ON THE USE OF "QUASI-GRAMMEME" IN ATHABASKAN[1]

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Abstract

Many prefixal position in the Athabaskan verb template can be attributed stable labels "derivation" or "inflection". In addition, there is a large group of quasi-inflectional positions; this was identified due to the illuminating notion of quasi-grammeme proposed by Mel'čuk. Generally, the inflection vs. quasi-inflection vs. derivation opposition is a key to understanding the intricate synthesis implemented in the Athabaskan verb.

ПОНЯТИЕ КВАЗИГРАММЕМЫ И АТАБАССКИЕ ЯЗЫКИ. Аннотация. Многие префиксальные позиции в атабасском глаголе могут быть четко определены как словоизменительные либо словообразовательные. Кроме того, есть большая группа квазисловоизменительных позиций, идентифицируемых как таковые благодаря полезному понятию квазиграммемы, введенному И.А. Мельчуком. В целом, оппозиция словоизменения/квазисловоизменения/словообразования является ключом к пониманию атабасского полисинтетизма.

1. Introduction

In this paper I am going to connect the intricacies of Athabaskan morphology with some ideas proposed in the morphological component of the Meaning-Text theory, particularly in Mel'čuk 1993. Athabaskan languages constitute the largest native American family of the USA and Canada, embracing some 40 languages in three separated areas: Alaska and western Canada; Oregon and Northern California; and the Southwest. Athabaskan languages are among the world's morphologically most complex languages. Most of what is expressed by syntactic constructions or function words in more familiar languages is expressed by morphology in Athabaskan. Therefore, morphological issues are of more weight in Athabaskan grammar compared to a "typological average". Athabaskan languages are strikingly unusual typologically (Kibrik 2002). Athabaskan are among the major language families of the world, and their data certainly cannot be neglected, if one strives for a typologically grounded theory of grammar.

2. Inflection vs. derivation

Among the central morphological problems is the traditional debate on the derivation vs. inflection opposition. Since attempts to distinguish between inflection and derivation encounter many difficulties (both universally and in particular languages), a heretical question may arise: is it really necessary to make this distinction? It is helpful to identify aspects in which this distinction is useful:

1) the practical, descriptive aspect: when describing a language we have to discriminate between the information listed in the dictionary and that remaining for the grammar; derivation would be accounted for in the dictionary, and inflection in the grammar (or, alternatively, inflection and productive derivation can be described in the grammar)

2) the theoretical (cognitive) aspect: what we think is stored as one lexeme (with its forms being, at least potentially, constructed on the basis of grammatical rules by the speakers in real usage), and what we think is definitely stored and remembered as separate lexemes

In the first aspect we are obliged to stick to the binary inflection vs. derivation opposition: every form should be accounted for somewhere in our description. In the second aspect we can allow for a possibility that the dichotomy is a continuous one. Some evidence has been presented, first, for the

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storage of inflectional forms in the speakers' long-term memory (Stemberger and MacWhinney 1988), and second, for the ability of the speakers to produce new derived lexemes on-line (see e.g. Zemskaja 1992). Below I do not discriminate between the two aspects consistently, but the difference between them should be kept in mind.

I believe that the distinction between inflection and derivation captures an important generalization, even though there are certainly instances when a straightforward application of this dichotomy is not possible.

3. Athabaskan morphology

Athabaskan morphology is traditionally described through the notion of template: a linearly ordered sequence or morphological positions such that each position is attributed to a functionally homogeneous set of morphemes. For a recent proposal of templatic morphology in Athabaskan see Kari 1989; for a critique see Rice 2000. In the chart below I present what can be called Standard Average Athabaskan template; it is based on the actual templates of Navajo (Young and Morgan 1992), Hupa (Golla 1970), Ahtna (Kari 1989, 1992), Sarcee (Cook 1984), and Slave (Rice 1989). The template includes those positions that occur at least in two languages out of the listed five.

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18  proclitic
17  (b) Oblique [postpositional object] +
     (a) preverb [postposition]
16  various derivational
15  reflexive Accusative [direct object] pronoun (Navajo, Hupa)
⌐14  iterative
├13  distributive
└12  incorporate (Slave, Sarcee, Ahtna)
11  number (Hupa, Slave)
⌐10  Accusative [direct object]  pronoun
├9   3 person Nominative [deictic subject] pronoun
└8   transitivity decrease (Navajo, Hupa)
7   qualifier
6   inceptive
5   qualifier
4   conjugation
3   mode
2   1/2 person Nominative [subject] pronoun
1   transitivity indicator [classifier]
0   root
+1  mode/aspect suffix
+2  enclitic
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In the chart, I propose some non-traditional terms; their traditional correlates are indicated in parentheses. Bracket signs on the left indicate the pairs of positions that might be interchanged in some languages (or in some instances within one language). Two striking peculiarities obvious from this chart are:
- the almost exclusively prefixing character, which, to my knowledge, does not occur in other languages of this level or morphological complexity
- the violations of the cross-linguistic scope, or relevance, ordering tendencies (see Rice 2000), in particular, placement of inflection closer to the root than derivation.

