

102. Head-marking vs. dependent-marking languages

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1. Introduction

The head- and dependent-marking parameter is a morphological-structural parameter which allows languages to be classified according to their head-marking and dependent-marking characteristics. Phrases, clauses, and complex sentences are grammatical units which are assumed to be hierarchically organized as constituents consisting of elements functioning as heads and other elements functioning as their dependents. Dependency relations within constituents on all levels of grammar can be marked morphologically either on the head element or on the dependent element. The central hypothesis of the head- and dependent-marking parameter, originally developed and introduced by Johanna Nichols (1986) and further elaborated in Nichols (1992), is the idea that languages tend to mark dependency relations consistently either on the head element or on a dependent element of their respective constituents. This means that languages can be classified according to these two marking types – predominantly head-marking and predominantly dependent-marking – with a significant clustering around these polar types.

In addition, Nichols contends that these morphological-structural characteristics are typologically important grammatical features of a language, because they can be shown within her analytic framework to enter into many correlations with other typological features such as word order type, alignment type, and certain grammatical categories. Furthermore, it is hypothesized that the head- and dependent-marking characteristics are diachronically the most conservative and stable features of a language so that they can serve as a tool to generate reasonable and substantial hypotheses about the genetic and areal relatedness of a language or group of languages

reaching a time depth which transcends the limits of the traditional historical-comparative method.

The head- and dependent-marking parameter offers many ideas, claims and hypotheses relevant for linguistic typology, historical linguistics, grammaticalization theory, language contact, and grammatical theory. The implications for the different fields of linguistic research are far from being fully explored and understood. The innovative character of this concept is reflected in the reactions of the linguistic community; silence paired with skepticism prevailed in the beginning (e.g. Croft's influential book on language typology and universals did not even mention this concept; cf. Croft 1990). Some linguists began to integrate this concept in their research (e.g. Bresnan & Mchombo 1987, Van Valin 1987) and later, the reviews of Nichols' book (1992) were overwhelmingly positive (cf. Blake 1993, Haspelmath 1993, Dahl 1994, Niepokuj 1994). They collectively emphasized the new perspectives in linguistic research which were opened by the introduction and data-intensive typological exploitation of this concept. Although it is Nichols' merit to have demonstrated the importance of the head- and dependent-marking concept for linguistic typology, it was T. Milewski who originally had established this typological parameter (cf. Milewski 1950). Milewski distinguished between **concentric** versus **eccentric** languages which corresponds to Nichols' head- and dependent-marking classification. Languages were termed **concentric** by Milewski when they dominantly indicate the syntactic relation on the governing element of a constituent. Accordingly, languages were termed **eccentric** when they mark the existence of a syntactic relation on the governed element(s) of a constituent (see also Lehmann (1983) for a general discussion of the head- and dependent-marking concept with a different terminology and a brief mention of Milewski's concentric vs. eccentric typology).

Criticism was expressed by historical linguists about Nichols' diachronic research based on the head- and dependent-parameter (e.g. Greenberg 1993).

The following sections will provide an introduction into the basic notions of this parameter (§ 2.), and will give some illustrative examples for head- and dependent-mark-

ing patterns (§ 3.). In (§ 4.) problems and limitations regarding the cross-linguistic application of this parameter and the overall distribution of head- and dependent-marking patterns will be presented. The following two sections, (§§ 5.–6.), present some results of the correlation of head- and dependent-marking patterns with other already established typological parameters such as word order and alignment, and (§ 7.) will give some indications how this parameter can be relevant for historical and theoretical linguistics.

