

IX. Typology of morphological and morphosyntactic categories
Typologie morphologischer und morphosyntaktischer Kategorien
La typologie des catégories morphologiques et morphosyntaxiques

54. Parts of speech

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The part-of-speech system of a language is a classification of the lexical items of that language with respect to a number of phonological, morphological, syntactic, and semantic properties (Anward, Moravcsik & Stassen 1997). An individual part of speech is, extensionally, a class of lexical items which share a unique set of such properties, or, intensionally, the unique set of properties shared by this class of lexical items.

In order to do typology on part-of-speech systems, it is useful to take part-of-speech systems to be mappings of semantically defined classes of lexical items onto classes delineated by phonological, morphological, and syntactic properties.

1. Semantic classes

To get an idea of the range of conceptual resources made available by natural languages, we may start with the list of lexical items in (1). Wierzbicka (1996), summarizing some 25 years of research, argues that the concepts expressed by the English words and expressions in (1) are both semantic primitives and lexical universals. That is, every language lexicalizes these concepts, and every other concept lexicalized by a natural language can be defined in terms of these concepts.

- (1) I, you, someone, something, people, this, the same, other, one, two, many/much, all, think, say, know, feel, want, do, happen, good, bad, big, small, when, where, after/before, above/under, no, because, if/would, can/may, very, kind of, have parts, like

To classify the concepts in (1), we can, for example, use a version of the semantic metalanguage of the Western grammatical tradition – the Aristotelian categories, as they are presented and exemplified in chapter 4 of Aristotle's *Categories* (Ackrill 1963: 5). In modern semantic terminology, these categories are: thing / person, quantity, property, relation, place, time, position, possession, action, and process – a not unreasonable semantic metalanguage. Compare, for example, Jackendoff's more recent set of "ontological categories": thing, event, state, action, place, path, property, and amount (Jackendoff 1990: 22). What needs to be added is chiefly the category of situation, the category expressed by sentences and interjections.

The following variation on the Aristotelian categories, where event subsumes action and process (both mental and physical) and where position and possession have been left out, since they are not instantiated in (1), suffices to classify Wierzbicka's concepts:

- (2) *Person/Thing:* I, you, someone, something, people
Event: do, happen, think, say, know, feel, want
Place: where, above/under, this
Time: when, after/before
Relation: because, if/would, can/may
 kind of, have parts like
 the same, other
Property: good, bad, big, small
Quantity: no
 one, two, many/much/
 very, all

We can begin to chart the diversity of part-of-speech systems by looking at the ways in which the semantic classes in (2) can be mapped onto classes delineated by phonological, morphological, and syntactic properties.

2. Semantic class and syntactic function

To begin with, there is a characteristic mapping of semantic classes onto syntactic functions.

Hopper & Thompson (1984: 708–710) argue that the demands of narrative discourse create two basic uses of words: introducing and deploying participants, and asserting the occurrence of events. Since participants are introduced and deployed in argument positions (subject and object position), and events are asserted to occur in main clause predicate position, these uses sanction two

basic prototypical combinations of semantic category and syntactic function:

- (3) Person/Thing; Argument
 (4) Event; Predicate

Croft (1990) equates Hopper & Thompson's two basic uses with the propositional acts of reference and predication, as these are defined by Searle (1969), and then goes on to identify further propositional acts, each one sanctioning a particular combination of semantic category and syntactic function.

A third major propositional act, modification, sanctions the combination in (5), and a minor propositional act of situating an entity in a background dimension sanctions the combinations in (6)–(8).

