonetheless, the desire to change language names is one of the main forces driving efforts to revise the Map (cf. West et al. 2007).

#### 7 The future

In many ways the map was ahead of its time. It attempted to express complex geographic data using a single 3 by 4 foot sheet of paper. Given the cross-cutting isoglosses present in the data, a single view was doomed to be insufficient. Perhaps with today's GIS technology another product would have been possible, employing multiple layers corresponding to individual isoglosses. But in the end, the Map was always fundamentally a political creation. The Map was an outgrowth of the heady days of the beginnings of Native language awareness in Alaska—a social and political movement in which the Map's creator took a leading role. After a century of official policy suppressing Native language, the late 1960s and early 1970s saw a re-awakening and reempowerment in which Native people began to take control and develop Native language education programs. Landmark state legislation passed in 1972 mandated bilingual education programs and founded the Alaska Native Language Center as a means of fostering those programs (Alton 1998, Krauss 1974a). This official recognition led to public demands for an authoritative view on just how many languages were spoken in Alaska. As Krauss (pers. comm.) later admitted, he finally "coughed up" and produced the Map, enshrining the boundaries which have been largely accepted up to the present day. Krauss' reluctance to produce such a map is understandable given his knowledge of the complex system isoglosses. In choosing to produce the Map he knew that he would be enshrining just one view of the data which he had been collecting over the previous decade. Although the intricacies of these data were described in many technical linguistic publications (Krauss 1973a, Krauss 1973b, Krauss 1980, Krauss & Golla 1981), none of this information was disseminated to the public on a scale anywhere close to that of the Map. Much later, in what is probably the most significant discussion of the definition of language boundaries in Alaska, Krauss justified the Map with a strong dose of pragmatism:

"Under changing conditions, however, such issues [distinctions between languages] gain very serious relevance, reality, importance. First, in Alaska at present younger generations are lucky if they know their own dialect or language, let alone those of their neighbors. Second, and partly in connection with that, there is now a need for a written form of the language, involving formal (written) recognition of differences in designing orthographies, for larger grouping for educational purposes, and for social and political organization at higher levels. All this is demanded by the times, if the Athabaskan [and Alaska Native] world is to survive as such" (Krauss 2000: li)

To a large extent the Map has achieved these intended political and social ends. While the Map cannot in itself stem the tide of language shift, by defining individual languages it has facilitated the production of reference and learning materials and the founding of language immersion schools. The only significant challenge to the Map has concerned the choice of language names, not the language boundaries or divisions to which those names are assigned. The Map has served to delineate Native territory in a way which is largely unassailable. Native land rights and tribal membership have been repeatedly assailed, but the language boundaries as defined on the Map

have gone unchallenged by both Native and non-Natives alike. One may question an Ahtna's right to subsistence fishing on the Copper River, but no one will question the extent of the Ahtna language as defined by the Map.

Part of the reason for this reification of the Map in the public consciousness is clear. As Native languages continue to be replaced by English the data on which the Map was based increasingly become historical artifacts, frozen in time in the year 1974. In the past Alaska's Native population was inherently mobile, yielding and gaining territory, unhindered by attachments to agriculture or animal husbandry. The boundaries between Koyukon and neighboring Inupiaq and Gwich'in shifted as recently as the nineteenth century (Burch 1988). To the extent that today's Alaska Native population remains mobile, those migrations no longer serve to establish new linguistic territory. The boundaries on the Map are fixed in history. Whatever the eventual fate of Alaska's Native languages, their connections to the land are now established beyond dispute.

