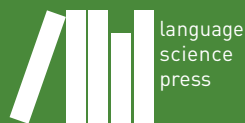# Adjective Attribution

Michael Rießler

DRAFT

of Monday 1st December, 2014, 15:27

language science press

Adjective Attribution

This book is the first typological study of adjective attribution marking. Its focus lies on Northern Eurasia, although it covers many more languages and presents an ontology of morphosyntactic categories relevant to noun phrase structure in general. Beside treating synchronic data, the study contributes to historical linguistics by reconstructing the origin of new types specifically in the language contact area between the Indo-European and Uralic families.

DRAFT

of Monday 1st December, 2014, 15:27

9 783944 675497

Michael Rießler

Adjective Attribution

Studies in Diversity Linguistics

In this series:

1. Handschuh, Corinna. A typology of marked-S languages

2. Rießler, Michael. Adjective attribution

3. Klamer, Marian (ed.). The Alor-Pantar languages: History and typology

4. Berghäll, Liisa. A grammar of Mauwake (Papua New Guinea)

5. Wilbur, Joshua. A grammar of Pite Saami

Adjective Attribution

Michael Rießler

Freie Universität Berlin

за най-любимите ми Алма, Ива и Кристина

Preface

Acknowledgements

List of abbreviations and notational conventions

Morphological glosses

The following list includes only abbreviations for glossing of linguistic examples not defined by the Leipzig Glossing Rules.[1]

ABESS	abessive
ADJZ	adjectivizer, adjectivization
AGR	(any kind of) agreement
ATTR	or (attr.); attribution, attributive
ANR	action nominal
COMPAR	comparative (adjective derivation)
CONTR	contrastive focus
CRS	currently relevant state
DERIV	derivative, derivation (unspecified)
DIM	diminutive
ESS	essive
HUM	human (gender)
ILL	illative
INFL	(any) inflection
MOD	modification
NAR	narrative (case)
NONFUT	non-future
NONHUM	non-human (gender)
PFCT	perfective (verb derivation)
PRED	or (pred.); predication, predicative
PREPOS	prepositional
REAL	realis
STAT	stative (verb derivation)
SUPER	superlative
UTR	utrum, common (gender)

Syntactic classes and phrase constituents

A	adjective
AdP	adpositional phrase
AP	adjective phrase

---

[1] http://www.eva.mpg.de/lingua/resources/glossing-rules/ 16.02.2014

Draft of Monday 1ˢᵗ December, 2014, 15:27

ART	(attributive) article
CASE	case (clitic)
DEF	definite article
Deg	degree word
HEAD	phrase head
INDEF	indefinite article
N	noun
NP	noun phrase
PSD	possessed (head in possessive noun phrase)
PSR	possessor (dependent in possessive noun phrase)
Rel	relative clause
V	verb

Abbreviations for cardinal directions

C	Central	S	South(ern)
E	East(ern)	SE	South-East(ern)
N	North(ern)	SW	South-West(ern)
NE	North-East(ern)	W	West(ern)
NW	North-West(ern)		

Other symbols

The following symbols are used for the illustration of linguistic changes.

~	variant
<	sbj]borrowingborrowing
←	sbj]derivationderivation or other synchronic process
⇐	sbj]grammaticalizationgrammaticalization[2]or other diachronic process

---

[2] Note that the term *grammaticalization* is used for different types of linguistic changes leading to re-analysis of a given construction's grammatical meaning. A prototypical instance in this rather broad sense of grammaticalization is the morphologization of a formerly lexical morpheme to a grammatical morpheme, as the development of definite markers from anaphoric pronouns in lan]Germanic languages|fn*Germanic languages, e.g. lan]English|fn*English *the (house)* (*the* ⇐ lan]Old English|fn*Old English *þæt*) and lan]Swedish|fn*Swedish *(hus)-et* (*-et* ⇐ lan]Old Norse|fn*Old Norse *hið*).

Contents

Part I

Preliminaries

1 Introduction

Aim

The aim of this investigation is to typologize adjective attribution marking devices in the languages of northern Eurasia. Agreement and construct state marking are commonly known morphological devices for the licensing of adjectival modifiers; an example of a purely syntactic device is juxtaposition.

