FIGURE 9.1 West view of a peak on *Iñgisugruich* (Jade Mountain), in northwest Alaska, August 1987. Not only was *Iñgisugruich* an important source of jade, but among the Iñupiat of the Kobuk River area, the mountain was also strongly associated with spiritual forces. Sanctions surrounding *Iñgisugruich* meant that only shamans could safely visit, and then only after lengthy ceremonies of purification. Photograph by Eric Loring. Bureau of Indian Affairs, ANCSA 14(h)(1) Collection, case file F-22292, Anchorage.

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GARY HOLTON

9 Place-Naming Strategies in Inuit-Yupik and Dene Languages in Alaska

The two major language families in Alaska, Inuit-Yupik and Dene (or Athabascan), share a boundary that forms an arc nearly 2,000 kilometres long. Beginning from Cook Inlet, off the south coast of Alaska, the boundary extends north and then east, all the way to the Canadian border on the shore of the Beaufort Sea, with Inuit-Yupik languages spoken in coastal areas and Dene languages in the interior.[1] In Canada, Inuit languages are spoken all the way to Greenland, while Dene languages range across the north as far as Hudson Bay. Along this shared border in Alaska, many thousands of places have been named, and these names—and the place-naming strategies that underlie them—provide insight into Indigenous conceptualizations of the landscape. Inuit-Yupik place naming is grounded in human affordance; names are assigned based on people's relationship to the land. In contrast, Dene place naming is highly deterministic, based on a generative geographic directional system. There are, of course, plenty of exceptions that prove these rules, but, broadly speaking, these generalizations hold across the two language families.

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FIGURE 9.2 Coastal orientation roots in Central Alaskan Yup'ik (Inuit-Yupik).

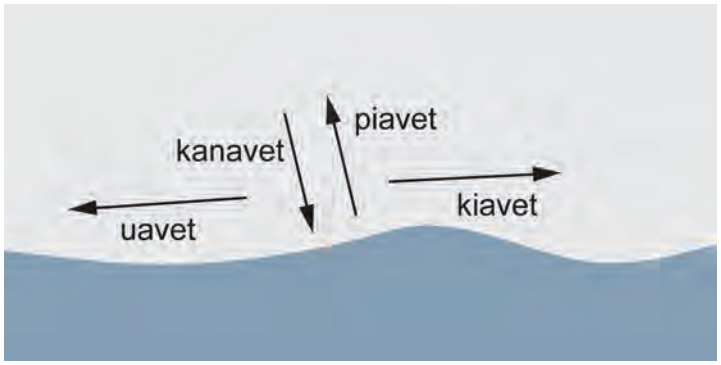
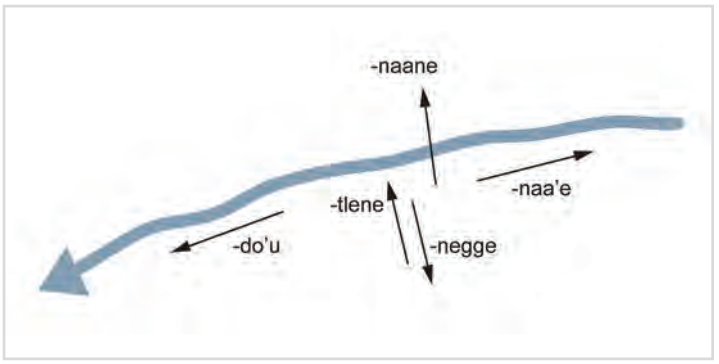


FIGURE 9.3 Riverine orientation roots in Koyukon (Dene).



Here I suggest that this difference in place-naming strategies can be explained partly in terms of differences in the way that the demonstrative systems of the two language families are extended to spatial reference. Both Inuit-Yupik and Dene languages include elaborate systems of words expressing spatial relations, allowing a much finer distinction than is possible with the proximal "this" and distal "that" in English. However, the function of the demonstrative system differs greatly in the two language families. In Inuit-Yupik languages, the demonstrative systems operate primarily on the local level and have limited application relative to the broader landscape. In Dene languages, however, the demonstrative systems are fundamental to the conceptualization of landscape, playing a key role in place-naming strategies.

To a certain extent this should not be surprising. Landscape is a semantic domain whose categorization is known to vary across languages. As Stephen Levinson (2008, 257) notes, "from a geological point of view," landscape is "mere deformation of a continuous surface, so that discrete units and categories must be the construction of the cognizer." In other words, concepts such as "mountain" are not universal in either denotation or connotation. Put another way, "different language groups/cultures have different ways of conceptualizing landscape, as evidenced by different terminology and ways of talking about and naming landscape features" (Mark, Turk, and Stea 2007, 16). Further evidence from specific languages can be found in the various case studies contained in the collection *Landscape in Language* (Mark et al. 2011). However, landscape categorization is not limited to feature terminology. Place names also provide insight into the categorization of landscape, and these names may also be deeply embedded within orientation systems. For example, a language employing a riverine orientation system embodies a very different approach to landscape than does a language employing a cardinal system based on compass directions, even though both are "absolute" systems in the sense described by Levinson (2003). In a riverine system, movement and location are contextualized within the parameters of upstream-downstream and landward–waterward. The valley system is "burned in" to a speaker's relationship to the land. In a cardinal system, by contrast, locations and movement can be described without any reference to the notion of valley.

In comparing Inuit-Yupik and Dene languages, the relevance of orientation systems is easily overlooked. On first glance, the two language families appear to have very similar orientation systems, both essentially riverine in nature (though

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coastal languages substitute upcoast-downcoast for upstream-downstream). The geographic dimension is based on either a riverine or a coastal template, consisting at its core of an orthogonal distinction between an upstream-downstream (or upcoast-downcoast) axis and a landward-waterward axis. The basic geographic template is superficially similar in the two language families. This can be illustrated by comparing the basic orientation roots in Central Alaskan Yup'ik (figure 9.2) and Koyukon, a Dene language (figure 9.3).[2]

These sorts of orientation systems are quite common in the world's languages, being found, for example, in various Austronesian languages (Adelaar 1997). However, of particular relevance here is the fact that these systems of orientation ultimately derive from larger systems of demonstratives, and the paths by which these larger demonstrative systems have come to be reduced to orientation systems differs significantly between Inuit-Yupik and Dene languages. In the remainder of this chapter, I first describe the demonstrative and orientation systems in Inuit-Yupik and Dene languages before turning to a comparison of different place-naming strategies.