#### References

- Allen, Henry T. 1887. Report of an Expedition to the Copper, Tanana and Koyukuk Rivers in the Territory of Alaska in the Year 1885. Washington, D.C.
- Alton, Thomas. 1998. Federal policy and Alaska native languages since 1867. Fairbanks: University of Alaska Fairbanks Ph.D. dissertation.
- Burch, Ernest S., Jr. 1988. The Iñupiaq Eskimo Nations of Northwest Alaska. Fairbanks: University of Alaska Press.
- Dall, William Healey. 1877. On the Distribution and Nomenclature of the Native Tribes of Alaksa and the Adjacent Territory, with a map. Part I, pp. 7-156. (Contributions to North American Ethnology, vol. 1,). Washington, D.C.: Government Printing Office.
- Goddard, Ives. 1984. Synonymy. Handbook of North American Indians, vol. 5: Arctic, ed. by D. Damas, 5-7. Washington, D.C.: Smithsonian.
- Jacobson, Steven A. 1984. Yup'ik Eskimo Dictionary. Fairbanks: Alaska Native Language Center.
- Krauss, Michael E. 1961. [Tanana field notes, transitional dialects]. TN961K1961b. Ms, Alaska Native Language Archive, Fairbanks.
- —. 1962. [Athabaskan isogloss maps]. CA961K1962c. Ms, Alaska Native Language Archive, Fairbanks.
- —. 1963. Classification of the Athapaskan languages. CA961K1963a. Ms, Alaska Native Language Archive, Fairbanks.

- —. 1964. Review of Hoijer et al., Studies in the Athapaskan Languages. International Journal of American Linguistics 30.409-15.
- —. 1973a. Eskimo-Aleut. Linguistics in North America, ed. by T.A. Sebeok, 796-902. (Current Trends in Linguistics 10). The Hague: Mouton.
- —. 1973b. Na-Dene. Linguistics in North America, ed. by T.A. Sebeok, 903-78. (Current Trends in Linguistics 10). The Hague: Mouton.
- —. 1974a. Alaska Native language legislation. International Journal of American Linguistics 40(2).150-52.
- —. 1974b. Native Peoples and Languages of Alaska [map]. Fairbanks: Alaska Native Language Center.
- —. 1980. Alaska Native Languages: Past, Present, and Future. (Alaska Native Language Center Research Paper 4). Fairbanks: Alaska Native Language Center.
- —. 1990. Typology and Change in Alaskan Languages. Language Typology 1987: Systematic Balance in Language, 147-56. (Amsterdam Studies in the Theory and History of Linguistic Science IV: Current Issues in Linguistic Theory 67). Amsterdam: Benjamins.
- —. 2000. Koyukon dialectology and its relationship to other Athabaskan languages. Koyukon Athabaskan Dictionary, ed. by E. Jones & J. Jetté, l-lxv. Fairbanks: Alaska Native Language Center.
- —. 2006. A history of Eyak language documentation and study: Fredericæ de Laguna in memoriam. Arctic Anthropology 43(2).172-218.
- Krauss, Michael E. & Victor K. Golla. 1981. Northern Athabaskan Languages. Handbook of North American Indians, vol. 6: Subarctic, ed. by J. Helm, 67-86. Washington, D.C.: Smithsonian.
- Osgood, Cornelius. 1936. The Distribution of the Northern Athapaskan Indians. (Yale University Publications in Anthropology, no. 7). New Haven: Yale University.
- Shelikhov, Gregorii Ivanovich & Richard A. Pierce. 1981. A Voyage to America 1783–1786. Kingston: Limestone Press.
- Tikhmenev, Petr Aleksandrovich. 1863. Istoricheskoe obozrienie obrazovaniia Rossiiskoamerikanskoi kompanii i dieistvii eia do nastoiashchago vremeni. St. Petersburg: E. Veimar.
- Tuttle, Siri. 1998. Metrical and Tonal Structures in Tanana Athabaskan. Seattle: University of Washington Ph.D. Dissertation.
- West, Colin Thor, Meghan Wilson & Jim Kerr. 2007. Revising the Native Peoples and Languages of Alaska Map using GIS. Paper presented at the AAAS Arcitc Science Conference. Anchorage, Sept 24-26.