ATHABASKAN CLASSIFIERS AND CAUSAL-NONCAUSAL TYPOLOGY

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In the over 40 years that I have known Andrej Kibrik it has been a pleasure to read his work and see him grow into a major figure in international typology, field linguistics, and Na-Dene descriptive and comparative linguistics. His work on Athabaskan classifiers changed my understanding of the topic and removed a stumbling block to my work on causal-noncausal alternations, while also opening up new perspectives for the historical typology of the North Pacific Rim. Here I will lay out some of the ways in which his Athabaskan work is important to general morphosyntactic typology.

Cross-linguistic work on causal-noncausal alternations goes back to the influential wordlist study of Nedjalkov 1969, where four causal-noncausal pairs ('laugh' : 'make laugh'; 'boil', 'burn', and 'break', the latter three in both transitive and intransitive uses) were surveyed across a large number of languages worldwide to see which is morphologically basic and which derived. Findings included a number of observations bearing on how lexical meaning influences formal pairing (e.g. the pair 'break' is prone to be decausative, ambitransitive, or equipollent rather than causativized). This line of work continues, with larger databases, improved understanding of the semantic and formal parameters, and improvements in coding and quantitative analysis (Nichols 1982, Haspelmath 1993, Nichols et al. 2004, Grossman, Nikolayev 2018, and later work by these and other authors).

Athabaskan[1] causal-noncausal alternations are important beyond their descriptive interest. Athabaskan and the larger Athabaskan-Eyak-Tlingit family are evidently the next-to-last language family to enter the Americas, followed only by Eskimo-Aleut (this view goes back to Sapir 1916), plausibly related to the Yeniseian family of central Siberia, and with a linguistic geography including distinct southward and eastward spreads by different major branches resulting in chains across the Subarctic, through the intermontane region to Mexico, and coastally south to northern California, archaeologically traceable. That history and geography offer

[1] The family is also known as Dene, from the indigenous endonym, and the larger AET family as Na-Dene. Use of *Dene* would be more in line with current best practice in linguistics, but here I use the more common *Athabaskan*.

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rich evidence on questions such as rates of change and favored changes under various contact scenarios and in different demographic distributions. To exploit these sources and identify items for comparison we need a full understanding of the verb structure in comparative perspective, and here is where Andrej's work comes in.

This paper uses a database of 18 causal-noncausal verb pairs in 200+ languages, begun in 1992, used in Nichols et al. 2004 and subsequent work, and by now with much-improved analysis and coding (survey questionnaire available as Nichols 2017). Andrej's work on Athabaskan classifiers has proved to be a keystone for interpreting the causal-noncausal data especially as regards the implications for language typology and history in northern Asia and North America.

What are known as classifiers among Athabaskanists (who have used the term as standard for nearly a century, while almost universally acknowledging it to be a misnomer) are a set of four prefixes in the immediately preverbal slot, which is the closest to the verb root (in the long string of prefix slots in the Athabaskan verb template) and the most intimately bound up with the verb's semantics and syntax. Every verb in an Athabaskan language has one of the four classifiers in that slot, but their functions and meanings have defied, or at least complicated, description. It has been clear from the earliest work that they most often have to do with valence and argument structure, and such operations as passivization, causativization, formation of impersonal verbs, etc. involve classifier alternations. However, no function or meaning can be assigned to any of them.

Andrej's deceptively simple answer to the conundrum is that classifiers do not mark argument structure, argument functions, or the like, but the mere fact of a **shift** of what is called transitivity in Hopper and Thompson 1980: to simplify, the degree of the verbal action's effect on an object, which can involve such things as addition of an agent argument (acting on the object), a change from unspecified to explicit object, a change from generic to specific action, and much more. The essential thing is movement up or down a transitivity hierarchy. This is captured in his two-dimensional hierarchical diagram (Figure 1)

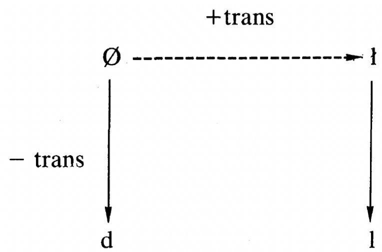

Figure 1. Athabascan classifiers and directions of derivation between them.
Arrows: directions of derivation. Ø, ł, l, d: the four classifiers,
in a generic Athabaskan form. (After Kibrik 1993: 50, 1996: 261.)

