Selkup denominal adjectives: a Generalized Paradigm Function analysis

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Selkup (Uralic) has a great variety of morphological devices for creating transpositions from one lexical category to another without necessarily changing the lexical meaning at all. Kuznecova et al. (1980) explicitly demarcate this aspect of the grammar in their description under the heading of ‘representation’ (‘reprezentacija’). This paper deals with ‘adjectival representations of nouns’, which behave as attributive adjectives, much like English polar from pole (e.g. polar icecap).

However, in Selkup these retain significant traces of their nominal past and behave in many respects like inflected forms of nouns, with or without additional lexical content. These are therefore neither derivational nor inflectional in the usual senses of the terms and represent a poorly described type of lexical relatedness.

Selkup nouns share the general structure of Uralic nouns in having three suffix position slots, for number ([Number: {singular, dual, plural and collective}]), possessor agreement ([PossAgr: {person/number}]) and case ([Case: {nominative, accusative, genitive, instrumental, caritive, translativie, coordinative, dative-allative, illative, locative, elative, prolative, vocative}]).

A typical example of a fully inflected noun is shown in (1):

(1) qoː-iː-nyt-kɔːlyk
   leader-PL-2PL.POSS-CAR
   ‘without your (Pl) leaders (Pl)’

The three features are paradigmatic, i.e. the values of [Number], [PossAgr], [Case] are mutually exclusive.

In Paradigm Function Morphology (Stump, 2001) the inflectional paradigm of a lexeme is given by its Paradigm Function (PF). This takes pairing of <root/stem form, lexemic index> and a full set of features defining that word form (σ) and delivers the inflected form corresponding to that feature set, for all the permissible combinations of features applicable to that lexeme. The PF is defined in part in terms of sets of realization rules (RR), with the general form (2):

(2) RR maps to
    <X, σ> <Y, σ>
    specific set of feature values (e.g Num:pl)
    lexeme class (e.g. N, V, …)

where X, Y are (perhaps partially inflected) forms of the lexeme (X and Y may be identical).

The position class property is coded by organizing the RRs into Blocks. Each block corresponds to a position class and contains a realization rule that applies if its feature content is nondistinct from the feature content, σ, of the full word form. Only one realization rule per block can apply and this guarantees the paradigmatic relationship. For instance, we can propose the rules in (3) to represent the form given in (1) (with obvious simplifications):

(3) a. I: Num(X, {Pl}) = Xi:
  b. II: PossAgr(X, {2pl}) = Xnyt
  c. III: PossAgr(X, {Caritive}) = Xkɔːlyk

Given the root qoː as our starting point these rules allow us to infer the form in (1) for the paradigm cell defined by the feature set {LEADER [Num: Pl, PossAgr: 2pl, Case: Caritive]}, as shown in (4):
(4) a. I: $\text{Num}(qo\text{,:}\{\text{Pl}\}) = qo\text{,:i}$
b. II: $\text{PossAgr}(qo\text{,:i}, \{\text{2pl}\}) = qo\text{,:i:nyt}$
c. III: $\text{PossAgr}(qo\text{,:i:nyt}, \{\text{Caritive}\}) = qo\text{,:i:nytkɔ:lyk}$

Default zero-marked forms such as ‘Num:sg’, ‘PossAgr:unpossessed’ lack their own RR and the form is defined by the Identity Function Default (IDF).

In addition to these clearly inflectional forms, there are three major ‘adjectival representation of nouns’. These are denominal forms derived by suffixation:

(5)

associative representation  kana-l’  ‘dog’s, pertaining to dogs’
similitudinal representation  alako-ššal’  ‘similar to a boat’
locative representation  mɔ:t-qyl’  ‘located in the/a house’

The adjectival representations of nouns serve for attributive modification. Unlike canonical inflection, similitudinal and locative representations add semantic content to the noun denotation, essentially creating a representation of the form SIMILAR_TO(N) and LOCATED_IN(N). The semantics of these predicates means that such a word will denote a property as well as denoting an object. Note that derived adjectives with a similar meaning are widespread in the languages of the world, cf. English boy-ish, god-like and Tundra Nenets war°-xi°(located) on the shore’ < war° ‘shore’. The associative representation is similar to relational adjectives in English and other languages: it is a transposition from the noun class to the adjective class without the addition of a semantic predicate to the content or semantic representation of the lexeme. It denotes some loosely (contextually/pragmatically) defined association between two entities.

However, Kuznecova et al. (1980) make a clear distinction between true adjectives and adjectival representations of nouns in terms of their morphosyntax. The two types are similar in that both can function only as modifiers and do not differ in their external distribution, but adjectival representations are analyzed as part of the nominal paradigm (and hence, are in a sense ‘inflectional’). The crucial difference is that, unlike true adjectives, adjectival representations have (inflectional) possessive forms. Thus, in addition to the associative form of the unpossessed noun qaqlı sledge’, qaqlı-l’ ‘pertaining to a sledge’, we have forms such as qaqlı-nɪː-l’ ‘pertaining to our.DU sledge’ and qaqlı-ntyty-l’ ‘pertaining to their.PL sledge’, where -nɪː- and -ntyty- are possessive affixes. Simple denominal adjectives are not compatible with possessive affixes, cf.:

(6) a. *(mat) mɔ:t-ny-symyl’ qum  
   I.GEN house-1SG-PROP man  
   ‘man with my house’

b. (mat) pɔ:ra-ny-šal’ qum  
   I.GEN size-.1SG-.SIM man  
   ‘man of my size (lit. man similar to my size)’

Example (6a) illustrates a denominal adjective which is formed with the suffix -symyl’ and has a proprietive meaning (‘with N’). Such adjectives cannot be derived from inflected word forms, including possessive forms, as is expected of a derivational process. The behaviour of the similitudinal suffix -šal’ in (6b) is different: it can attach to a noun bearing possessor agreement morphology, as is typical of inflectional morphology.