2. Basic notions

The head- and dependent-marking parameter is built on two theoretically independent concepts, **headedness** and **morphological marking**. The concept of **headedness** was developed and employed in different structuralist approaches to syntax. The framework of dependency grammar (cf. Tesnière 1966, Mel'čuk 1988, etc.) is, in particular, the theoretical background for Nichols' notion of **head**. Headedness is not directly or overtly given in the linguistic data, but can be determined by various independent criteria and operations (cf. e.g. Zwicky 1985, Corbett et al. 1994). The head of a given construction is "the word which determines the syntactic type of the entire constituent and hence the privileges of occurrence and syntactic distribution of the constituent. If there is any government (by which I mean requirement of one word in a particular grammatical function by another) within the constituent, it is the head that governs the dependent" (Nichols 1992: 46). The most important constituent types with their respective head and dependent relations which were chosen for the broad data-intensive typological study in Nichols (1986) and with some modifications in Nichols (1992) are shown in Table 1.

The other central concept is that of overt **morphological marking** of syntactic relations, i.e. an affix or some other morphological means signals the presence of a dependency relation and the kind of this relation either on the head or the dependent of a constituent. Nichols distinguishes three different ways in which morphological means indicate the kind of syntactic relation, but only two of them are relevant for the intended typological parameter. On the one hand, affixes may **index** certain properties of either the head or the dependent on the other corre-

Table 102.1: Constituent types and head/dependent relations

Constituent	Head	Dependent
Noun phrase	possessed noun	possessor
	noun	modifying adjective
Clause	adposition	object of adposition
	predicate/verb	arguments/adjuncts
Sentence	auxiliary verb	lexical/main verb
	main-clause predicate	subordinate clause

sponding constituent. For instance, the inflection of verbs in many Indo-European languages indexes the person/number categories of the subject (dependent) on the head of the clause (verb), and, similarly, the inflection of the attributive adjective in some Indo-European languages indexes gender/number categories of the head noun on the dependent (attributive adjective) of such a construction. This indexing function of morphology coincides broadly with what is traditionally called agreement.

The other way affixes may indicate the presence of a syntactic relation is by directly **coding** this relation. Ergative, nominative, accusative, and dative case forms directly code a syntactic relation such as subject, direct object and so on, of the (dependent) noun they are attached to. The same is true for the Indo-European verb inflection which signals that the dependent noun stands in a particular relation to the head (verb), namely in a subject relation.

The central criterion according to which the head- and dependent-marking parameter classifies languages is the locus of morphological marking of syntactic relations within a constituent. Morphological markers of various types – affixes, clitics, ablaut and other form changing mechanisms – can be located on the head word, the dependent word, on both or on neither. Constructions are **head-marking** if these markers are attached to the head word, they are **dependent-marking** if they are attached to the dependent word, and they are **double-marking** if markers are located on both head and dependent words of a construction. In order to further clarify

what is meant with head-marking and dependent-marking constructions, some illustrative examples will be given in the next section.

3. Some head-marking and dependent-marking patterns

On the phrase level, there are at least three different types of syntactic relations which are cross-linguistically significant enough to serve as a basis for comparison, the possessive construction, the noun plus attributive adjective NP, and the adpositional phrase.

A possessive construction is dependent-marking, if the noun or pronoun referring to the **possessor** is morphologically marked while the noun referring to the **possessum** ("thing possessed") remains unmarked. The possessum is generally assumed to be the head of a possessive construction. Compare the examples from German, a predominantly dependent-marking language, in (1 a–b). The head constituents in these and all the following examples are represented in bold letters.

- (1) (a) German
das Haus des Vater-s
 the.NOM house the.GEN father-GEN
 'father's house'
- (b) *sein Haus*
 3SG.POSS house
 'his house'

The possessor noun *Vater* 'father' in (1 a) is marked by a genitive case which identifies the kind of syntactic relation which holds between *Haus* 'house' and *Vater*. In (1 b) the possessor is referred to by a 3rd person pronoun which marks the possessive relation not by a case suffix but simply by its membership to the paradigm of possessive pronouns which are in opposition to other personal pronouns in German. In both examples, the head noun *Haus*, which refers to the possessum, remains unmarked.

Possessive constructions are head-marked, if the head noun – the possessum – bears the morphological marker indicating the possessive relation. Compare the examples (2 a–b) from Abkhaz, a Northwest Caucasian language which shows thorough head-marking characteristics.