The main parts of this thesis include an ontological classification of all attested devices in the geographic area of investigation and a survey of adjective attribution marking devices occurring across the northern Eurasian language families. Finally, several attested scenarios for the evolution of adjective attribution marking devices in languages of northern Eurasia are discussed.

Question

The most central questions dealt with in this investigation regard the formal licensing of the syntactic relation between a head noun and its adjectival dependent inside a noun phrase:

- What syntactic, morphological or other adjective attribution marking devices are available in languages?

- How can these devices be systematically described and typologized?

- How is the occurrence of the different types distributed geographically?

- How does attribution marking arise and diffuse across languages?

Method

The present study is the result of empirical research based on data from grammatical descriptions on the investigated languages. It follows a data-driven, bottom-up and framework-neutral approach (cf. Haspelmath 2008) and also the method of "Autotypology" following Bickel & Nichols (2002) and Bickel (2007).

The method of sampling and mapping of data is inspired by the *Autotyp*[1] and *Eurotyp*[2] research programs and the *WALS* project.[3] The approach presented here is closer to *Eurotyp* than to *WALS* or *Autotyp* in coding as many different genera from the geographic area of investigation as possible.

Content

The study is divided into four main parts. In "Theoretical preliminaries", a few basic comparative concepts relevant to a framework-neutral description of a noun phrase and its constituents are introduced. This part also discusses the syntax-morphology interface in noun-phrase structure which is of central importance for the present study.

The part "Typology" presents a general ontology of adjective attribution marking devices based on data from northern Eurasian and other languages.

In the part "Synchrony", a synchronic-typological survey of noun phrase structure with attributive adjectives in northern Eurasia is presented and exemplified with data from all genera of the area.

The last main part "Diachrony" is devoted to the evolution of adjective attribution marking devices. It describes several different paths of evolving and abolishing adjective attribution marking devices in northern Eurasian languages.

---

[1] Cf. http://www.spw.uzh.ch/autotyp/ 16.02.2014

[2] Cf. http://www.degruyter.com/view/serial/16329 16.02.2014

[3] Cf. http://wals.info 16.02.2014

Nichols,
    Johanna
Head-
    marking
    and
    dependent-
    marking
    gram-
    mars@*Head-
    marking
    and
    dependent-
    marking
    gram-
    mars*

2 Noun phrases and adjectival modifiers

2.1 Noun phrases

A noun phrase is a referential syntactic unit which can serve as subject, object or oblique argument of a verb or as predicative complement of a nominal sentence. Furthermore, a noun phrase can be used in adverbial and adnominal functions. According to common syntactic models, the head determines the category of the phrase and governs the dependent constituent(s) in the phrase (cf. Nichols 1986: 57). Consequently, the head of a noun phrase is a noun (or a pronoun). Dependent constituents in noun phrases, also called "attributes", narrow the denotation, i.e. modify the head noun descriptively. Typical modifiers in noun phrases are nouns (or noun phrases), adjectives (or adjective phrases), adpositions (or adpositional phrases) and relative clauses, as in the following example.[1]

(1) [NP [PSR *her*] [AP *brand new*] *house* [AdP *over there*] [Rel *which is big*]]

Noun phrases can thus contain simple modifiers, like nouns or adjectives, or more complex types of modifiers which are complex phrases themselves: for instance (possessor) noun phrases (*my*), adjective phrases (*brand new*), adpositional phrases (*in the village*) or relative clauses (*which was expensive*).

2.2 Adjectival modifiers

This book presents a cross-linguistic comparison of attributive adjectives. It investigates the syntactic and morphosyntactic behavior of adjectives inside noun phrases, in particular how they are formally licensed as dependent constituents in noun phrases.

The notion "adjective" needs some clarification because adjectives do not constitute a universal syntactic category. Whereas in some languages adjectives form a distinct word class, in other languages adjectives may not be clearly distinguishable from other parts of speech and constitute a flexible category together

---

[1] Possible hierarchies of constituents inside this noun phrase are ignored in this illustrating example.

with nouns or with verbs. In a third group of languages, adjectives do not exist et all.