The essential point is that the classifiers do not **derive** verbs; there are no transitivizing, detransitivizing, etc. derivational morphemes, but the classifiers simply reflect that those shifts obtain between verbs in a pair. (The only overt marker of valence per se is the subject and/or object indexes on the verb.)

The arrows show that the *Ø* classifier is a possible starting point of a derivation but not an endpoint. Thus if we find forms of the same verb, one with *Ø* and one with *ł*, we know that the *Ø* one is basic and the *ł* one derived and has higher transitivity. Thus if in a dictionary we find, e.g., a verb 'get angry' with the *Ø* classifier and 'make angry' with *ł*, we know that 'make angry' is derived from 'get angry' because that is the only possible direction of shift between the two; and this derivation increases transitivity (it is classic causativization). If we find 'learn' with *l* and 'teach' with *ł* we know that 'learn' is derived because *ł* to *l* is the only possible direction of shift between those two. In these examples, 'angry' is causativizing and 'learn' decausativizing. If both verbs have the same classifier the pair is ambitransitive (labile). Though all causal-noncausal pairs have a marker on each verb, there is no configuration that can be called equipollent, as all possible pairings are accounted for by one of the shifts shown in Figure 1.

I applied this approach and coded up the 18 verb pairs from Ahtna using Kari 1990, a large and sophisticated bilingual dictionary with a probably exhaustive list of the known verb roots of the language and with many examples per headword (= the root) organized by affixal template. This is a polysynthetic language with complex and mostly templatic verb morphology and complex morphophonemics that obscure the morphological structure, making it difficult to neatly isolate a best match to a wordlist item and feel confident that it is a bona fide lexeme in the language. But the wordlist task of this survey can be likened to imposing a two-dimensional emic grid on the multimensional and continuous lexicosemantic substance of the language, and reporting what surfaces in each target cell, without regard to where else it surfaces or what fails to surface in the target cell (Nichols et al. 2004), and on this understanding of the goal it is possible to identify a match.

If the classifiers are taken as ordinary derivational morphemes each with a basic or invariant function, almost all verb pairs are equipollent — a very unusual profile, cross-linguistically. I then recoded the verbs using the Kibrik diagram, coding as basic whichever form's classifier could be a starting point for the other, and coding as derived whichever one could be an endpoint for the other. The outcome was verbs classifiable as causativizing, decausativizing, and labile — a more tractable profile. Moreover, the Ahtna verbs that are not causativizing by this measure are those that are likely to be non-causativizing cross-linguistically, confirming the plausibility of the analysis. (An example is 'break', equipollent or decausative in many languages and decausative in Ahtna.) An earlier file on Navajo, gathered before Kibrik's work came out and still to be recoded, also appears to use decausativization in several of the same pairs.

However, if the language on the Kibrik-based analysis looks fairly typical, the fact that the coded entries describe not presence vs. absence of morphology but directionality of shifts in transitivity — relations or changes and not morphemes or derivations — makes the language unlike any other I have ever surveyed. (The same would go for any other Athabaskan language.) This does not show up in the database entries for Ahtna, but it is very important for typological comparison. Since one cannot assume in advance that the Athabaskan family (or any other) is truly unique on earth, a search for other such languages is in order. The hallmarks of the Athabaskan classifier system include the inability of specialists in the family to identify invariant or basic or most common functions for the classifiers, and the high proportion of equipollent verb pairs in the data. It may be possible to identify more languages of the Athabaskan type using these criteria.

There are broader implications to be drawn from the Athabaskan data and the analysis of the classifiers. The earlier Navajo survey mentioned above appears to differ from Ahtna in using causativization more widely. Now, causativization proves to be the most frequent pattern in all cross-linguistic surveys, and there is also reason to believe that it is favored in sociolinguistic situations where decomplexification is to be expected (Nichols 2018), including migration, language shift, and expansion. Ahtna is in or near the Athabaskan homeland and has mostly Athabaskan neighbors, while Navajo has migrated far to the south and absorbed appreciable Pueblo influence. By this criterion Ahtna is probably conservative and Navajo innovative and specifically decomplexified. Thus the Ahtna pattern and the preliminary Navajo analysis appear consistent with the known histories.