Violations of scope-based ordering in Athabaskan is not limited to the derivation/inflection distinction, but concerns also the relative order of inflectional categories. As has been demonstrated by A.E. Kibrik (1980) and Bybee (1985: 34-35), among others, the most common ordering of grammatical categories, in terms of proximity to the root, is: ROOT – (A) aspect – (B) tense – (C) mood –

(D) person. Compare examples from the thoroughly scope-obedient (suffixing) Central Alaskan Yup'ik (Eskimo-Aleut family) and from the entirely unpredictable (prefixing) Navajo:

(1) Central Alaskan Yup'ik (Eskimo-Aleut, Mithun 1999: 407)

ROOT		DERIVATION			INFLECTION			
iter-	ngnaqe-	rraar-	tur-		llru-	u-	q	'he always wanted to enter first'
enter-	try.to-	first-	repeatedly-		Past-	Indicative-	3Sg	
			ASPECT		TENSE	MOOD	PERSON	
			A		B	C	D	**Scope/relevance ranks**

(2) Navajo   nihideestsił   'I will move on the buttocks to a point'

DERIVATION			INFLECTION			ROOT
ni-	hi-	di-	ghi-	s-	l-	tsił
Terminative-	Seriative-	Inceptive-	Progr-	1Sg.Nom -	TI↑↓-	move.sitting
DERIVASP	LEXASP	INFLASP	MODE	PERSON	VALENCY	ROOT
A	A	A	B/C	D		**Scope/relevance ranks**

In Central Alaskan Yup'ik, the hierarchical proximity of derivation to the root, compared to the peripherality of inflection, is obvious, and the boundary between derivation and inflection is clear-cut. In Navajo the ordering is odd and morphemes such as inceptive and transitivity indicator (TI) do not lend themselves easily to the derivation vs. inflection dichotomy (see below).

In this paper I mostly concentrate on the derivation/inflection dichotomy that is represented in the Athabaskan template in a puzzling and unusual way. One cannot hope to understand Athabaskan morphology without addressing how individual morpheme positions can be characterized in terms of this dichotomy. I am not going to propose an ultimate explanation for the Athabaskan paradox below. Rather the goal of this paper it to see to what extent the labels "derivational" and "inflectional" help to explain the Athabaskan templatic positions, and how the conceptual apparatus can be extended.

4. Inflection and derivation in Athabaskan

In Athabaskan linguistics, it is usually implied that certain morphological positions can be characterized in terms of the inflection vs. derivation dichotomy. For example, Hoijer, Young and Morgan, and others typically label certain positions "derivational". In Sapir and Hoijer (1967:85) only two positions (corresponding to what is positions 18-16 and 6-5 in my chart above) were considered derivational, and all the rest (with one exception, see below) were labeled "paradigmatic" (inflectional). Kari (1989:428) quoted an unpublished paper by Whorf who quoted Sapir's term "interrupted synthesis" that characterizes this property of Athabaskan.

Let us see how the derivation and inflection labels apply to the 18 prefixal position in the Athabaskan verb. The morphological positions that are exclusively devoted to a particular type of morphology, are the following:

- Purely derivational positions: qualifier [5,7] and various derivational [16].
- Purely inflectional positions: Nominative pronoun [2/9], mode [3], conjugation [4], Accusative pronoun [10], Reflexive Accusative pronoun [15], Oblique pronoun [17b].

But what about all other positions and the corresponding morpheme classes? Can they be characterized as either inflectional or derivational? Along with derivation and inflection, I propose to distinguish the third phenomenon in Athabaskan: quasi-inflection, following the Mel'čuk's (1993) notion of quasi-grammeme, and Golla's (1970:115) notion of "secondary inflection". In Sapir and Hoijer (1967) most of such morphemes were treated as paradigmatic (that is, inflectional). In order to see how these morphemes should better be treated, one needs to delve into the actual definitions of derivation and inflection.