Inuit-Yupik Orientation Systems

Inuit-Yupik languages are notable for their complex systems of demonstratives. The precise realization varies across individual Inuit-Yupik languages. It is most elaborated in Central Alaskan Yup'ik, which contrasts three dimensions corresponding to "directivity," roughly the distance from the deictic centre (origin); a dimension termed "indicability"; and a dimension termed "accessibility" (Jacobson 1984). Although the structure of the system varies greatly across individual languages, the forms correspond regularly, permitting the entire system to be reconstructed at the level of Proto-Inuit-Yupik (PIY) by application of the standard tools of the linguistic comparative method (see table 9.1). Although we think of orientation systems in modern languages as being based on relationship to water (river or coast), the PIY demonstrative system can be better described as an elevation-based system distinguishing up, down, and same level. To these basic elevations are added proximal (near the deictic centre) and distal (away from the deictic centre) terms, which are independent of elevation. Such elevation-based systems are not uncommon in the world's languages (Diessel 1999).

TABLE 9.1 Proto-Inuit-Yupik Demonstrative Roots

	restricted		extended		obscured	
	accessible	non-accessible	accessible	non-accessible	accessible	non-accessible
distal	*kiv-	*kiɣ-	*qav-	*qaɣ-	*qam-	*qakəm-
level	*iŋ-	*ik-	*av-	*aɣ-	*am-	*akəm-
down	*kan-/*kað-	*uɣ-	*un-	*unəɣ-	*cam-	*cakəm-
up	*piŋ-	*pik-	*pav-	*paɣ-	*pam-	*pakəm-

SOURCE: FORTESCUE, JACOBSON, AND KAPLAN 1994.

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But the PIY demonstrative system adds two additional dimensions, those of indicability and accessibility. The dimension labelled "indicability" by Jacobson (1984) has to do with visibility and distinguishes among "restricted" (confined within a specific limit), "extended" (moving or unconfined), and "obscured" (blocked from view). The semantics of the dimension of accessibility are less consistent but nonetheless clearly defined for each accessible and non-accessible pair of terms. The precise semantics of the system need not concern us here. Rather, what is of interest is the way this system is realized in the individual Inuit-Yupik languages, and in particular how the system maps onto the landscape domain.

Not all of the original PIY demonstrative roots survive in modern languages, and the modern orientation systems make use of only a small subset of the larger demonstrative system. Moreover, the modern orientation systems are based not on the up-level-down elevation distinction found in the reconstruction PIY system, but rather on an orthogonal coordinate system. To derive the modern orientation systems from the original PIY demonstrative system, modern languages employ a subset of the original demonstratives and then reassign their semantics to form an orthogonal grid. Each modern Inuit-Yupik language achieves this in a slightly different way. Consider first the Inupiaq (North Slope dialect) demonstrative system, as shown in table 9.2. The table is laid out here to parallel the organization of the PIY demonstratives shown in table 9.1. Gaps indicate PIY demonstratives that lack a reflex in Inupiaq. The highlighted cells indicate terms that are used in the orientation system, to be discussed below.

Comparing the Inupiaq demonstratives with their PIY counterparts, two things are immediately evident. First, both the forms of the Inupiaq roots and their structural distribution are very much like those found in PIY. Only some minor sound changes have occurred, such as PIY *c > Inupiaq s. (Note that in the Inupiaq practical orthography, <g> represents [ɣ], so is unchanged from PIY.) Second, there are some gaps in the table, reflecting PIY demonstrative roots that have been lost in modern Inupiaq. In general, as one moves east across the Arctic, fewer of the original PIY demonstrative roots survive in modern languages. In Inupiaq these gaps lead to the partial collapse of the accessibility dimension with the restricted and extended terms.

The demonstrative system provides the basis for and coexists with an orientation system that contrasts the orthogonal dimensions of upcoast-downcoast versus waterward-landward. The full orientation system also includes terms deriving from winds, with the choice of wind term varying greatly by location (Fortescue 1988). However, if we ignore the wind terms for a moment, we can posit a kind of intermediate orientation system based only on the demonstrative system, as in table 9.3.

The Inupiaq orientation terms are precisely those that are shaded in table 9.2. Of the six restricted Inupiaq demonstrative roots shown in table 9.2, only four are employed in the orientation system. As in all Inuit-Yupik languages, the proximal term is not employed in the orientation system. The down and up terms *kan-* and *pik-* are used for the waterward-landward axis, that is, "down toward the coast" versus "up away from the coast." The accessibility distinction is irrelevant here since these terms have no counterpart in the accessibility parameter in

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modern Inupiaq. The single restricted level term *ik-* is used to mean "down the coast" or "to the left facing the water." The accessible distal term *kiv-* is used to mean "up the coast" or "to the right facing the water." This latter term retains as well its demonstrative sense of "inside," which contrasts with the non-accessible form *kig-*, meaning "outside." This results in homophony between the orientation system's sense of *kiv-* meaning "down the coast" and the more localized sense of "inside." This ambiguity is clearly the result of the original demonstrative system being extended for use as part of the orientation system.

A general rule for mapping the demonstrative system onto the orientation system is that wherever an accessible term exists it is the one employed in the orientation, and thus, like *kiv*, becomes polysemous between its larger orientation sense and its more localized demonstrative sense. The corresponding non-accessible term is not used, as in the orientation system, but maintains its demonstrative sense. In particular, none of the obscured non-accessible terms are employed in the orientation system, but they continue to be used as demonstratives: *qakim-* ("out there, not visible"); *akim-* ("over there across, not visible"); *sakim-* ("out there in the Arctic entry, not visible"); and *pakim* ("up there on the roof, not visible").

Quite a different picture emerges in the neighbouring Central Alaskan Yup'ik language. Here, the PIY demonstrative system is preserved almost wholly intact, as shown in table 9.4. Unlike in the Inupiaq system, there are no gaps to facilitate choice of accessible or non-accessible terms for use in the orientation system.

TABLE 9.2 Alaskan Inupiaq Demonstrative Roots

	restricted		**extended**		**obscured**	
proximate	uv-		ma-		sam-	
	accessible	non-accessible	accessible	non-accessible	accessible	non-accessible
distal	kiv-	kig-	qav-	qag-	qam-	qakim-
level		ik-	av-	ag-	am-	akim-
down	kan-		un-		sam-	sakim-
up		pik-		pag-	pam-	pakim-

NOTE: SHADING INDICATES ROOTS USED IN THE ORIENTATION SYSTEM. SOURCE: MACLEAN 2014.