- (2) (a) Abkhaz (Hewitt 1979: 116)
sarà sə-y'nə
 1SG 1SG-house
 'my house'

- (b) *à-č'k'an yə-y'nə*
 ART-boy 3SG-house
 'the boy's house'

The head noun *y'nə* 'house' in (2 a) and (2 b) is marked by a bound pronoun which – in this context – indicates the possessive relation and refers to the possessor of this relation. Similar ways to express possession can be found in Mayan languages and many North American Indian languages.

The differences between head-marking and dependent-marking adpositional phrases parallel the ones found in possessive constructions. The adposition is assumed to be the head of an adpositional phrase which governs its object noun or pronoun which, consequently, counts as the dependent of such a construction. Compare the examples in (3 a–b).

- (3) (a) Russian
s brat-om
 with brother-INSTR
 'with (my, one's) brother'
- (b) Tzutujil Mayan (Dayley 1985: 152)
r-umaal jar aachi
 3AG-cause the man
 'because of, by the man'

The prepositional phrase in (3 a) is dependent-marking, because the object noun which is governed by the preposition *s* 'with' receives the case marker required for this kind of syntactic relation. Other prepositions in Russian govern different cases. The marking type of this construction would be the same if the object noun were replaced by a pronoun. The adpositional phrase in (3 b) is head-marked, because the adposition – the head of the construction – is marked by a 3rd person bound pronoun which cross-references the object noun of the construction.

Noun phrases consisting of a head noun and a modifying adjective (dependent) are – if there is any relation marking morphology – preferably marked on the dependent. The adjective receives the morphological marker of the relation, and agrees in gender, number, or case with the governing noun. It is typologically very significant that it is difficult to find any example for an adjective plus noun pattern which is head-marked. This fact indicates that such noun phrases strongly prefer dependent-marking patterns which seems to be a trait of this constituent type itself. Shuswap, a Salish language of the Northwest Pacific coast may serve as an ex-

ample of this rare pattern. It has a special relative case prefix *t-* which is used to indicate the attributive relation on the head noun of the construction (cf. Kuipers 1974: 78).

The head-marked constructions in (2 a–b) and (3 b) have in common that the dependent nouns or pronouns which are cross-referenced, or indexed, on the respective head by a bound pronoun are optional, i. e. these constructions would be complete and perfect grammatical expressions, if the dependent nouns or pronouns were left out. This is not the case with the corresponding dependent-marked construction in (1 a–b) and (3 a). The constructions as such would be no longer existent, or would be simply ungrammatical, if the dependent nouns/pronouns were omitted.

Languages which show dependent-marking constructions on the clause-level usually have case marking systems. Nouns or pronouns representing the core arguments of the clause are the dependents of the verbal head of the clause. They are morphologically marked by case forms which indicate the presence of a dependency relation and, in addition, code the sort of syntactic relation between these constituents. The case marking of the core arguments is governed by the verbal head of the clause. Compare the example in (4) from Chechen, a Northeast Caucasian language of the Nakh group, which has strong dependent-marking characteristics.

- (4) Chechen (Nichols 1986: 61)
da:-s wo'a-na urs-Ø tü:xira
 father-ERG son-DAT knife-ABS struck
 'The father stabbed the son.' (lit. 'father struck son with knife')

All three nominal arguments in (4) are marked by different case forms – ergative, dative, and absolutive. The verbal head *tü:xira* 'struck' shows no marking of syntactic relations at all, which holds for the majority of verbs in Chechen. There is a minor group of verbs which have a morphological slot for prefixes which agree in gender and number with the absolutive marked noun. This is the only head-marking trait to be found in Chechen.

An example for a head-marking construction on the clause level is given in (5).

- (5) Abkhaz (Hewitt 1979: 36)
a-xác'a a-ph°ðs a-s°q°ð
 the-man the-woman the-book
Ø-l-y-te-yt'
 it-to.her-he-gave-FINITE
 'The man gave the woman the book.'