5. Quasi-inflection

Mel'čuk (1993:262ff.) defines inflectional categories on the basis of two necessary properties: obligatoriness of expression in every word to which the given category applies, and regularity of expression; he also mentions some additional typical properties of the inflectional meanings (=grammemes): abstractness of meaning and broad combinatorial potential. Mel'čuk further notes that the regularity of expression is a relative (gradual) rather than absolute property, and therefore a category may be infectional to a certain degree. The grammeme ultimately serves in Mel'čuk's framework as a basis for the definition of the lexeme. The derivational meaning (= derivateme) is defined negatively in respect to the grammeme (p. 287ff.): non-lexical meaning which is not inflectional. Mel'čuk lists seven distinctions that contrast grammemes and derivatemes (p. 293ff.), though none of these distinctions can be considered completely necessary. As other authors, Mel'čuk acknowledges the absence of a rigid boundary between inflection and derivation, and identifies one important intermediate class of meanings (p. 302-303): **quasi-grammemes** which resemble the grammemes in being regular, but on the other hand are not obligatory. This notion turns out very useful for Athabaskan. (In addition, Mel'čuk draws a distinction between the strongly derived (productive derivation) and the weakly derived (non-productive derivation) lexemes, see below.)

On the basis of Mel'čuk's terminological pair "grammeme (=inflectional meaning)" – "inflection" I propose a parallel pair "quasi-grammeme" – "quasi-inflection". I claim that the following prefixal positions in the Athabaskan template belong to morphemes that are quasi-grammemes and thus can be characterized as quasi-inflection: transitivity decrease [8], number [11], distributive [13], and iterative [14]. Note that all of these positions can only be occupied by one morpheme each. For example, the distributive morpheme adds the meaning that the event took place on more than individual occasion and, by inference, suggests the plurality of the absolutive argument.

(3) Upper Kuskokwim, distributive
a. tsasja   ts'a-di-ghi-ł-joch   b. tsasja   ts'a-**n**-da-zi-ł-joch
    cup   Pref-Pref-ghPf-TI↑-broke   cup   Pref-Distrib-Pref-zPf-TI↑-broke
    'I broke a cup/the cups'   'I broke the cups'

The form in (3a) does not have the meaning of non-distributivity or singularity of the patient, rather it is unmarked in this respect. So the distributive morpheme does not belong to any paradigm but is in contrast only to absence, to lack of any formal marking and meaning. This is very different from inflectional categories whose zero members do convey a specific meaning, as e.g. English *I work* is the present tense, contrasted to *I worked*.

Similarly, the iterative morpheme indicates the repeated character of an event, while its absence does not convey any specific meaning.

(4) Navajo, iterative
a. yi-di-lé   b. **né**-i-di-dlééh
   33.Acc-Pref-handle   Iter-33.Acc-Pref-TI↓:handle
   'He carries it along'   'He repeatedly carries it along'

Still another quasi-grammeme, transitivity decrease, appears e.g. in Navajo semipassive, accompanying the indefinite nominative pronoun.

(5) Navajo, transitivity decrease
a. łééchąąʔí   ni-sh-hash   b. ni-ʔ-**di**-sh-ghash
   dog   Pref-zPf-TI↑:bit   Pref-Indf.Nom-Decr-zPf-TI↑↓:bit
   'The dog bit you'   'You have been bitten'

The first Mel'čuk's requirement towards quasi-grammemes is that they are regular. The morphemes such as distributive or iterative can be freely added to any verb, in accordance with the semantic demands. Considering these morphemes derivational, as sometimes proposed, seems very unnatural: they definitely do not create new lexemes, but are freely added to any verbal meaning. (Note that adding quasi-grammemes entails other changes in the verbs in (3)–(5), but this is a different story, and a very complicated story of Athabaskan polysynthesis.)

The second Mel'čuk's principle is non-obligatoriness of quasi-grammemes. Obligatoriness is the defining feature of grammatical categories: one or another grammeme belonging to the category must always be present in the words of the relevant word class. But this does not hold for the morphemes in question. When a certain quasi-grammeme does not appear on the verb this does not qualify this verb semantically in any way. Therefore, there is no sense in postulating zero counterparts in these positions. Only the presence of the specific morphemes is meaningful. This is the crucial difference of quasi-inflection from inflection.

Perhaps one more prefix position can be treated as quasi-inflection, namely, incorporate [12]. Unlike the four positions discussed above, there are multiple morphemes potentially occurring in this position. But otherwise it seems that this category is similar, being both regular and non-obligatory. The lack of an incorporate does not bear any specific meaning and thus cannot be considered the zero member of an opposition.