TABLE 9.3 Alaskan Inupiaq Orientation System (wind terms ignored)

	restricted	**extended**	**obscured**
upcoast	kiv-	qav-	qam-
downcoast	ik-	av-	am-
waterward	kan-	un-	sam-
landward	pik-	pag-	pam-

TABLE 9.4 Central Alaskan Yup'ik Demonstrative Adverbs (terminalis case)

	restricted		**extended**		**obscured**	
proximate	wavet		maavet			
	accessible	non-accessible	accessible	non-accessible	accessible	non-accessible
distal	kiavet	keggavet	qavavet	qagaavet	qamavet	qakmavet
level	yaavet	ikavet	avavet	agaavet	amavet	akmavet
down	kanavet	uavet	unavet	un'gavet	camavet	cakmavet
up	piavet	pikavet	pavavet	pagaavet	pamavet	pakmavet

NOTE: SHADING INDICATES ROOTS USED IN THE ORIENTATION SYSTEM. SOURCE: AFTER JACOBSON 2012.

TABLE 9.5 West Greenlandic Demonstrative Roots

	restricted		**extended**		**obscured**	
proximate	u-		ma-		(im-)	
	accessible	non-accessible	accessible	non-accessible	accessible	non-accessible
distal		kig-	qav-		qam-	
level		ik-	av-			
down	kan-				sam-	
up		pik-	pav-			

NOTE: SHADING INDICATES ROOTS USED IN THE ORIENTATION SYSTEM.

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FIGURE 9.4 Yup'ik orientation system in a riverine system (restricted, terminalis case).

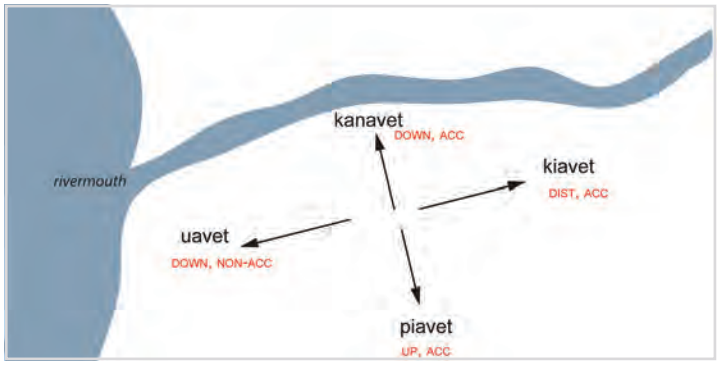
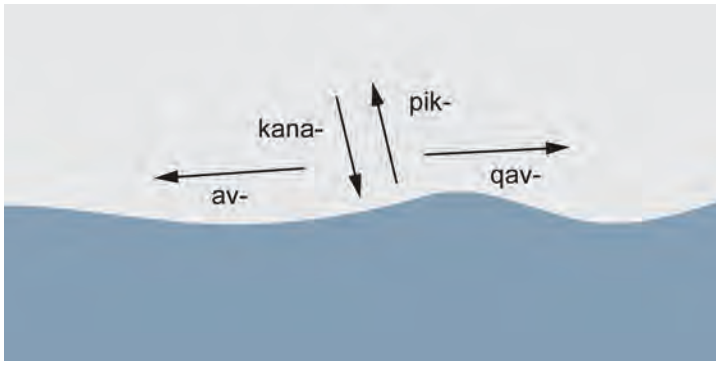


FIGURE 9.5 Greenlandic coastal orientation roots.



The Yup'ik demonstrative system does not make use of level demonstratives in the orientation system. Rather, both the accessible and non-accessible down terms are used. The accessible term *kana-* ("down there") is used for the direction toward water, while the non-accessible term *ua-* is used for the "downriver" direction. The term *kana-* ("toward water") is paired with the up accessible term *pia-* ("up there") to mean "away from water," while the downriver term *ua-* is paired with the distal accessible term *kia-* ("inside") to mean "upriver." This yields an orthogonal riverine directional, illustrated in figure 9.4 with restricted terms inflected for the terminalis case, expressing the meaning "toward."

The same Yup'ik orientation terms can also map onto a coastal system in which the downward non-accessible term denotes not "downriver" but rather "down the coast" or "to the right facing the water," and the distal accessible term denotes not "upriver" but rather "up the coast" or "to the left facing the water."

The Inupiaq and Yup'ik systems represent but two of the many ways in which the PIY demonstrative systems are realized in modern Inuit-Yupik languages and are extended to wider-scale orientation. A more extreme example of how demonstrative systems can be reanalyzed is found in West Greenlandic. As shown in table 9.5, the Greenlandic demonstrative system is greatly reduced from PIY.[3] In no dimension other than the proximal is an entire series of roots preserved.

The lack of terms in the extended and obscured domains has led to an orientation system in which this distinction is no longer made. Rather, the Greenlandic orientation system uses terms drawn from both the restricted and extended subsystems, and terms that may have originally belonged to different dimensions of the demonstrative paradigm (see figure 9.5). Thus, an originally accessible demonstrative, *kan* ("down [toward the coast]") is now opposed to an originally non-accessible demonstrative, *pik* ("up [away from the coast]"). The original non-accessible "down" demonstrative has been lost, as has the original accessible "up" demonstrative. With the accessibility dimension thus extinguished, the juxtaposition of *av* and *qav* is now unproblematic.

While the Greenlandic system is not directly relevant to the Alaskan languages considered here, it serves to illustrate the significant variation among the Inuit-Yupik languages in both the realization of the demonstrative system and the use of the demonstratives to form an orientation system. While the demonstrative terminology have their sources in

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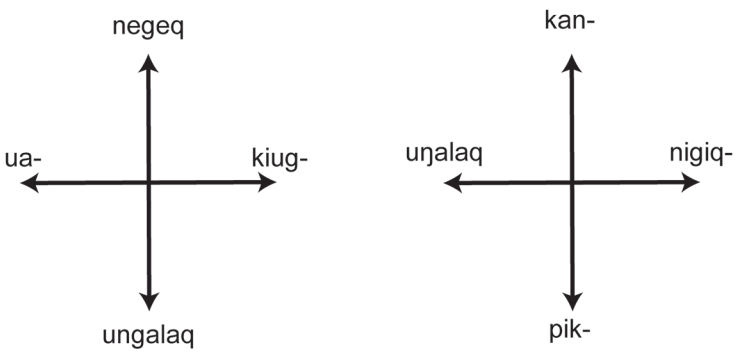
FIGURE 9.6 Yup'ik (left) and Inupiaq (right) directional terms compared.



PIY, the individual demonstrative systems themselves function quite differently. These differences are greater still when we move to larger geographic scales beyond a single village. As one moves toward these larger scales, the undulations of the local coastline vary, and the need for less locally dependent terminology increases. The geographic integrity of the system is maintained by employing wind terms in lieu of some of the demonstrative roots. This strategy is found throughout the Inuit-Yupik languages, but the particular implementation varies greatly not only by language but also by geographic location within a given language (Fortescue 1988). This variation can be illustrated by comparing Yup'ik and Inupiaq (North Slope) directional terms (as in figure 9.6).