■ For the survey of languages considered in this investigation, the term *adjective* had thus to be defined in a purely semantic sense, as words with a lexical meaning referring to properties or qualities such as 'high', 'beautiful', 'red', etc. "Qualifying modifiers" (Rijkhoff 2002: 100, elsewhere) in this broad sense are all lexical elements specifying properties of their referents. This definition excludes possessive pronouns, demonstratives, numerals, and words meaning 'other', all of which may behave syntactically like adjectival modifiers in several languages. On the other hand, the semantic definition of adjectives includes adjectival nouns and adjectival verbs (cf. "nouny" and "verby" adjectives in Wetzer (1996: 25–34, elsewhere)) and even qualifying modifiers which are true verbs or true nouns in some languages.

Even though adjectives do not constitute a universal syntactic category, almost all languages seem to exhibit some type of modifier construction in the noun phrase to specify qualitative properties. Hixkaryanalan]Hixkaryana, a Carib language spoken in Brazil, however, has been mentioned as a counterexample because qualitative properties are only expressed in predicative constructions (Derbyshire 1979: 37, 131; Rijkhoff 2002: 138). If a language does not exhibit a

Table 2.1: Parts-of-speech systems (based on Hengeveld, Rijkhoff & Siewierska 2004)

Type 1	(Flexible)	V / N / A		
Type 2	(Flexible)	V	N / A	
Type 3	(Differentiated)	V	N	A
Type 4	(Rigid)	V	N	
Type 5	(Rigid)	V		

distinct class of adjectives, inherent properties of the referent are most often expressed by other lexical means, for example by a relative clause (headed by a finite stative or descriptive verb) used as an adnominal modifier or by a qualifying noun phrase (headed by an abstract, property marking noun) as adnominal modifiers (cf. Rijkhoff 2002: 100).

Similar to Hengeveld, Rijkhoff & Siewierska (2004), the present study is based on the characterization of adjectives as semantic predicates which can be used as modifiers of nouns without further (derivational) operations. A typology of parts-of-speech systems is illustrated in Table 2.1.

In the "flexible" language types 1–2 in Table 2.1, certain classes of lexemes can occur in more than one function (as verbs/nouns/adjectives in Type 1 or as nouns/adjectives in Type 2). In the "differentiated" type of languages, on the other hand, the various classes of lexemes are strictly divided according to their function and constitute a tripartite system of lexeme classes with verbs/nouns/-adjectives (Type 3). The "rigid" types of languages exhibit either a bipartite system with verbs/nouns (Type 4) or a system exhibiting only one class of lexemes: verbs (Type 5).[2]

Most northern Eurasian languages belong to a type of language which exhibits a distinct class of adjectives, whether flexible or rigid (and whether this class is open or closed and counts only very few lexemes). Languages spoken on the European subcontinent predominantly belong to Type 3 and exhibit adjectives as a distinct major class. Most lan]IndoeuropeanIndoeuropean languages of northern Eurasia belong to this type, but also Basquelan]Basque, the Uraliclan]Uralic languages of Europe and most languages belonging to one of the three Caucasianlan]Caucasian families.

Type 2 languages with a flexible class of "noun-adjectives" are also well represented in northern Eurasia. In practically all Mongoliclan]Mongolic, Tungusiclan]Tungusic and Turkiclan]Turkic languages, for example, there is usually no sharp distinction between adjectives and nouns (Rijkhoff 2002: 122–123; Poppe 1964: 9).

Type 4 languages lacking a flexible or distinct class of adjectives are represented, for example, by Ainulan]Ainu, Koreanlan]Korean and Nivkhlan]Nivkh. In these languages, verbs are normally employed as qualifying adnominal modifiers.

Languages of Type 1 (with a flexible class of "verb-adjectives") or 5 (exhibiting exclusively verbs) are not represented in the northern Eurasian area.

2.3 Syntax of adjectival modification

The present book deals with noun phrases in which adjectives occur as attributes. Predicative adjectives are not dealt with systematically, [3] although in some cases attributive and predicative adjectives will be contrasted to each other, especially

---

[2] The classification of Hengeveld, Rijkhoff & Siewierska (2004) has seven types because the authors also include manner adverbs as a distinct class. According to the original classification, Type 3 in Table 2.1 should thus be divided further yielding the three subtypes V–N–A/Adv (flexible), V–N–A–Adv (rigid) and V–N–A (rigid).