- (5) Property; Modifier
 (6) Place; Modifier
 (7) Time; Modifier
 (8) Quantity; Modifier

If we also take into account the combination of the semantic category of situation with the syntactic function of independent utterance (root (sentence), in the sense of Emonds 1976), we can summarize the mapping of semantic classes onto syntactic functions by means of the grid in Table 1. The semantic classes are ordered along a rough scale of time-stability (Givón 1984; see also Stassen 1997: 15–16, 578–581 for a recent assessment), from the least stable entities (situation and event) to the most stable entities (person and thing), as well as along an additional scale of spatiotemporal specification (Stassen 1997), which is orthogonal to the time-sta-

Tab. 54.1: Semantic classes and syntactic functions

	root	predicate	predicate modifier	argument modifier	argument
situation	✓				
event		✓			
place			✓	✓	
time			✓	✓	
relation			✓	✓	
property			✓	✓	
quantity				✓	
person/thing					✓

bility scale and extends from place (most specified) through time to relation, where it "meets" the time-stability scale. The syntactic functions are ordered along a scale from root to subject or object (argument) function. Highlighted cells indicate characteristic combinations.

3. Lexicalization

Thus, in a first step, a part-of-speech system can be thought of a distinctive lexicalization of each of the highlighted cells in Table 54.1. That is, a language will provide its users with a unique class of lexemes for each one of these highlighted combinations of semantic class and syntactic function.

The usual names of these lexeme classes are given in (9).

(9)	
root, situation	Interjection
predicate, event	Verb
predicate modifier, place	Adverb, Adposition, Conjunction
predicate modifier, time	Adverb, Adposition, Conjunction
predicate modifier, relation	Adverb, Adposition, Conjunction
predicate modifier, property	Adverb
argument modifier, place	Demonstrative
argument modifier, property	Adjective
argument modifier, quantity	Quantifier, Numeral
argument, person/thing	Pronoun, Noun

3.1. Interjections

The combination of the semantic class of situation and the syntactic function of root is lexicalized by interjections.

Interjections normally divide into at least four subclasses (Ameka 1992): expressive interjections ('ouch', 'oh', 'wow', 'aha'), directive interjections ('hush', 'psst', 'hey'), phatic interjections ('mhm', 'yes', 'no', 'huh'), and descriptive interjections ('wham', 'thud', 'bang'), also called ideophones or expressives.

While expressive, directive, and phatic interjections index aspects of the speech event, ideophones signify topical events in an essentially symbolic way. Typical ideophones display phonetic symbolism, often iconic, based on onomatopoeia or phonaestheticism.

3.2. Verbs

The combination of the semantic class of event and the syntactic function of predicate is lexicalized by verbs.

The lexical class of basic verbs will normally lexicalize concepts of motion, posture,

process, activity, existence, production, possession, transfer, contact, destruction, and transaction (Dixon 1977, 1980: 280–281, Foley 1986: 113–128, Givón 1980, Tsunoda 1981, and Viberg 1986).

There are Australian languages (Dixon 1976: 615–768, 1980: 280–281) and Papuan languages (Foley 1986: 113–128) which have very small classes of verbs (between 10 and 100). To cover the conceptual range covered by a large class of verbs, some of these languages use combinations of a verb in predicate function and a noun in argument function ('do saliva': spit) or modifier function ('perceive [with] eye': see). Other languages use combinations of a verb in predicate function and one or more verbs in conjunctive predicative function ('go get return give': bring).

There are also languages, for example the Australian language Mangarayi (Merlan 1982), where the class of verbs is split into a small set of inflected verbs and a larger set of non-inflecting verbs which must be governed by an inflected verb.

3.3. Modifier categories

The combinations of the semantic classes of relation, time, place, property, and quantity and the syntactic function of modifier are lexicalized by adpositions, conjunctions and adverbs in predicate modifier (adverbial) function and by demonstratives, adjectives, quantifiers, and numerals in argument modifier (attributive) function.

As pointed out by Schachter (1985), it is not uncommon for classes that lexicalize concepts in modifier function to be small and closed. For example, Yoruba has a small class of adjectives, a common situation in African languages, and may also have exactly one preposition (developed from a verb), Chukchi has only four postpositions, recently developed from nouns, and Archi, a Dagh-

tanian language, has a class of around a dozen basic attributive words, which is fairly heterogeneous, but seems to somehow straddle the property-quantity boundary.

3.4. Pronouns and nouns

The combination of the semantic class of person/thing and the syntactic function of argument is lexicalized by personal pronouns and nouns.