Both Yup'ik and Inupiaq employ reflexes of the wind terms PIY *nəʏəʀ and *uŋalaʀ. In Yup'ik, the wind terms *negeq* and *ungalaq* are paired with the upriver-downriver (or upcoast-downcoast) terms. In Inupiaq, the wind terms *nigiq* and *uŋalaq* are paired with the toward-away from coast terms.

The variation in the realization of Inuit-Yupik directional systems can be explained in terms of geography (Fortescue 1988, 2011). In Yup'ik, *negeq* is a north wind, hence orthogonal to the prevailing east-west trending rivers and their concomitant downstream-upstream terms. In North Slope Inupiaq, *nigiq* is an east wind, hence orthogonal to the toward-away from water direction. So the choice of the downstream–upstream axis in Yup'ik versus the toward-away from water axis in Inupiaq is readily explained. However, the ability of Inuit-Yupik languages to essentially pick and choose among demonstratives has significant consequences for the conceptualization of landscape. The reification of these orientation terms into an essentially cardinal directional system decouples the terms from the landscape, depriving them of their potential function as guides to the topography and sources for place naming.

In practice, Inuit-Yupik orientation terms may have very little to do with the wider landscape. In my own field work with speakers of Yup'ik, I have noted a great reluctance to use these orientation terms on any scale beyond the immediate vicinity. Travel along rivers is much more likely to be described either in terms of cardinal directions (e.g., *negeq*, or "north") or in terms of movement either with or against the current (e.g., *asgur-*, or "move against the current") than with the orientation system. So while the Yup'ik demonstrative and orientation systems may be extremely rich and complex, they have little practical relevance to the domain of landscape. Nor, as we shall see below, do they play major roles in place naming.

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Dene Demonstrative Systems

A very different situation is found in Dene languages. The Proto-Dene demonstrative system is reconstructed in table 9.6. There are two paradigms corresponding to motion away (allative) and static (punctual). Modern Dene languages add additional dimensions of motion toward the deictic centre and static location in an area.

Rather than a three-way, elevation-based contrast between up/level/down, as in Inuit-Yupik, the Proto-Dene system contrasts the four basic demonstratives of upstream, downstream, landward, and waterward, forming a two-dimensional coordinate system (for an example, see figure 9.7). To these basic terms are added additional terms indicating "ahead into open country or water"; "across water"; "away in a non-specific direction"; "above vertically"; and "below vertically." The resulting system is thus three-dimensional and highly descriptive of the riverine valley that characterizes much of the Alaskan Dene landscape.

Another major difference between the Inuit-Yupik and Dene demonstrative systems is that the Proto-Dene system is realized homologously across the Alaskan Dene languages, augmented to varying degrees with prefixes specifying distance and suffixes specifying motion or area. That is, the ancient Proto-Dene system is robustly preserved in all modern languages. The system used in the Tanacross language (shown in table 9.7) is typical in that it includes a four-way distinction between allative (movement away from deictic centre), ablative (movement toward the deictic centre), punctual (static location at specific point), and areal (static location in general area). These four paradigms derive ultimately from suffixation patterns that have been historically obscured.

The forms shown in table 9.7 are stems and must be inflected in order to form a demonstrative word. As in other Dene languages, the demonstratives are preceded by a prefix indicating distance from the deictic centre. In Tanacross, these prefixes are *a-* (neutral), *da-* (proximal), *na-* (intermediate), *ja-* (distal), and *ja*ʔa (distant).

As in Inuit-Yupik languages, this three-dimensional paradigm of demonstratives allows very precise orientation. However, unlike Inuit-Yupik, this extends across the entire language family, robustly attested in each of the Alaskan Dene languages.[4] Moreover, the system operates at all levels, being equally relevant when applied at the large-scale geographic domain, within a house, or locally on the human body (see table 9.8). This contrasts with Inuit-Yupik languages, in which the demonstrative system functions only at a very local scale, while the more generalized orientation system functions at larger scales relevant to the landscape domain. In Dene languages, the riverine-based system permeates all aspects of orientation, independent of scale.

To understand just how pervasive the Dene riverine orientation system is, consider the usage of the demonstrative system within a house. The extension of demonstratives within a house is based on a conventionalization in which the front door of the house is orientated facing the river. Thus, "upstream" within a house is the direction to the left or right of the door, depending on the direction of flow of the river.[5] The upstream-downstream and inland-waterward axes are reflected throughout Dene

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languages in both local (for examples, within the home) and regional spatial domains. The robustness of the riverine demonstrative system within the family underscores the importance of the riverine valley in Dene. As discussed in the following section, it also provides the motivation for place-naming strategies.

Place-Naming Strategies

Although the Inuit-Yupik and Dene orientation systems are superficially similar, they are reflected quite differently in the toponymic systems for the two language families. The Dene demonstrative roots define a streamscape based on the orthogonal dimensions of upstream-downstream and toward-away from water. This streamscape is used regularly to generate toponymic clusters based on shared landscape generic terms.[6] The core set of generics is composed of **kæqʼ* ("stream mouth"), **tɬʼat* ("stream headwaters"), **wən* ("lake"), and **naʔ/*niqʼə* ("stream") (where the asterisk indicates a reconstructed Proto-Dene form), as shown in figure 9.8.[7] These terms are not related to the demonstrative system, but they are determined by that system. That is, the riverine structure of the demonstratives delineates a linear valley template to which these landscape terms are assigned. As with the demonstrative system, reflexes of the Proto-Dene streamscape generic terms are robustly attested in all modern Alaskan Dene languages.

The system is generative in the sense that, for any given specific term, each member of the limited set of generic landscape terms can (and usually does) occur (Kari 2010b; Levinson 2003). As an example, consider the Tanacross word *chʼinchedl* ("nose ridge").

TABLE 9.6 Proto-Dene Demonstrative Roots

	allative	punctual
upstream	*niʔ	*niʼ-d
downstream	*daʔ	*daʼ-d
landward	*nəɢ-ə	*nəχ
waterward	*tsənʔ	*tsɻʼ-d
ahead	*nəs-ə	*nəs
across	*ɲaˑnʔ	*ɲąʼˑ-d
away	*ʔɑnʔ	*ʔąʼˑ-d
above	*-ə	*-d
below	*dəɢ-ə	*deχ

SOURCE: LEER 1989.