[3] A typology of adjective predication is presented by Wetzer (1996).

Martin likes "Indo-European" better, but I prefer "Indoeuropean" (similar to "Finnougric", which is most commonly used among Uralists)

[
[
[
[
[
[

if the languages in question code them differently. The main question to answer with my investigation is how different languages license the syntactic position of adjectival modifiers inside noun phrases, i.e. what grammatical devices are used for the encoding of the syntactic relationship between an adjectival dependent and its head noun.

2.3.1 Noun phrase internal syntax

The syntactic relationship between noun phrase constituents can be encoded by means of purely syntactic structures, i.e. simply stringing together constituents, or by adding syntactic or morphological devices.

The adjective can take up the modifier slot in the noun phrase without further syntactic or morphological marking taking place inside the noun phrase. Such syntactic licensing means that the relationship between dependent and head is encoded purely structurally in terms of designated positions. An instance of purely syntactic licensing are noun phrases with adjectival modifiers in lan]EnglishEnglish. The adjective obligatorily precedes the noun but is not marked otherwise.

(2) Englishlan]English (Indoeuropean; own knowledge)
     large houses

An example of a syntactic device is the dummy head *one* in lan]EnglishEnglish which occurs obligatorily in noun phrases without lexical heads.

(3) Englishlan]English (Indoeuropean; own knowledge)

    a. *a   large one*
        INDEF large $_{\text{HEAD}}$:SG
        'a large one'

    b. *large ones*
        large $_{\text{HEAD}}$:PL
        'large ones'

The dummy head *one* is a noun phrase constituent itself, hence a true syntactic attribution marking device, even though morphology is also involved in this syntactic structure because *one* is inflected for number. The difference between covert and overt syntactic attribution marking devices can also be illustrated with different relative clauses in lan]EnglishEnglish.

(4) Englishlan]English (Indoeuropean; own knowledge)

    a. [NP *the house* [REL *I built*]] [

    b. [NP *the house* [REL *that I built*]] [

        i. [NP *the man* [REL *who*nom *built a house*]] [

        ii. [NP *the man* [REL *whose*gen *house was built*]] [

Whereas (4a) exemplifies a covert syntactic device because the relative clause is simply juxtaposed, (4b) is an overt syntactic device because the the relative clause is marked by an invariable formative. In (4b-i+4b-ii), the relativizer *who* is also an overt syntactic device. But in the marking of this relative clause construction, morphology is involved too because the relativizer inflects for case according to the semantic role of the relativized noun.

    Morphological attribution marking devices are either overt (linear or else) morphemes bound to constituents or covert morphological processes, like incorporation.[4] A prototypical instance of a morphological adjective attribution marking device is agreement inflection, as in lan]GermanGerman.

(5)   Germanlan]German (Indoeuropean; own knowledge)
    groß-e Häus-er
    big-PL house-PL
    'large houses'

Agreement inflection of attributive adjectives in lan]GermanGerman is a morphological device, it exists only because syntax requires it, hence a morphosyntactic device. Other morphological marking in lan]GermanGerman occurs on syntactic units or on constituents of syntactic units without belonging to morphosyntax. For instance, the plural inflection on the head noun (*Häus-er*) or the inflectional circumfix yielding a participle (*ge-bau-t*) in (6) belongs exclusively to the level of (inflectional and derivational) morphology but not to syntax.

(6)   Germanlan]German (Indoeuropean; own knowledge)
    ge-bau-t-e   *Häus-er*
    PTCP-**build**-PTCP-PL house-PL
    'built houses'

Note that adjectives have been characterized as predicates which can be used as modifiers of nouns without further (derivational) operations. Consequently, the

---

[4] Morphological attribution marking devices can also attach to complex constituents, as the possessor marking clitics in lan]English|fn*English or Swedishlan]Swedish|fn* which attach to noun phrases: Swedishlan]Swedish|fn* [NP[NP kungen]=s rike] the_king=POSS empire 'the empire of the king', [NP[NP kungen av Sverige]=s rike] the_king of Sweden=POSS empire 'the empire of the King of Sweden'.