The lexical class of basic **personal pronouns** is defined by the normally obligatory dimensions of person (first, second, and third) and number (at least singular and plural) and the optional dimensions of inclusive/exclusive 1st person plural (which may sometimes have the status of an additional person category; Dixon 1980: 351–356), gender, case, discourse status (e.g. proximal – obviative in Algonquian; Hockett 1966), social status (e.g. speech level in Nahuatl; Hill & Hill 1978), and kinship (e.g. in Lardil; Hale 1966, Dixon 1980: 276).

There are, though, Papuan languages that lack a number distinction in pronouns (Foley 1986: 66–74) and Papuan and Australian languages that lack third person pronouns (Foley 1986: 66–74; Dixon 1980: 356–362). A truly minimal pronominal system has just one first person pronoun and one second person pronoun. Such a system is found in the Papuan language Golin (Foley 1986: 70).

Pronominal concepts may also be expressed by affixes, instead of or beside independent pronouns.

The lexical class of basic **nouns** will typically include items denoting humans, animals, plants, artifacts, inanimate objects, environmental phenomena, and more abstract cultural entities, as well as a number of relational concepts, having to do with kinship, other social relations, name, body parts, plant parts, and parts of inanimate objects and abstract entities (Leisi 1966, Langacker 1987, Silverstein 1987).

Pronouns and nouns can be ordered on an animacy hierarchy (Silverstein 1976):

I, You > Humans > Animals > Artifacts > Plants > Objects > Abstracts

Cutting across this hierarchy are a number of further distinctions:

Individuation: count items, such as 'head', 'pot', and 'mountain', versus mass items, such as 'blood', 'milk', and 'water';

Discourse status: pronouns, such as 'I' and 'you', versus interrogatives, such as 'who' and 'what', versus names, such as *Jack* and *Jill*, versus common nouns, such as 'friend' and 'stone';
Valency: relational nouns, such as 'mother', 'name', 'head' and 'top', versus non-relational nouns, such as 'woman' and 'pot'.

Relational nouns may be less differentiated than non-relational nouns along the animacy hierarchy: humans, animals, plants and objects always have separate lexicalizations, but distinctions between human body parts, animal body parts, plant parts, and object parts, as well as distinctions between human kin and animal kin, and human status and animal status, may be more or less neutralized. Names may also show less differentiation than common nouns along the animacy hierarchy (Leach 1970: 89–92).

3.5. Variation

As pointed out by Hengeveld (1992, ch. 4), a part-of-speech system, viewed simply as a lexicalization of the highlighted cells in table 1, is subject to two kinds of variation.

First, a language need not use all of the syntactic functions in Table 54.1. A language may lack predicate modifiers, using serial or medial verbs instead. Likewise, a language may lack argument modifiers, and use predicate modifiers (or something equivalent) to express argument modification. Hixkaryana and other Carib languages are examples of languages that approximate this type (Derbyshire 1979), and, incidentally, constitute potential counter-examples to Hengeveld's proposal that absence of argument modifiers entails absence of predicate modifiers. Following Whorf (1945) and Sasse (1988), Hengeveld also proposes that there are languages that lack arguments altogether and express everything through a series of predicates. However, proposed examples of such languages, Wakashan and Iroquoian languages, do not seem to fit the type (Jacobsen 1979, Mithun 2000).

In polysynthetic languages, syntactic functions may, optionally or obligatorily, be realized word-internally, through compounding, incorporation and/or inflection. In particular, argument function may be restricted to pronominal inflection, with independent nouns

being used as appositions (Jelinek 1984), and predicate and argument modification may be essentially word-formation processes.

Secondly, a language need not lexicalize all of the highlighted cells in Table 54.1. In particular, all of the modifier categories are cross-linguistically optional. Anward (2000) observes a tendency for languages with adverbs to have adpositions as well, but this needs to be tested against a larger sample. Hengeveld's proposal that languages with adverbs also have adjectives may be better rephrased as a tendency for languages with adpositions also to have adjectives. Even this generalization has counterexamples, though. Ainu is one.