TABLE 9.7 Tanacross (Dene) Demonstrative Roots

	allative		punctual	areal
upstream	-ndéʔe	-ndîˑdz	-ndéˑ	-ndíˑg
downstream	-ndáˑʔa	-ndâˑdz	-ndaˑ	
inland	-ndeg	-ndêdz	-ndég	-ndóg
waterward	-tθɛ́nʔ		-tθíˑ	-tθúg
ahead	-nɛð			-noð
across	-náˑnʔ	-ndáz	-náˑn	-ndás
away	-ʔɛ́nʔ	-ʔáz		-ʔóg
above	-deg	-dêdz	-déˑ	-ndóg
below	-ʒégʔ	-ʒêz	-ʒéˑ	-ʒóg

NOTE: GAPS IN THE TABLE REFLECT FORMS NOT CURRENTLY ATTESTED, POSSIBLY OWING TO LANGUAGE ATTRITION. SOURCE: ARNOLD, THOMAN, AND HOLTON 2009.

TABLE 9.8 Examples of Tanacross Demonstratives at Various Scales

Example	Demonstrative
yandáʼa Fairbanks tsʼíʃ tíhhaay ("I'm going down to Fairbanks")	distal, downstream, allative
dandee didhindah ("Sit down on the upstream side [of the table]")	proximal, upstream, punctual
nandôg shtthíʼ tah sh̲áʔ xúnɬee ("I have lice in my hair")	intermediate, above, areal

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FIGURE 9.7 Tanacross (Dene) demonstratives (distal, allative paradigm).

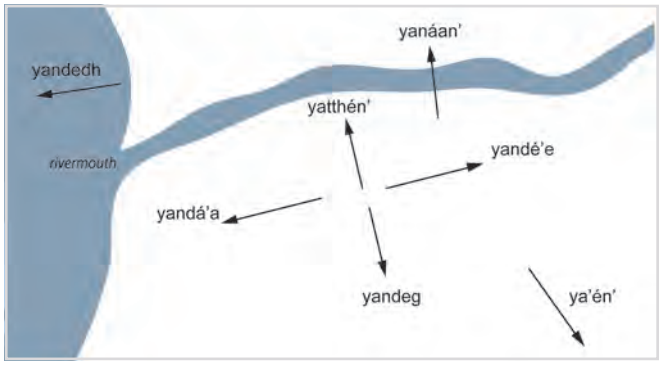
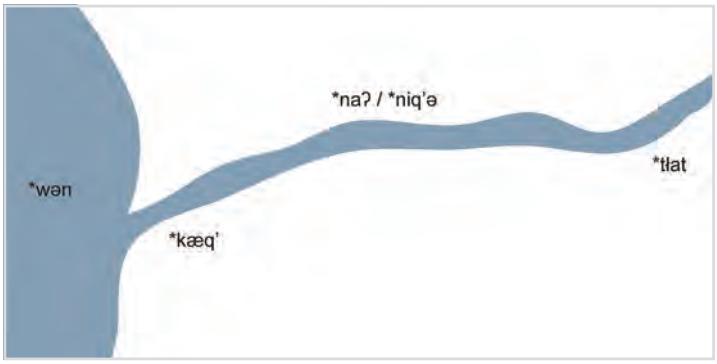


FIGURE 9.8 Proto-Dene streamscape generic terms.



The word occurs as the name for a prominent ridge rising some five hundred metres to the north of the Tanana River. It is used as a specific term to generate a cluster of names in that locality, including *Ch'inchedl Ndiig* ("nose creek") (< **niqʼə*), a creek that drains the back side of *Ch'inchedl*; *Ch'inchedl Menn'* ("nose lake") (< **wən*), the lake from which the creek flows; *Ch'inchedl Tl'aa* ("nose headwaters") (< **tɬ'at*), the headwaters of the creek; and *Ch'inchedl Teyy'* ("nose hill"), a peak that rises above the headwaters. This last generic term *teyy'* ("hill") augments the basic streamscape system. Crucially, a given specific term may be repeated only if it is not used to generate name clusters. Thus, the Tanacross name *Ch'inchedl* is a singleton, that is, a unique name that is not repeated.

The singleton *Ch'inchedl* can be contrasted with the specific term *ch'endaag* ("mineral lick"). This latter term occurs in the name *Ch'endaag Menn'* ("mineral lick lake"), which is repeated fully five times. This is rather striking given that the territory in which the Tanacross language is spoken is among the smallest of any Dene language in Alaska, and the five places with the name "mineral lick lake" are located within ten to fifty kilometres of each other. However, none of these names participates in a larger generative naming pattern (figure 9.9).

That is, the specific term *ch'endaag* does not occur in any other derived forms—either referring to neighbouring or distant features. There is simply no "mineral lick mouth," "mineral lick creek," "mineral lick headwaters," and so on. This distinction between specific terms that generate name clusters and those that do not is clearly functional. Because the former are not repeated outside the cluster, these singleton specifics essentially denote a region or territory. Names for individual parts of the territory can be generated readily even by those unfamiliar with the territory by drawing the generative principles of the Dene naming system.

The generative capacity of the Dene naming system is so deeply entrenched as to seem almost deterministic. This is particularly true for the generic term **kæq'* ("mouth"). Once one knows the name of a particular river, the name of its mouth is easily ascertained. This is not simply a matter of specifying a location using a geographic term. Rather, if the mouth is named, its name is almost invariably based on **kæq'*; alternate names are simply not possible. These mouth names are often highly lexicalized and often borrowed into English with the generic term. Thus, at the mouth of the Kantishna River is located a village known in English as Crossjacket. The Lower Tanana name for

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the Kantishna River is *K'osr No,'* a binominal name composed of the specific *k'osr* ("polishing stone") and the generic *no'* (< **naʔ*). Thus, the village at its mouth must be *K'osr Chaget* (< **kæq'*), which is readily seen to be the etymological source of the English name. Examples like this abound across the Dene territory in Alaska (see table 9.9).

The generative capacity also has synchronic relevance. New names are rarely coined in Dene languages, as most of the country is already named, obviating the need for further appellations. However, where new names are coined, the riverine system provides the template. Thus, a new name near a mouth of a creek will almost invariably be named using the generic "mouth." There are exceptions to this rule, but these arise only when there is an overriding influence from a competing naming strategy. There is a single such example in the list of 2,436 Ahtna names: the name *Naghilden*, which denotes a location at the mouth of Canyon Creek. Rather than the generic *cae'e* ("mouth," it contains a generic *den* ("place, area") and means literally "waterfall place." In this single case, the prominence of a nearby hydrologic feature took precedence, but in the vast majority of cases the system exhibits a constrained productivity in which new names must follow the generative strategy.