[
[
[

lan]GermanGerman participle stem *gebaut* (← *bauen + ge- ... -t*) is an adjective in this broad sense. Syntactically, the participle behaves like a true adjective and takes similar attribution marking. The attribution marking device (i.e. the agreement inflection) attaches to the participle stem as such (marked with parentheses in 6). The participle inflection of the verb root *bau-* yielding this new stem does not belong to the sphere of syntax. Similarly, category-changing derivational morphology in other languages yielding, for example, a stative verb or a participle function, is not considered to be morphological licensing of adjectival modification.
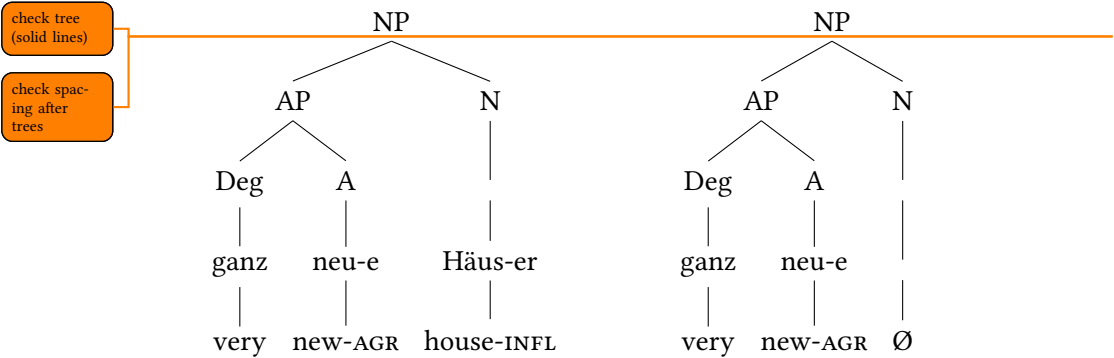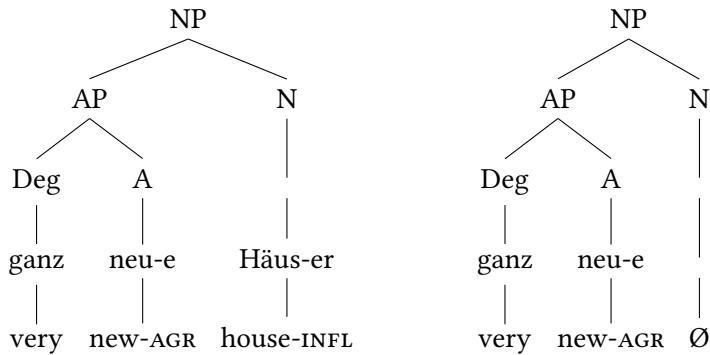
2.3.2 Headless noun phrases

Adjectives as well as various other modifiers can also occur in noun phrases without a noun. Normally, this is the case with adjectives in elliptical constructions or adjectives which are otherwise substantivized. In many languages, noun phrases with and without an overtly expressed head noun exhibit a similar phrase structure, as in the following examples from lan]GermanGerman.

(7)   Germanlan]German (Indoeuropean; own knowledge)

a. *ganz neue Häuser*   b. *ganz neue* (viz. *Häuser*)

```
        NP                              NP
       /  \                            /  \
     AP     N                        AP     N
    /  \    |                       /  \    |
  Deg   A   |                     Deg   A   |
   |    |   |                      |    |   |
 ganz neu-e Häus-er              ganz neu-e  |
   |    |     |                    |    |    |
  very new-AGR house-INFL        very new-AGR Ø
```

The syntactic structure of the two examples in (7) is principally identical except for the missing head noun 'house' with its morphological plural marking in the second structure. The attributive adjective 'new' is marked for the same morphosyntactic agreement features in both examples. Even though the adjective in the headless phrase is semantically substantivized and used referentially, it is still syntactically the modifier of the (ellipted) noun 'house'. The syntactic status of the modifier as head of an adjective phrase is indicated by its ability to take dependents, such as the degree word 'very'. lan]GermanGerman thus allows the syntactic head position to remain empty in elliptical constructions.