While interjection seems to be a universal part of speech, it is a matter of considerable controversy whether or not both [event; predicate] and [person/thing; argument] need to be distinctively lexicalized. There is no lack of proposed cases of languages where the noun-verb distinction is neutralized. In some languages, such as the Wakashan languages Nootka and Nitinat (Swadesh 1939, Whorf 1945) and the neighbouring Salish languages (Kuipers 1968, Kinkade 1983, Jelinek & Demers 1994), all content words (as opposed to invariable particles) are said to be basically verbal, or predicative, in nature, but also allow an argument use, in which they are interpreted essentially as headless relatives. In other languages, such as Eskimo languages (Hammerich 1951, Johns 1992), all content words are held to be basically nominal, with agentive nouns as the closest equivalent to verbs. In yet other languages, such as various Austronesian languages (Himmelmann 1991, Broschart 1997), it is not even clear which function, predicate or argument, is basic. Indeed, Gil (1994) has argued that in such languages, only [situation; root] is lexicalized.

4. Complex mapping

However, a part-of-speech system is not simply a lexicalization of a subset of the highlighted cells in Table 54.1. The mapping of semantic classes onto formally demarcated classes is far more complex.

First of all, semantic classes may be distinctively lexicalized in non-typical functions as well, which means that semantic classes are often multiply lexicalized. Place, for example, is lexicalized not only by adpositions (*to*), but also by nouns (*direction*) and verbs (*enter*) (Schwarze 1991).

Secondly, lexical items may be used in other functions than the one in which they are lexicalized. A noun such as *iron* may be used not only as argument (*I bought some iron*), but also as predicative (*This metal is iron*), predicate (*Did you iron my shirt?*), and attributive modifier (*I need an iron bar*).

4.1. Lexicalization possibilities

While the semantic class of person/things only seems lexicalizable by nouns, other semantic classes can be lexicalized in several ways.

Event can be lexicalized by action nouns, such as *scandal* and *war*, in argument function.

Place can be lexicalized in argument function, as locational nouns, in predicate function, as verbs of posture, location, and motion, in adverbial function, as adverbs, adpositions and conjunctions, and in attributive function, as demonstratives. Adverbs and adpositions can also be incorporated into verbs as locational/directional affixes and adpositions can be grammaticalized to local case affixes.

The general notions of 'place' and 'path' are typically lexicalized by nouns, while the notions of 'come', 'go' (motion) and 'stand' (posture) are typically lexicalized by verbs.

More specific place and path concepts, such as 'in', 'behind', and 'to' can be lexicalized both by nouns (*interior*, *rear*, *way*) and by adverbs and adpositions (*in*, *behind*, *to*), as pointed out by Schwarze (1991). Moreover, such concepts can be incorporated into the meanings of motion verbs in certain languages (Talmy 1985).

Certain notions are more likely to be lexicalized by nouns, for example 'left', 'right' and the points of compass. In addition, such notions are not incorporated in the meanings of motion verbs, and they are rarely grammaticalized as case concepts.

Deictic concepts, on the other hand, are typically lexicalized by modifier categories.

Time can be lexicalized in argument function, as temporal nouns, in predicate function, as aspectual verbs and verbs of duration and temporal existence, in adverbial function, as adverbs, adpositions and conjunctions, and in attributive function, as temporal adjectives. Aspectual verbs and temporal adverbs can also be grammaticalized as tense and aspect inflections.

Temporal unit notions, such as 'time', 'day', 'night', 'summer', and 'winter', are typ-

ically lexicalized by nouns, while aspectual notions, such as 'start' and 'stop', frequency notions, such as 'repeat' and 'often', duration notions, such as 'take a long while', and notions of temporal existence such as 'occur' and 'take place' (sic!) are typically lexicalized by verbs and adverbs. Temporal relations and points-in-time, deictically anchored or not, are often lexicalized as adpositions (*after*), adverbs (*now*), and adjectives (*early*).