A further intriguing observation is that the suffixes of the three adjectival representations are incompatible with case markers. In the case of the locative representation, this is not surprising, given the meaning. However, it remains puzzling that the associative and similitudinal suffixes should be incompatible with at least the meaningful case markers, given that they combine with
possessor inflection. In other words, it is not difficult to conjure up meanings for the relational adjectives which would include cases. For instance, it is unclear why we cannot have similitudinal forms derived from cases other than nom, acc, voc, say ‘similar to knife-gen (blade)’ = ‘(blade which is) similar to a knife’s’ or ‘pertaining to river-loc (mist)’ = ‘(mist which is associated with being) at the river’. But such forms are impossible.

So the similitudinal suffix (and those of the other two adjectival representations) are not only compatible with inflected forms of lexemes, but are also in paradigmatic opposition to case suffixes. Although it is not itself a case suffix in any obvious sense of the term, it belongs functionally to the same set of suffixes as the case suffixes. Classical PFM is not designed to handle such categorial mixing. We therefore adopt an extension of PFM under which a Generalized Paradigm Function (GPF) is capable of mapping a complete lexical representation (consisting of <FORM, SYNTAX, SEMANTICS, LEXEMIC INDEX> attributes) to another complete lexical representation. The LEXEMIC INDEX (LI) is an arbitrary integer individuating all and only the distinct lexemes in the lexicon. For straightforward inflection the SYN, SEM, LI attributes are not mentioned in the GPF, but are defined by the Identity Function Default and the mapping is effected by three blocks of realization rules applying to the FORM value. This is equivalent to the classical PF analysis, as seen schematically in (7):

(7) GPF(LEADER, {<pl, 2pl, car>})
maps to
FORM: qo:- qo:-i:-nyt-kɔ:lyk
SYN: N (by IDF)
SEM: [LEADER(x)] [LEADER(x)] (by IDF)
LI: LEADER LEADER (by IDF)

Derivational morphology involves a non-trivial change in all four attributes (as with the Selkup proprietive adjective, (6a)).

A pure (a-semantic) transposition is effected by a GPF which alters the FORM and SYN attributes but not the SEM or LI attributes. We represent syntactic categories as argument structure representations following, essentially, Higginbotham (1985), Spencer (1999). A noun has the semantic function role ‘R’, and an attributive adjective has the role $A^*_i(x_i)$. Attribution consists of coindexing the ‘A’ and the ‘R’ roles: $tall<A^*_i(x_i)\text{ tree}<R^*>$. A relational adjective such $polar$ has the derived role $<A^*_i(x_i),<R_1>>: polar <A^*_i(x_i),<R_1>> icecap<R_2^*> ‘icecap bearing some relation to the pole’:

(8) FORM: pole-ar
SYN: $<A^*_i(x_i),<R>>$
SEM: [POLE(x)]
LI: POLE

The associative representation is effectively ‘inflectional transposition’, i.e. a member of the inflected paradigm of the noun which nonetheless acquires the morphosyntax of an adjective:

(9) a. GPF(SLEDGE, {<sg, unpossd, associative>})
maps to
FORM: qaqlly- qaqlly-l’
SYN: $<R>$ $<A^*_i(x_i),<R>>$
SEM: [SLEDGE(x)] [SLEDGE(x)]
LI: SLEDGE SLEDGE

b. GPF(SLEDGE, {<sg, 2pl, associative>}) ‘pertaining to your(pl) sledges’
The GPF can also add a semantic predicate to such an “inflectional transposition” without changing the lexemic status of the output, as with the similitudinal:

(10) \[ \text{GPF}(\text{SLEDGE}, \{<\text{sg, 2pl, similitudinal}>\}) \text{ 'similar to your(pl) sledge'} \]

This is similar to Booij’s (1996) ‘inherent inflection’, which also (generally) adds semantic content, but in the case of the similitudinal representation, the process is not purely inflectional because it changes the lexical category, rather like a transposition.

Depending on language-specific (indeed, construction-specific) principles the ‘R’ role of the original noun may or may not be accessible to morphosyntactic principles. But since the adjectival representations of Selkup nouns are essentially like case-marked forms they often behave like nouns in the syntax, taking their own modifiers/specifiers, as in (6b).

The Selkup system of ‘representacija’ thus demonstrates the need for a model of lexical relatedness that can be fully integrated into a model of derivation, and is flexible enough to account for the complex interactions which give rise to the kinds of non-canonical inflection illustrated here, and which also provides sufficiently rich representational structure to allow us to reflect the mixed categorial status of these types of word.

References


Stump, G. 2001. Inflectional Morphology. CUP.