FIGURE 9.9 Ray Sanford reviewing maps of Tanacross place names, noting locations of places named *Ch'endaag Menn'*. Photograph by Gary Holton, 2012.

TABLE 9.9 Some Common Village Names with Dene Etymologies Based on **kæq'*

English	Dene name	Language
Salcha	*Soł Chaget*	Lower Tanana
Bearpaw	*Ch'edzaya' Chaget*	Lower Tanana
Chena	*Ch'eno' Khwdochaget*	Lower Tanana
Healy Lake	*Mendees Cheeg*	Tanacross
Ketchumstuck	*Saages Cheeg*	Tanacross
Holikachuk	*Holjichak'*	Holikachuk
Anvik	*Gitr'ingith Chagg*	Deg Xinag
Stony River	*K'qizaghetnu Hdakaq'*	Dena'ina
Chistochina	*Tsiis Tl'edze' Caegge*	Ahtna
Copper Center	*Tl'aticae'e*	Athna
Allakaket	*Aalaa Kkaakk'et*	Koyukon
Hughes	*Hut'odlee Kkaakk'et*	Koyukon
McGrath	*Tochak'*	Upper Kuskokwim

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FIGURE 9.10 Dene elder and Lower Tanana speaker Percy Duyck (1929–2014) reviewing Nenana-area place names. Duyck and other Dene speakers make use of the riverine demonstrative system to identify and locate place names. Photograph by Gary Holton, 2011.

The use of generics in Inuit-Yupik languages is quite different. In particular, Inuit-Yupik place naming is not generative. To see just how different the Inuit-Yupik strategy is, it is worth comparing the use of the Inuit-Yupik generic **paðə* ("mouth") with Dene **kæq'ə*. As in Dene languages, the Inuit-Yupik generic "mouth" can be used in place names. For example, the Central Yup'ik name for the village of Stony River is *Teggalqum Kuigan Painga*, incorporating the Yup'ik word *pai* ("mouth") (< **paðə*). This village is located in a bilingual region bordering Yup'ik and Dena'ina (Dene) territory, so it also has a Dena'ina name, *K'qizaghetnu Hdakaq,'* which also incorporates the Dena'ina generic *kaq'* ("mouth") (< **kæq'ə*). Yet the name for Stony River is actually quite exceptional in this regard. Most Yup'ik names for villages located at river mouths do not in fact contain the generic "mouth." For example, Egegik, located at the mouth of the Egegik River, is known simply as *Igyagiiq*, a generic term meaning "throat" and referring metaphorically to "the area of a river a little ways back from the mouth" (Jacobson 2012, 279). This name contains no specific component; it is simply a landscape generic. In other words, it is descriptive but not generative.

The contrast between Inuit-Yupik and Dene extends to features beyond river mouths themselves. A large mountain above the Cheeneetnuk River, known locally as Swift River Mountain, is called in Deg Xinag (Dene) *Jonetno' Xidochagg Deloy Chux*, literally "big mountain at mouth of Jonetno" (*chagg* < **kæq'ə*). *Jonetno,'* literally "clear water creek," is the Deg Xinag name for the Cheeneetnuk River. But the Yup'ik name has nothing to do with either the creek or its mouth. Instead, this mountain is known in Yup'ik by the highly descriptive name

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Kiturciigalnguq, meaning "place one cannot pass." Gusty Mikhail explains the name as follows: "That means 'we can't pass mountain.' You see the river is so crooked that that mountain when you go up, you go sometimes behind like that, sometimes it hit us. Sometimes sideways. You can't pass it. That's why they call him that way. You can't pass that mountain" (quoted in Kari 1980).

While the Deg Xinag language anchors the name generatively in the landscape via the generics "river," "mouth," and "mountain," the Yup'ik name forgoes landscape terminology in favour of a name based on human affordance. This difference is fundamental to understanding place-naming strategies in the two languages—a point to which we will return below.

Not only is the usage of the Inuit-Yupik and Dene "mouth" generic quite different, the terms also have fundamentally different semantics. Inuit-Yupik **paðə* has broad semantics referring to an "opening" or "entrance." This broad semantics is preserved in most of the languages of the family, including Yup'ik (Fortescue, Jacobson, and Kaplan 1994). Thus, Yup'ik *pai* (variant *paa*) can refer not only to the "mouth of river" but also to "opening of den, bottle," etc. or the "cockpit of kayak" (Jacobson 2012). In contrast, the Dene generic **kæq'* is restricted to the landscape domain, referring only to "river mouth." It is distinguished from roots such as *du* ("orifice" and *zaq'* ("mouth" [anatomical]). As I have argued previously, this Dene generic serves to delineate a prototypical Dene streamscape centred around a valley. The term **kæq'* is not just "river mouth" but, more properly, "mouth of a valley," as evidenced, for example, by the Lower Tanana name *Dradlaya Chaget*, which is located not at a river mouth, as the term *chaget* (< **kæq'*) might imply, but at the place where the river leaves a steep-walled valley and spills onto the Minto Flats (Holton 2011, 234) (figure 9.10).

The Dene examples given above reflect the fundamental importance of the riverine orientation system for Dene place naming. Although the grammar of demonstratives is extremely complex in both Dene and Inuit-Yupik languages, only in Dene is the demonstrative system so fully embedded within place names. This becomes especially apparent when place-naming strategies are compared quantitatively. In order to do this, we must consider comprehensive name inventories, since selective name lists could potentially skew the results. Within Alaskan Dene, the most comprehensive published place-name inventories are those for Ahtna (Kari 2008) and Lower Tanana (Kari et al. 2012), listing 2,208 and 1,064 names, respectively.[8] No study of similar scope has yet been published for Inuit-Yupik languages in Alaska; however, we are fortunate to have available a comprehensive list of 1,007 names for the Inuinnait of western Canada, which can be used as a proxy for Alaskan Inuit-Yupik languages (Collignon 2006). The Ahtna and Inuinnait territories are comparable in size, and the name inventories are similarly exhaustive.[9] The Ahtna name density is thus roughly twice that of the Inuinnait, but the two systems can nevertheless be compared without undue risk of sampling error.