In other languages, accepting an empty head position in the (elliptical) noun phrase seems less straightforward. In Kildinlan]Saamic, Kildin Saami, for example, nouns and adjectives share identical inflection paradigms. As modifiers of nouns, however, adjectives are not inflected but are simply juxtaposed,[5] as in (8a) and (8b). Only when attributive adjectives occur in elliptical noun phrases are they inflected identically to nouns, as in (8c) and (8d).[6]

(8)   Saamic, Kildinlan]Saamic, Kildin (Uralic; own knowledge)

   a. *čofta odt pērrht*
       very new house(NOM:SG)

       'a very new house'

   b. *čofta odt pērht-es't*
   very new house-LOC:SG

       'in a very new house'

---

[5] This is true only for one class of adjectives. Other adjective classes show different morphosyntactic behavior, see §?? below.

[6] The stem alternation in the adjective *odt : od-* is due to a regular morpho-phonological process.

[
[
[
[
[
[
[

    c. *čofta odt*   (viz. *pērrht*)
       very new(NOM:SG)
       'a very new one'

    d. *čofta od-es't*   (viz. *pērht-es't*)
       very new-LOC:SG
       'in a very new one'

If the elliptical construction in Kildinlan]Saamic, Kildin Saami is analyzed as having an empty syntactic head position, as in lan]GermanGerman, an explanation for the different behavior of the (nominal) case inflection is needed. Unlike in lan]GermanGerman, where (nominal) inflection is always bound to the noun, inflection in Kildinlan]Saamic, Kildin Saami can occur bound to nouns or adjectives. Case marking in Kildinlan]Saamic, Kildin Saami could thus be analyzed as clitic and bound to the whole noun phrase and hence showing up on the rightmost phrase constituent.

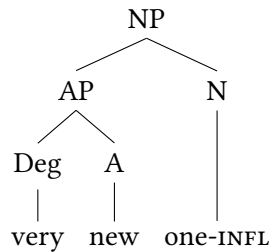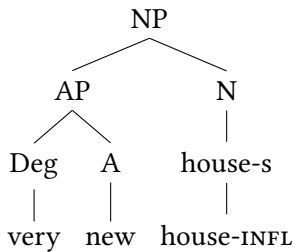(9)   Saamic, Kildinlan]Saamic, Kildin (Uralic; own knowledge)
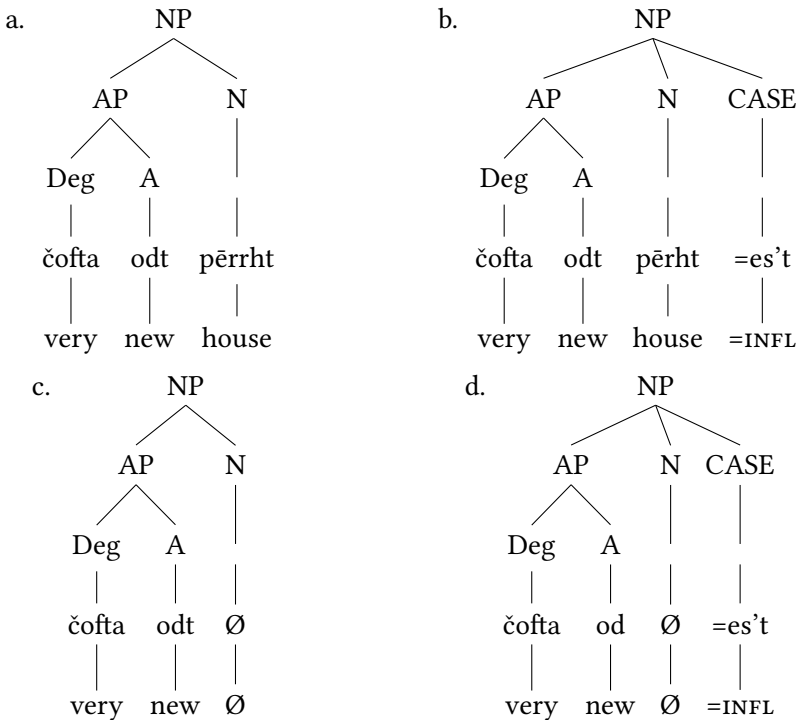
Another type of language in which elliptical noun phrases behave differently is exemplified by lan]EnglishEnglish. In elliptic constructions, attributive adjec-

tives are obligatorily marked with the marker *one*. This marker is exclusively used in headless noun phrases with adjectival (and some other) modifiers. It never occurs if the head noun is overtly expressed.