Relation can be lexicalized in argument function, as relational nouns, in predicate function, as stative verbs, in adverbial function, as adpositions, and in attributive function, as relational adjectives. The concepts of 'kind of' and 'part of' are typically lexicalized as nouns. Causal relations are lexicalizable as nouns (*ground*, *purpose*), verbs (*cause*) and adpositions (*because*), and modal notions have an unusually broad range of alternative lexicalizations (Nuyts 1994): nouns (*risk*), verbs (*can*), adverbs (*perhaps*), and adjective (*possible*). Even the notion of 'like' have several possible lexicalizations. In Swedish, there is the adposition *som* (like), and the adjective *lik* (similar), and in English there is also the verb *resemble*.

Property is also a very versatile category, which can be lexicalized by nouns, verbs, adverbs, and adjectives. There is by now a fairly extensive literature on which subcategories typically go into this category and which lexicalization tendencies these subcategories exhibit. See e.g. Dixon (1977), Schachter (1985), and Wetzler (1996).

Quantity, finally, is another versatile category. Quantity can be lexicalized by nouns (*pair*, *score*), verbs (*equal*, *exceed*), quantifiers (*many*) and numerals (*five*).

4.2. Extensions

Lexical items are typically not restricted to just one function, but have a range of syntactic functions. One way to put this is to say that the use of lexical items is typically extended from the function in which they are lexicalized to other syntactic functions as well.

A verb, such as *sing*, which denotes an event in predicate function (10 a), can also be used, with a derivational suffix and nominal inflection, to denote an entity in argument function (10 b) and predicate function (10 c), and, with another derivational suffix and nominal inflection, an event in argument function (10 d).

- (10) (a) Leonard Cohen sings.
 (b) The singer must die.
 (c) Leonard Cohen is a singer.
 (d) The singing stopped.

And a noun, such as *stone*, which denotes an entity in argument function (11 a), can also be used to denote an entity in predicate function (11 b), and, with verbal inflection, an event in predicate function (11 c) and, with a derivational suffix and nominal inflection, an event in argument function (11 d).

- (11) (a) The stones were heavy.
 (b) This is a stone.
 (c) They stone you when you're playing your guitar.
 (d) The stoning of singers must stop.

Thus, through extension, both verbs, such as *sing*, and nouns, such as *stone*, may fill up the space defined by the syntactic functions of predicate and argument, and the semantic categories of event and person/thing:

Frequent patterns of extension include:

- (i) Most parts of speech extend to root (i. e. can be used as single-word utterances).
 (ii) Most parts of speech extend to predicate (and/or predicative).
 (iii) Nouns and verbs extend to most other functions, although extension of nouns to adverbial may be restricted to locational and/or temporal nouns, and extension of verbs to modifier may be restricted to stative or intransitive verbs.
 (iv) Adverbial parts of speech (adverb, adposition) extend to attributive function.
 (v) Attributive parts of speech (demonstrative, adjective, quantifier, numeral) extend to adverbial and to argument.
 (vi) Ideophones extend to modifier.

4.3. Modes of extension

Kuryłowicz (1936) makes a distinction between syntactic derivation and lexical derivation, arguing that derivational morphology can change either syntactic function (syntactic derivation) or lexical category (lexical derivation). Adverbial derivation, for example *ici-ly* from *icy*, would be an instance of syntactic derivation, while derivation of adnominal adjectives, for example *ic-y* from *ice*, would be an instance of lexical derivation. The distinction works just as well for extensions which involve no derivational morphology – conversions, or "zero-derivations". Thus, conversion of a locational adverb, such as *out*, from adverbial (*We slept out*) to predi-

cative function (*The cat is out*) would be an example of syntactic conversion, while conversion of a locational adverb to predicate function (*He outs with the old equalizer*) would be an example of lexical conversion.

If we unpack Kuryłowicz's distinction, we can see that there are two potential changes associated with derivation and conversion: change of syntactic function and change of semantic category.

In clear-cut cases of syntactic derivation or conversion – what we might call syntactic extension – syntactic function is changed, without change of semantic category. Thus, in the derivation of *icily* from *icy*, syntactic function is changed – from attributive modifier to adverbial – but semantic category – property – is retained. The same holds for predicative conversion of *out*: syntactic function is changed – from adverbial to predicative – but semantic category – place – is retained.