In Abkhaz, the verb has maximally three slots for bound pronouns which refer to the core arguments of a transitive clause. The bound pronouns index the syntactic relations of the clause. The type of syntactic relation is morphologically encoded by the order of pronominal affixes on the verb. Nouns in Abkhaz are generally caseless. They are cross-referenced by the bound pronouns on the verb according to person, number, and gender. Their syntactic status is very different from the one nouns have in dependent-marked clauses. Lexical NPs in Abkhaz are optional. They can be omitted and usually are omitted in discourse as long as the reference of the bound pronouns is recoverable for the addressee. This means that the person-marked finite verb in Abkhaz represents a complete and fully grammatical clause. The appositional status of NPs in Abkhaz can be found in many other non-European languages and may be viewed as a defining feature, among others, of polysynthetic languages. The so-called "one-word-sentence" in polysynthetic languages and their major structural difference compared to the familiar Indo-European languages was already observed by Frans Boas in his famous Introduction to the *Handbook of American Indian Languages* (Boas 1911).

4. Applicability and distribution

4.1. Other marking patterns

The head- vs. dependent-marking parameter is designed to classify all constructions which show a morphological marking of the dependency relation either on the head or on the dependent(s) of a constituent. Morphological marking includes all types of form changing of either the head word or the dependent words. Therefore, all grammatical constructions which employ alternative means such as juxtaposition, word order, free function words, and relation marking clitics whose host is neither the head nor the dependent word fall out of the head- and dependent-marking classification. Nearly every language shows one of these marking techniques either as a minor or as a major pattern on one of the different constituent levels. For instance, the expression of possession by juxtaposition or compounding can be found in various languages, compare the examples in (6 a–c).

(6) (a) Chitimacha (Swadesh 1946: 327)

'iš hana

I house

'my house'

(b) Thai (Hudak 1990: 770)

nǎŋsǔ dèk

book child

'the child's book'

(c) dèk sāam khon

child three classifier

'three children'

In Chitimacha, a now extinct language isolate of Louisiana, possessive relations are predominantly expressed by juxtaposition, with the possessor (dependent) preceding the possessum (head), no matter whether the possessor is expressed by a noun or a pronoun. There is no morphological marking of possessive or attributive relations at all. The same is true for Thai, a language of the Kam-Tai family in Southeast Asia. The possessive relation as well as the attribute relation (compare the examples in (6b-c)) are expressed by word order with the head noun always preceding the dependent(s). The possessive construction in (6b) would be the same if the dependent noun *dèk* 'child' were replaced by a pronoun. There is an alternative way to express (6b) with a function word *khǎŋ* between possessum and possessor, which roughly corresponds to English *of*. In a strict sense, the possessive constructions with *khǎŋ* 'of' can not be considered as dependent-marking because it is not a morphological marker attached to the dependent word. The same problem arises with English *of* in *the house of the ancestors* where *of* cannot be counted as a morphological dependent-marker.

On the clause level, a similar problem emerges for the application of the head- and dependent-marking parameter with respect to relation-marking clitics – pronominal clitics – which are located in a special syntactic position not necessarily close to the head or in the preferred position of the nominal dependent(s). These pronominal clitics are dependents and show case distinctions, which qualifies them for the classification as dependent-marking. On the other hand, pronominal clitics tend to cluster in a rigid order in second position often directly preceding the main verb which brings them close to a head-marking construction, although they are not yet pronominal affixes. The peculiarities of pronominal clitics – e.g. in French,

Serbo-Croatian, or Uto-Aztecan languages – cause some uncertainty in the application of the head- and dependent-parameter, which leads Nichols to introduce a third category besides head-marking and dependent-marking, namely **free** or **floated** marking (cf. Nichols 1992: 55–57). This third category is a kind of "waste basket" for all constructions involving pronominal clitics and relation marking particles which cannot be classified as head- or dependent-marking even if these criteria are applied in a less strict way.

Further problems with respect to the application of the head- and dependent-marking parameter cannot – because of lack of space – be treated in detail here, but should at least be mentioned briefly.