(6) Upper Kuskokwim, incorporation

a. ho-ghi-s-dlo
   Pref-ghPf-1Sg.Nom-took.mass/pl.solid
   'I took it (anything mass or plural solid) out'

b. ho-**lats**-ghi-s-dlo
   Pref-dirt-ghPf-1Sg.Nom-took.mass/pl.solid
   'I took some dirt out'

c. ho-**tsa**-ghi-s-dlo
   Pref-rock-ghPf-1Sg.Nom-took.mass/pl.solid
   'I took some rocks out'

d. ho-**tu**-ghi-s-dlo
   Pref-water-ghPf-1Sg.Nom-took.mass/pl.solid
   'I took some water (in buckets) out'

In my view, quasi-grammemes are the polysynthetic analog of various adverbs and circumstants in less synthetic languages. They are optional and can be added or not added freely, and for this reason they cannot be captured by the opposition of inflection and derivation. Forced pressing of quasi-grammemes into derivation, typical of Athabaskan lexicography, may be one of the reasons responsible for the huge size and complexity of Athabaskan dictionaries, such as Young and Morgan 1987, 1992; Jetté and Jones 2000.

6. More complex instances

The remaining four prefixal positions require some special comment. Positions of proclitics [18] and preverbs [17a] in many cases might best be treated as quasi-inflection, though sometimes they might be derivational. The attribution of a preverb as derivational vs. quasi-inflectional is parallel to the distinction between arguments and adjuncts (actants vs. circumstants), that is those participants that are predicted by the semantics of the lexeme, and those that are not.

The inceptive morpheme occurring in position [6] – see ex. (2) above – is originally derivational. But in many Athabaskan languages it developed a secondary function as a part of the future mode morphology; it these forms it can be inflectional or quasi-inflectional, depending on individual language.

Finally, let us consider the transitivity indicator [classifier] position [1]. It is the only position not identified by Sapir and Hoijer (1967) as either derivational or inflectional. In fact, the transitivity indicators (TIs) are largely inflectional, especially as concerns the changes ø- > d- and ł- > l- accompanying the regular transitivity decrease processes (such as passive, reflexive, etc., see Kibrik 1996). The change ø- > ł-, accompanying the transitivity increase processes (productive, such as the

causative, see Kibrik 1993, or unproductive, such as the anticausative, see Kibrik 1996), is a case of the derivational usage of the TI. (Note that cross-linguistically the transitivity-increasing processes tend to pertain to derivation, and the transitivity-decreasing processes to inflection.) The following types of TI occurrences can be differentiated:
- inflectional, fully predictable (passive, reflexive, iterative)
- derivational, quite predictable (causative) or poorly predictable (anticausative)
- lexical, normally zero; if not zero, then fossilized, fully unpredictable.

Thus the l̲- TI is primarily derivational; when used in constructions like passive or reflexive, the d̲- TI is typically inflectional, and l̲- simultaneously refers to both kinds of processes; in the constructions like anticausatives and historical passives (see Kibrik 1996) d̲- and l̲- are used derivationally. TIs constitute a typologically interesting example of an inherently inflectional/derivational category.

7. Conclusion

To conclude, I have demonstrated how the intricate morphological system of Athabaskan languages can be treated with respect to derivation vs. inflection dichotomy. As in all languages, we find groups of clearly derivational and clearly inflectional affixes. Many prefixal position on the Athabaskan verb template can be attributed stable labels "derivation" or "inflection". A striking feature of Athabaskan is that inflection is generally closer to the root than derivation. The question of whether this is related to the prefixal nature of Athabaskan morphology remains for further investigation. It may be that languages tend to place derivation linearly before inflection; this principle, if viable, coincides with the "derivation closer to the root than inflection" principle in suffixing languages that constitute the unmarked typological option.

There is a significant residue of positions in the Athabaskan template that we cannot readily identify as either derivational or inflectional. There are at least two reasons for that. First, there is a large group of quasi-inflectional positions; this was identified due to the illuminating notion of quasi-grammeme proposed by Mel'čuk. Athabaskan quasi-grammemes are isolated morphemes that resemble inflectionals in being fully regular, but unlike inflectionals cannot be considered obligatory since they do not belong to any category, and can be contrasted only to absence.

The second reason for complications is template positions that can variously be associated with either derivation, or quasi-inflection, or inflection. Some morphemes are originally derivational and developed a secondary usage that is not. In other cases certain morphemes belonging to a position are inherently inflectional, while other more like derivational; still they constitute a natural class.

Generally, the inflection vs. quasi-inflection vs. derivation opposition is a key to understanding the intricate synthesis implemented in the Athabaskan verb.

NON-OBVIOUS ABBREVIATIONS IN GLOSSES

33 – both arguments are 3d person
Acc[usative]
Distrib[utive]
ghPf – gh-perfective
Iter[ative]
Progr[essive]
Nom[inative]
Pref – derivation prefix of a meaning irrelevant for the current discussion
TI↓, TI↑, TI↑↓ – transitivity indicator of decrease, of increase, of increase plus further decrease
zPf – z-perfective

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