If we look at the two cases of lexical derivation/conversion used as examples, it is plain that the conversion of *out* from locational adverb to verb is more syntactic than semantic, the change of semantic category being somehow a side-effect of the change of syntactic function, while the derivation of *icy* from *ice* is more semantic than syntactic, the change of syntactic function being more of a side-effect in this case. There are also cases of lexical derivation/conversion which involve only a change in semantic category. Property to thing (*beauty* → *beauty*), thing to property (*man* → *manhood*), and process to action (*break* → *break*) are three examples.

The "verbal" conversion of *out* is in fact a special case of syntactic extension, modistic extension (named after the group of medieval grammarians, the *modistae*, who held that semantic category is predictable from syntactic function), whereby members of a lexical class take on both a new syntactic function and the semantic category that is most typically associated with that function. In the case of *out*, the semantic category involved is of course event. Other examples of the same process would be conversion of "numeral" to "noun" (*Five go down to the sea*) and "noun" to "adjective" (*an orange clockwork*).

The remaining cases of lexical derivation/extension might be called semantic extension, either semantic extension with a syntactic side-effect, as in the derivation of *icy* from *ice*, whereby members of a lexical class take on a new semantic category and the syntactic

function(s) typically associated with that category, or "pure" semantic extension, as in the derivation of *manhood* from *man*, where only a shift in semantic category is involved.

5. Inflection and government

Lexical items are differentiated not only by their characteristic distribution over the cells in Table 1, but also by their patterns of inflection and government in the cells in which they occur.

Hopper & Thompson (1984) argue that the combinations

- | | | |
|-----|---------------|-----------|
| (3) | Person/Thing; | Argument |
| (4) | Event; | Predicate |

are loci for inflectional elaboration. Nominal morphology – inflection for definiteness, number, gender, case, and person agreement – is maximally elaborated in (3), and verbal morphology – inflection for finiteness, tense, mood, aspect, subject agreement, and object agreement – is maximally elaborated in (4).

Croft (1991) argues that inflectional elaboration is a consequence of markedness. Items appear in unmarked form and with maximal paradigmatic elaboration in unmarked contexts (characteristic combinations) and in marked form and with reduced paradigmatic elaboration in marked contexts (non-characteristic combinations). Thus, verbs appear as simple stems with maximal inflectional elaboration in (4), but tend to appear as elaborated stems (participles, nominalizations, etc) with reduced inflection in other, non-characteristic combinations.

The category/function combinations in (3) and (4) are also loci of syntagmatic elaboration, patterns of government. A pattern of government is minimally the core arguments (subject, object, possessor) a given head can take, the cases these arguments appear in, if any, and the positions of these arguments relative to the head. The combinations in (3) and (4) are often associated with distinct patterns of government. In Germanic, for example, verbs in (4) govern subjects, with nominative or dative case, and may also govern direct objects, with accusative case, as well as oblique objects, with dative or genitive case. Nouns in (3) govern only possessors in the genitive case. Subjects and possessors precede their heads, while objects either precede or follow their heads. Syntagmatic elaboration, like paradigmatic elaboration, is maximal in

unmarked contexts and likely to be reduced in marked contexts.

In addition to the patterns of inflection and government in (3) and (4), there is a third type of distinctive inflection and government (Stassen 1997, ch. 14): the absence of inflection and government associated with locational adverbs in predicate function and adverbial function.

A strong hypothesis is that there are at most three models for inflection and government operative in a language: the *V model*, with verbal inflection and verbal government (v; v), the *N model*, with nominal inflection and nominal government (n; n), and the *L model*, with no inflection and no government (-; -), anchored in the combinations of (3), (4), and (6), respectively. And these models extend, through a process called take-over by Stassen, horizontally and vertically to other cells in Table 54.1.

Minimally, a language will use L inflection and L and V government, with V inflection, N inflection, and N government as successive elaborations. However, "new" patterns of inflection and government need not be wholly distinct from "older" patterns.