One of the points of departure of the whole head- and dependent-marking typology is the assumption that constituent structures on the phrase or clause level are basically the same but realized in a variety of different ways. This background assumption seems to be natural from the point of view of European languages which are dominantly dependent-marking. It turns out, however, that it is sometimes hard to identify adpositional phrases particularly in strong head-marking languages. The reason is that these languages lack European-style adpositions but employ relational nouns which are inflected with pronouns belonging to the possessive or object series of bound pronouns. The whole construction looks then more like a possessive construction (cf. Nichols 1992: 58). Other languages – particularly in New Guinea – use so-called **serial verbs** instead of adpositions, so that the resulting construction closely resembles a verbal phrase.

A similar problem arises with respect to attributive adjectives. Many languages – this is not restricted to radically head-marking languages – lack this lexical category, but express adjectival concepts by means of **inactive** or **stative verbs** or by nouns. The resulting attributive constructions look then more like simple predications in the first case, and like possessive constructions in the latter case.

Both problems indicate that the underlying model of the clause as a hierarchical structure of constituents with clearly identifiable dependency relations is not – especially with respect to head-marking languages – a firm ground for cross-linguistic comparison as it was expected. It seems to be the case that not all syntactic relations which were chosen as a universal set of dependency rela-

tions for cross-linguistic comparison in this study do occur in all languages. The problems with constituent structure and dependency relations as well as with their respective morphological marking are much more complicated with respect to the sentence level, i. e. the relations between main and subordinate clauses, relative clauses, causative constructions etc. Therefore, head-marking and dependent-marking strategies on the sentence level are not systematically surveyed in Nichols' typology.

4.2. Cross-linguistic distribution of head- and dependent-marking patterns

Nichols has examined the typological distributions of head- and dependent-marking patterns in a huge number of sample languages, 60 languages in her initial study (cf. Nichols 1986) and 174 languages in the book (cf. Nichols 1992), which were chosen according to their geographical distribution (**areas, macro-areas**) and their genetic affiliation (**families, stocks**; for details of sampling cf. Nichols 1992: Ch 1.4.). Some of the results can be summarized as follows:

(a) Head- and dependent-marking features in each of the examined constituent types (i. e. the possessive NP, the adjective plus noun NP, the adpositional phrase, the clause, and the sum of possessive NP + adjective plus noun NP + clause) have approximately equal frequencies throughout the whole sample which means that there is no universally preferred marking type. But, with respect to areas, the head-marking patterns are preferred over dependent-marking patterns throughout the New World (North America, Mesoamerica, South America), while dependent-marking patterns are preferred in the Old World (Africa, Ancient Near East, Northern Eurasia, South and Southeast Asia). There is no significant preference in the Pacific Area (Oceania, New Guinea, Australia).
 (b) The classification of languages according to their overall head-marking and dependent-marking properties – the sum of the marking properties of the single constituents in a particular language – reveals significant peaks around the two polar types, i. e. dominantly head-marking and dominantly dependent-marking. This is important evidence for the hypothesis that languages tend to be consistent with respect to the marking patterns they choose (cf. Nichols 1986: 70; 1992: 72 f.). In addition, Nichols makes the observation that

the clustering of languages around the strong head-marking type is more compact than the clustering of languages around the dependent-marking type. The languages between the extreme types show to various degrees **split marking patterns** or **double marking patterns**. Double marking patterns means that a certain construction is head- and dependent-marked at the same time; e. g. pronominal cross-referencing of nominal arguments on the verbal head plus case marking of the nouns at the same time. Split marking means that a certain marking type is not employed throughout a certain constituent type; e. g. an adpositional phrase may be head-marked if the object of the adposition is a pronoun, but dependent-marked with a noun.

(c) Two implicational statements can be formulated regarding the distribution of head- and dependent-marked patterns across the different constituent levels within a language:

(1) "If a language has major, salient head-marking morphology anywhere, it will have it at the clause level," and (2) "If a language has dependent-marking morphology at the clause level, it will have it at the phrase level." (Nichols 1986: 75).