As we expect given the claimed generative capacity of Dene naming, more than 60 percent of Ahtna names are binominal (or trinomial) and headed by one of twenty-two landscape generics. In contrast, only 21 percent of Inuinnait names are based on a landscape generic (see table 9.10). Moreover, nearly half of these names (94 of 207) are duplicates, so that the percentage of unique Inuinnait names based on

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a landscape generic is more like 11 percent. In fact, name duplication is much more prevalent in Inuinnait than in Dene. Fully 26 percent (257 of 1,007) of Inuinnait names are duplicates, compared to only 6 percent (155 of 2,436) of Ahtna names and just 4 percent (44 of 1,064) of Lower Tanana names. Even if we ignore name duplication, the percentage of landscape-based names in Ahtna is three times that in Inuinnait. However, this figure ignores grammatical structure of Dene binomial names. Inuinnait names based on landscape terms include many that are simply a landscape term or a landscape term modified by an adjectival suffix (post-base).

This is also true of the Yup'ik (Inuit-Yupik) names on Nunivak Island, one of the few sub-regions of Inuit-Yupik territory in Alaska for which comprehensive published name data are available.[10] A large number of Nunivak names consist only of a generic name with a modifying adjectival suffix. This includes twenty single-word names consisting of the generic root *kuik-* ("river") together with one or more derivational suffixes (see table 9.11).

Frequent use of generic names leads naturally to a high incidence of name repetition. The seven tokens of Nunivak *Kuigaar* is one example of such repetition. We also find on Nunivak Island five tokens of *Pengur* ("dune") (as well as fifteen more names derived from the same root); four tokens of *Penarrat* ("small cliffs") (as well as twenty other names derived from *penat* ["cliffs"]); and four tokens of *Qemirrlag* ("major hill/ridge") (as well as fourteen other terms based on the root *qemir* ["hill/ridge"]).

Names comprised solely of a landscape generic are impossible in Ahtna, and names based on adjectival modification of a landscape generic are extremely rare, comprising less than 2 per cent of the inventory. Such names tend to refer to major features, such as *Dghelaay Ce'e* for Denali, literally "big mountain." The more common generative pattern can be exemplified by the Ahtna names based on *yidateni* ("jaw trail"). The nine names in listed in table 9.12 make use of landscape generics referring to "canyon," "mountain," "river mouth," "hill," "creek," "headwaters," "lake," and "uplands." In addition, the specific term itself occurs as a name, *Yidateni*, denoting a convex landform. The landscape generics themselves do not occur as names.

The names shown in table 9.12 form what Kari (2008) has described as a place-name cluster built upon a single specific term. Examples of such clusters abound in Alaskan Dene languages. Within a cluster, names are generated by addition of one or more landscape generics. Crucially, the domain of application of the cluster is the river valley. All but one of the names in table 9.12 include generics referring to the riverine valley: "canyon," "creek," "river mouth," and "headwaters." The sole exception is *Yidateni Dghelaaye'*, which contains only the generic "mountain." This name refers to mountains on either side of the headwaters of *Yidateni Na.'*

The generative nature of Dene naming has important functional implications. The most striking feature of the system is its near predictive value. The major creek in the vicinity of *Yidateni* must almost obligatorily be named *Yidateni Na,'* and the pass located at the headwaters of *Yidateni Na'* is similarly known as *Yidateni Tl'aa.* Such statements must of course be qualified, for exceptions do exist, and the fact that such Ahtna names "make sense" in terms of the local geography should not be confused with a claim that those same names are

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predetermined. For example, where two lakes exist at the headwaters of the stream, it is not possible to know a priori which will be named with the generics "headwater lake." However, where both lakes are named, the typical pattern would be to distinguish them with the directional terms "upstream" and "downstream," as in the Ahtna names *Hwdaandi Taltsogh Bene,'* literally "downstream yellow-water lake," and *Hwniindi Taltsogh Bene,'* literally "upstream yellow-water lake." The overwhelming tendency toward deterministic naming practices in Dene languages is very real, both to observers and the speakers themselves. As Kari (2010a, xv; emphasis added) notes, "Ahtna geographic names are so informative and *learnable* that they facilitate the understanding and recognition of the landscape." Ahtna names index the landscape in a reciprocal fashion. On the one hand, the names literally describe the landscape, providing knowledge of places with which one is not familiar; on the other, the landscape imposes the names, providing a physio-geographic structure that facilitates memorization and usage of names. Knowledge of a small number of specific terms can be readily extended to a large geographic area using the generative naming system. The robustness of this system is further attested by the widespread agreement in linguistically cognate names across language boundaries (Kari 2010b).

The contrast with Inuinnait could not be more stark. There is no way to know in advance whether a particular river will be known as "big river" or "long river" or simply "river." Given this ambiguity, it is perhaps not surprising that knowledge of Inuinnait names is not considered a prerequisite for travelling or hunting on the land (Collignon 2006, 107). Rather,

TABLE 9.10 Examples of Inuinnait Names Based on Landscape Generic

Name	Literal
Kuunayuq	long river
Kuugaluk	big river
Kuugaaryuk	small river
Palliq	bay
Qikiqtahuk	small island
Tahialuk	(big) lake
Ikpik	slope

SOURCE: COLLIGNON 2006.

TABLE 9.11 Yup'ik Place Names Based on Generic *Kuik-* ("River") on Nunivak Island

Name	**Literal**
Kuicungar	dear little river
Kuigaar (7)	little river
Kuigaarag	two little rivers
Kuigaaremiut	village of little river
Kuiggavluar (2)	just a little river
Kuigglugar	poor old river
Kuigglugarmiut	village of poor-old-river
Kuigkaun	future river
Kugimiutuli	one who stays at the river
Kuigpii	its big river
Kuiguar (2)	imitation river
Kuileg	one with a river

NOTE: WHERE A NAME REFERS TO MORE THAN ONE PLACE, NUMBERS IN PARENTHESES INDICATE THE NUMBER OF DISTINCT PLACES WITH THAT NAME. SOURCE: DROZDA 1994.

TABLE 9.12 Ahtna Names Based on Specific Term *Yidateni*

Name	**Literal**
Yidateni Dyii	jaw trail canyon
Yidateni Dyii Dghelaaye'	jaw trail canyon mountain
Yidateni Caek'e	jaw trail mouth
Yidateni Caek'e Tes	jaw trail mouth hill
Yidateni Na'	jaw trail creek
Yidateni Tl'aa	jaw trail headwaters
Yidateni Tl'aa Bene'	jaw trail headwaters lake
Yidateni Dghelaaye'	jaw trail mountain
Yidateni Na' Ngge'	jaw trail creek uplands

SOURCE: KARI 2008, 27.

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FIGURE 9.11 *Tr'edhdode*, a landmark situated in the pass between the *Dradlaya Nik'a* (Chatanika River) and *Tsogho Nik'a* (Beaver Creek) drainages. Photograph courtesy Chris Cannon, 2016.