Assuming that Ahtna is indeed conservative, the implications for prehistory may be significant. Table 1 shows frequencies of derivational types in the Pacific Northwest and nearby subcontinental areas. In the Pacific Northwest and in the northeastern (Paleosiberian) part of Asia, causativization is very frequent and somewhat more frequent among inanimate verbs than animate verbs. To the west, in the Uralic languages and in western and central Siberia (where Uralic languages are a large part of the linguistic population), causatives are less frequent among animate verbs. Still farther west, Europe is very different, with decausativization frequent (implemented by reflexivization in most of the Indo-European languages there). Eastern North America is still too sparsely sampled to bear firm conclusions, but so far it appears that causativization is frequent and not sensitive to animacy. Mexico-Central America, also so far sparsely sampled, is still different.

The Ahtna pattern appears to be an extreme version of the Central-West Siberian pattern, while the Eskimo-Aleut pattern is similar to the profile of the nearby Paleosiberian languages. The Eskimo-Aleut pattern is unsurprising, given the relatively recent immigrations of Eskimoan and Aleut from the Paleosiberian population Siberia to coastal Alaska (Fortescue, Vajda 2022: Ch. 1; Berge 2018). The

Table 1. Percent of verb pairs with derived noncausal and causal members

Subcontinent-sized areas of the American Pacific Northwest and nearby. Figures for individual languages given only for the Pacific Northwest and the Paleosiberian languages of eastern Siberia. Surveys are incomplete for the Americas. Animate = verbs prototypically with animate S/O (e.g. 'fear' : 'scare'), inanimate = prototypically with inanimate S/O (e.g. 'boil').

			ANIMATE, % derived		INANIMATE, % derived	
			Noncausal	Causal	Noncausal	Causal
Europe		Mean	0.43	0.23	0.54	0.20
Dvina-Ural		Mean	0.28	0.66	0.37	0.64
W-C Siberia		Mean	0.13	0.75	0.36	0.64
Paleosiberia	Yeniseian	Ket	0.22	0.89	0.22	0.78
	Chuk.-Kamchatkan	Chukchi	0.10	0.80	0.33	0.78
	Chuk.-Kamchatkan	Koryak	0.10	0.70	0.62	0.92
	Yukagir	Yukagir	0.20	0.90	0.30	1.00
	Japonic	Japanese	0.11	0.67	0.50	0.63
	Nivkh	Nivkh	0.22	0.44	0.25	0.75
	Eskimoan	Siberian Yupik	0.11	0.56	0.20	0.80
	Aleut	Aleut	0.33	0.75	0.45	1.00
		Mean	0.17	0.71	0.36	0.83
Pacific NW	Eskimo-Aleut	C Alaskan Yupik	0.00	0.73	0.22	0.78
	Eskimo-Aleut	Aleut	0.33	0.75	0.45	1.00
	Athabaskan	Ahtna	0.25	0.63	0.25	0.25
	Haida	Haida	0.00	0.73	0.14	1.00
	Salishan	Thompson	0.36	0.64	0.33	0.33
		Mean	0.19	0.70	0.28	0.67
OR-CA	Klamath-Sahaptian	Nez Perce	0.11	0.89	0.00	1.00
E N America		Mean	0.24	0.75	0.55	0.76
Mexico-C America		Mean	0.44	0.55	0.29	0.39

Athabaskan pattern supports the entry of AET considerably earlier and from an interior Siberian population (as proposed by Fortescue & Vajda 2022: 2–3), but conflicts with the linguistic evidence of Kari 2010, 2019 and ongoing work supporting familiarity of an ancestral pre-Athabaskan or pre-AET ancestor with the late glacial topography and shorelines of Lake Ahtna. Andrej's analysis makes it possible to bring in Athabaskan evidence and reveal the contradiction, and a survey of more AET languages in his framework should help resolve it.

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