(d) Many split-marking phenomena in the examined languages have to do with the different behavior of nouns and pronouns. There is a clear preference for possessive constructions and adpositional phrases to be head-marked if the respective dependents (i. e. possessor, object of adposition) are pronouns, while nouns show preferably dependent-marking patterns.

5. Correlations with other typological parameters

The distribution of head- and dependent-marking patterns shows some significant correlations with other typological parameters such as **word order types** (→ Art. 64) and **alignment types** which have already been established as important syntactic features of languages in the literature.

In relational typology, three major alignment types such as accusative, ergative, and stative-active are distinguished according to the marking patterns of the core arguments of a clause. Accusative alignment means that the transitive object/undergoer receives a special marking and therefore contrasts with the transitive subject/actor which is marked the same way as the intransitive subject, often by

a nominative case. The accusative marking pattern, as well as the other alignment types, can be identified on various parts of speech such as nouns, pronouns, and verbs. Languages can employ distinct patterns, e.g. with nouns and pronouns, which results in the well-known split-marking systems such as split ergativity (cf. Silverstein 1976, DeLancey 1981). The accusative alignment seems to be the most frequent and unmarked type which is also reflected with respect to the distribution of head- and dependent-marking types. The numbers of head-marking, double-marking, and dependent-marking languages among the languages with dominantly accusative alignment are approximately the same (cf. Nichols 1992: 101). This means that accusative alignment is equally possible with head-marking, double-marking, and dependent-marking languages.

The correlation with ergative alignment, however, reveals a remarkable preference for dependent-marking patterns (cf. Nichols 1992: 101). Ergative alignment means that the subject/actor of a transitive clause is marked differently and contrasts with the transitive object/undergoer and intransitive subject which are both marked the same way, usually by an absolutive case. The majority of ergative languages in Nichols' sample are dependent-marking, which means that ergative alignment strongly prefers case marking.

Head-marking, on the other hand, is strongly associated with the stative-active alignment type (cf. Nichols 1992: 101). Stative-active alignment means that there is a marking split with respect to the intransitive subject. The intransitive subject, which is semantically the instigator of an action, is coded the same way as the subject/actor of a transitive clause, and the transitive object/undergoer is treated the same way as the intransitive subject which is involved in an uncontrolled state or process. The semantically determined coding of the core arguments of an intransitive or transitive clause in an active language is usually coupled with a rigid verb classification. The fact that these languages prefer head-marking patterns, i.e. the verb as the locus of the main syntactic information, is therefore functionally well motivated. There are, however, also dependent-marking or double-marking languages which exhibit stative-active coding patterns (e.g. Batsbi, Northeast Caucasian; cf. Holisky 1987).

The results of the statistical correlation of the head-, double-, and dependent-marking

languages with the various word order types such as verb-initial, verb-medial, and verb-final types are less significant and convincing than the results of the correlation with the alignment types. Nevertheless, some interesting trends can be identified. First of all, SOV word order is by far the most dominant and prevailing basic word order type on nearly all continents (for some critical remarks regarding the assignment of word order types to Australian languages in Nichols' sample, see Blake 1993: 52). The data in Nichols (1992: 105 f.) show first of all the tendency for verb-medial and verb-final word order types to prefer dependent-marking patterns. Secondly the number of verb-initial languages is especially high for head-marking languages, while there are only very few verb-initial dependent-marking languages.

Nichols offers some functional explanations for the association of verb-initial word order with head-marking and the fact that the lack of basic word order is frequently found in head-marking languages. The lack of a basic word order is motivated by the appositional status of lexical NPs in strong head-marking languages. The grammaticalization of verb-initial order is explained with the principle that the main syntactic relations of a clause should be set up at the beginning of the clause. Head-marking languages indicate these relations on the verb, which explains the clustering of head-marking with the verb-initial order type. The same principle could motivate the preference of dependent-marking languages for verb-medial and verb-final order types. In these languages, the principal syntactic relations are marked on the noun or pronoun arguments of the clause which then tend to precede the verb (cf. Nichols 1992: 108 f.).