Inuinnait names connect people to the landscape and serve to create a human dimension to it. Of course, the same could be said for Ahtna names. The difference is that where Inuinnait names are deliberately chosen, Ahtna names are largely imparted by the landscape itself; indeed, they are inseparable from it. That is not to say that naming is completely unconstrained in Inuinnait: one would presumably be unlikely to name a lake using the Inuinnait generic for "mountain." Nor is naming completely constrained in Ahtna: the choice of specific terms such as *yidateni* reflects speaker creativity. But these observations are secondary to the basic distinction in the role of landscape in Inuit-Yupik and Dene place naming.

Inuit names are much more likely to be based on human experience (Collignon's *uumajuit*), with no reference to landscape. One thus finds Inuinnait names such as *Alliakhaqhiurvik* ("place to search for material to make sledges") and *Ihurvik* ("place where hunters wait for game"). For this reason, Inuit names are also readily coined. This is true in Alaska among the Yup'ik just as much as with the Inuinnait. Although Yup'ik names are sometimes said to be of great antiquity, Fienup-Riordan (2011, xxix) cites numerous examples of recently coined whimsical names, noting that "some places were named simply to make us smile." Thus, the Yup'ik place *Kass'aq*, literally "white person," is so named simply because a white person lived there. Such recently coined whimsical names are almost entirely absent in Dene languages. Rather, Dene names are predominantly landscape-based (see figure 9.11), generated in clusters within the domain of the riverine valley.

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Conclusions

The comparisons presented here lend some support to the hypothesis that Alaska's two major language families conceptualize the landscape in very different ways. Though both groups are nomadic hunter-gatherers sharing a common border across the Subarctic, their linguistic relationships to this landscape are quite different. The primary contribution of this chapter is to suggest a relationship between demonstrative systems and place-naming strategies. Although both Inuit-Yupik and Dene languages have extremely rich demonstrative systems, the Inuit-Yupik systems operate primarily at a local scale. At larger scales relevant to landscape, the systems have been reduced and altered in language-specific ways. There is no overarching Inuit-Yupik landscape demonstrative system.

In contrast, the Dene demonstrative system is preserved intact in all of the Alaskan Dene languages, giving special prominence to the linear valley. This valley system can be thought of as a semantic template, or "semplate"—that is, a semantic system that is reflected in more than one area of the grammar (Levinson and Burenhult 2009). The linear valley also serves as the organizing principle for generative place naming based on a shared specific term combined with a suite of landscape generics. The existence of the linear valley semplate provides evidence for a deep-rooted Dene conceptualization of the valley as central to the landscape. This concept is further reinforced by the reciprocal nature of Dene place naming, through which the landscape essentially names itself.

Place-naming strategies in Inuit-Yupik and Dene languages draw on different linguistic resources, rooted in the underlying differences in their demonstrative systems. As a result, Alaska's two major language families, which seem at first glance to have very similar demonstrative systems, approach the naming of the landscape in very different ways. Whether or not this difference in naming strategies reflects different ways of conceptualizing the landscape, or simply different linguistic designs, remains an outstanding question.

Of course, any conclusions drawn here are necessarily tentative, as they rely on disparate (and often incomplete) sources from a variety of languages. Inadequate documentation remains a major barrier to the analysis of the landscape domain in Alaska. Research on Indigenous toponymy requires exhaustive documentation in order to avoid sampling bias. Yet most place-name studies in Alaska have been opportunistic or guided by etic territorial boundaries. Place-name documentation driven by Indigenous communities tends to focus on single communities rather than entire language areas, and research driven by government agencies tends to impose artificial boundaries. More popular and widely distributed name lists are often redacted, resulting in what is only a subjective sampling of names for more prominent features. While these materials may be informative about the names they do contain, they do not admit a larger synthesis. For example, without comprehensive coverage one cannot extract information about name density or the relative frequency of certain naming strategies.

To date, comprehensive place-name lists have been published for just three Alaskan languages, and these only recently: Ahtna (Kari 2008), Lower Tanana (Kari et al. 2012), and Tlingit (Thornton 2012). Even the best reference dictionaries provide little information about the semantics of generic landscape terms. There is still much to learn, and ongoing documentation efforts must also be supplemented by experimental work.

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Notes

1 Inuit and Yupik languages are the two branches of a language family traditionally known as "Eskimo"—a term no longer acceptable in Canada but still in use in Alaska. Likewise, in Canada, the term "Dene" has largely supplanted "Athabaskan" (the spelling generally preferred there), whereas in Alaska "Athabascan" remains the more common term. I use the terms Inuit-Yupik and Dene in place of Eskimo and Athabascan, respectively.

2 For the sake of consistency, I follow the conventional practice of using ethnonyms to refer to language. The language spoken by the Yup'ik people is more properly known as Yugtun. Similarly, the languages spoken by the Koyukon and Inuinnait peoples are more properly Denakk'e and Inuinnaqtun, respectively.

3 The values in table 9.5 reflect a more conservative stage of the language. In modern West Greenlandic, the distinction between restricted and extended demonstratives has been neutralized (Fortescue 1984, 259). However, this difference is not relevant to the argument made in this chapter.

4 Notably, the riverine system does not reconstruct to the higher-level branch of the larger Na-Dene family. Rather, the riverine system is an innovation within the Dene branch (Leer 1989, 602).

5 In practice, local river direction will also be conventionalized. Thus, in Tanacross village, houses are treated as if they were facing the river flowing from right to left as one looks out the door. This remains the case even though only one house is actually situated in this fashion today. Nonetheless, demonstrative terms are applied unambiguously within the house based on this conventionalization.

6 In both English and Dene languages, many place names are composed of a combination of a generic landscape term from a limited set (for example, "lake," "mountain," "river," etc.) plus a specific term which provides additional identification. Thus, in the English name "Big Lake," "lake" is the generic and "big" is the specific.

7 For the difference in distribution of reflexes of Proto-Dene **na* and **niq'e*, see Kari (1996).

8 The list published in 2008 includes 2,208 names; a revised and updated list available from the Alaska Native Language Archive includes a total of 2,436 names.

9 Kari (2008) estimates the size of the Ahtna territory as 50,000 square miles (13 million hectares). Inuinnait territory is roughly five times as large, at approximately 270,000 square miles, or 70 million hectares (Collignon, pers. comm.), and thus the same order of magnitude as Ahtna territory.

10 The variety of Yup'ik spoken on Nunivak Island is usually referred to as Cup'ig. Though the structure of the directional system in Cup'ig is similar to that found in other varieties of Central Alaskan Yup'ik, Cup'ig exhibits significant lexical and phonological differences, to the extent that some speakers consider Cup'ig to be a distinct language (Amos and Amos 2003, viii; Jacobson 2012, 42).

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