Nominal and verbal inflection may overlap. As Allen (1964), Seiler (1983), and Siewierska (1998), show, possessor agreement is often identical to either subject agreement or object agreement. There are also languages where there is identity between determiner inflection and either finiteness inflection or subject agreement. Nama is a case in point. And there are languages, such as Swedish, where nominal and verbal inflection, although categorically differentiated (nouns inflect for case, number, definiteness, and gender, verbs for voice and finiteness), have roughly the same set of suffixes as exponents (Kvist 1995).

Nominal and verbal government may also overlap. Nouns and verbs may govern the same cases, and their core arguments may be similarly positioned.

Sometimes, such overlaps seem to suggest a fundamental similarity of nouns and verbs. For example, in Eskimo languages, ergative case and genitive case are largely identical. Since possessor agreement and absolutive agreement are identical, as well, and core arguments of both nouns and verbs precede their heads, this has often been interpreted as indicative of a neutralization of the noun – verb distinction in Eskimo (Johns 1992, but cf. also Woodbury 1985).

6. Parts of speech as spread patterns

Since natural languages do not restrict the distribution of their lexical items to one prototypical use per item, the traditional notion of part of speech is best explicated in terms of characteristic **spreads** of lexical items over the cells in Table 54.1. The proposal to interpret parts of speech in this way was first made by Whorf (1945) and Hockett (1958, ch. 26), and has since been elaborated by Hengeveld (1992) and Anward, Moravcsik & Stassen (1997). Extensionally, a part of speech is a class of lexical items which share a pattern of spread. Intensionally, a part of speech is the pattern of spread shared by a class of lexical items.

For example, the English class of concrete nouns, exemplified by *stone*, is partially defined by the spread in (12).

(12)

stone occurs
 in unmarked form in [predicate; thing]
 with nominal inflection and government;
 in unmarked form in [argument; thing]
 with nominal inflection and government;
 in unmarked form in [argument modifier; thing]
 with no inflection and no government.
 in unmarked form in [predicate; event],
 with verbal inflection and government;
 in marked form in [argument; event]
 with nominal inflection and government;

The distinctive spread patterns of a particular language, its parts of speech, can be identified through an analytic reconstruction of the part-of-speech system of that language, comprising the steps detailed above, and summarized in (13):

(13) *Analytic Reconstruction of Part-of-speech Systems*

Primary lexicalization

Which of the highlighted category/function combinations in Table 1 are lexicalized?

What are the basic patterns of inflection and government in these combinations?

Secondary lexicalization

Which of the remaining category/function combinations in Table 1 are lexicalized?

Extension

How are lexical items extended from their lexicalization sites to other category/function combinations?

Take-over

How do patterns of inflection and government extend from their basic sites to lexical items in other category/function combinations?

In this interpretation, parts of speech are stable and coherent generalizations over spreads of individual lexical items, centered around one of the highlighted cells in Table 1 ([argument; thing], in the case of *stone*, for example). Such general patterns of spread serve as attractors in language acquisition and language change, and thus work to streamline vocabularies. However, since both competing generalizations and generalizations on different levels of abstraction may be operative in the process, there is no point in reifying such generalizations into entities which are then somehow "realized" by individual spreads.

Likewise, there is no point in taking the parts of speech of a given language to be instantiations of a universal set of parts of speech. Parts of speech are language-specific generalizations over language-specific spreads. And cross-linguistic generalizations are just that, generalizations over language-specific generalizations (see Dryer 1997: 116–119 for a short, but illuminating discussion of these points).

A typological inquiry into part-of-speech systems must start with the best inventory of semantic classes available, and relate them to phonological, morphological, and syntactic properties, as currently conceived, but progress means transcending the initial framework, turning up unexpected regularities, and, possibly, completely revising fundamental assumptions.

7. References

- A useful general bibliography of works on the typology of parts of speech, compiled by Frans Plank, can be found in *Linguistic Typology* 1. 185–192 (1997).
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