6. Correlations with grammatical categories

The most important result of the statistical correlation of various grammatical categories such as **inalienable possession**, **inclusive/exclusive** distinctions in the 1st person plural pronouns, **gender**, **noun classes**, **plural neutralization**, **non-finite** verb forms, and the use of **adpositions** with the various typological parameters discussed above (head- and dependent-marking, word order and alignment) is that **geography**, i.e. the geographical distribution of the categories over large areas, and head- and dependent-marking are the main limiting

and predicting factors for the occurrence of these categories.

The occurrence of a distinction, for instance, between alienable and inalienable possession is exclusively bound to the head-marking patterns, i. e. either the language belongs to the overall head-marking type or there is a split-marking pattern, which always entails that the inalienable possession is represented by the head-marking construction. It seems that it is not possible for this category to be expressed by two different case forms, e. g. two different genitive cases. The often stated iconic motivation for the expression of inalienable possession (see e. g. Haiman 1980) seems to be secondary. The other predicting factor is geographical distribution. But this is secondary too. The almost complete lack of the alienable/inalienable distinctions in the Old World and the increasing frequency of occurrence of this distinction if one moves east to the New World seems to be an epiphenomenon of the general cline between the Old World and the New World with respect to the frequency of head-marking language types. For the other grammatical categories mentioned above, geographical distribution over large areas is the major predicting factor. If some typological parameter plays a role regarding the distribution then it is the head- and dependent-marking parameter, but only as a secondary factor. The inclusive/exclusive distinction is solely determined by geography.

7. Relevance for historical and theoretical linguistics

Head- and dependent-marking patterns are comparatively stable structural features of a language and language family. Language families tend to be very consistent with respect to their morphological marking type (head-, dependent-, double-, and split-marking). This means that the head- and dependent-marking parameter can be used as a hypothesis-generating tool in historical linguistics with respect to the relatedness of languages. It is not possible to state positively the genetic relatedness of adjacent languages, but, if there are sharp contrasts with respect to the morphological marking type between a particular language and the languages within a proposed language family, this can be taken as negative evidence for the assumed genetic relationship. Migration of people – i. e. non-relatedness – may be the reason for

this otherwise unlikely contrast. If there are significant deviations from the average morphological marking type of a language family, this is due to areal influences (cf. Nichols 1986: 98).

The stability of the overall morphological marking type does not mean that there are no historical changes from one marking pattern to the other. With respect to such historical processes, Nichols formulates two principles which are highly relevant to grammaticalization theory. The first principle is that of **headward migration**, which allows a clear prediction about the historical behavior of function words, particles, and affixal morphology and gives an idea of how head-marking patterns emerge: "If any adposition or piece of affixal morphology moves, it will go from the dependent to the head of the constituent, not vice versa" (Nichols 1986: 84). The other principle is that of **reduction** – i. e. the reduction of whole words to affixes via cliticization – and **boundary shift**. Reduction is an analog of headward migration in that the original dependents get cliticized and eventually become markers of their head. Boundary shift means that constituents merge in the course of grammaticalization and that their former constituent boundaries disappear or move elsewhere; e. g. in the historical process of the development of case affixes, postpositions often are reduced and finally become case markers on their former dependent; the constituent boundary between the former constituents was collapsed with the constituent boundary of the NP. It is only via boundary shift that new dependent-marking morphology emerges (cf. Nichols 1986: 88).

One of the main merits of the introduction of the head- vs. dependent-marking parameter is to have brought the already well-known structural features of head-marking languages into a broad comparative perspective with the more familiar structural features of dependent-marking languages. It has become increasingly clear that grammatical theories which have based their central theoretical assumptions on the features of dependent-marking languages, e. g. the concept of government, fail to give satisfying accounts of head-marking languages (cf. Van Valin 1987).

8. References

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