(10) Englishlan]English (Indoeuropean; own knowledge)

a. very new houses   b. very new ones (viz. houses)

Being a grammatical word, hence a constituent in the phrase structure, the marker■ *one* in lan]EnglishEnglish is sometimes described as "dummy head" (cf., e.g. Rijkhoff 2002: 23) replacing the noun at the syntactic head position. Consequently, it could be argued that the syntactic head position is never empty in lan]EnglishEnglish■

2.3.3 Appositional modification

Apposition[7] is commonly described as a sequence of two (or more) co-referential constituents on the same syntactic level and hence with the same syntactic function, as in the following expression.

(11) $(_{np}[_{NP}$ *Alma and Iva*$][_{NP}$ *my daughters*$])$ *are in this picture.*

Syntactically, the two independent noun phrases *Alma and Iva, my daughters* together serve as one argument phrase in (11).[8] In other words, apposition can be defined as a single semantic phrase which consists of several independent syntactic phrases which together serve one syntactic function.

Appositional modification differs from true apposition in that the apposed constituent phrase is semantically and syntactically dependent on the other constituent phrase. Similar to the definition presented in Rijkhoff (2002: 22), appositional (noun) modification is here understood as a construction in which the dependent constituent is not part of the (integral) phrase headed by the modified

---

[7] Note the different meaning of "juxtaposition", which is defined as a distinct functional type in §??.

[8] The notation of the appositional unit in round brackets is borrowed from Rijkhoff (2002: 21).

noun. Semantically, the appositional modifier is headed by the modified noun. Syntactically, however, the appositional modifier has an empty head which is co-referential with the head noun of the apposed noun phrase.

Appositional modification seems to occur as a secondary marked type of adjective attribution marking in several languages, for instance in lan]GeorgianGeorgian▮ Attributive adjectives are normally preposed and show only limited agreement (see 12a). In postposition (marking emphasis), however, the adjective inflects for the full set of cases and numbers (12b). This construction thus resembles an independent (headless) noun phrase in apposition to the semantic head (Testelets 1998: 652, 677); cf. also §**??** below.

(12) Georgianlan]Georgian (Kartvelian; Testelets 1998: 652)

    a. *am   or **lamaz** kal-s*
       that:OBL two nice:OBL woman-DAT

       'to those two nice women'

    b. *kal-eb-s   **lamaz-eb-s***
       woman-PL-DAT nice-PL-DAT

       'to the NICE women'

Even without differentiated attribution marking, constituent order change between attribute and head can indicate apposition, as in lan]BulgarianBulgarian. Note that the constituent order in noun phrases of lan]BulgarianBulgarian is strictly head-final. In poetic language, however, it is possible to move the adjective after the noun.

(13) Bulgarianlan]Bulgarian (Indoeuropean; own knowledge)

    a. *tezi **golem-i** gradove*
       these big-PL   towns

       'these big towns'

    b. *tezi   gradove **golem-i***
       these towns   big-PL

       'these big towns'

It seems impossible to prove that lan]BulgarianBulgarian presents an example of appositional modification. The emphasized noun phrase in (13b) could simply be analyzed as integral noun phrase differentiated from other non-emphasized noun phrases by word order. lan]GeorgianGeorgian, however, is different from lan]BulgarianBulgarian. The emphasized noun phrase in (12b) exhibits different

morphosyntactic marking due to the additional agreement features (lan]GeorgianGeorgian)
and is very likely to be analyzed as an attributive appositional construction.

Evidence for appositional modification as a syntactically distinguished noun
phrase type is also found in constructions were the apposed headless noun phrase
is overtly marked by means of attributive nominalization (cf. §??). Attributive
nominalization can be illustrated with the epithet construction in lan]GermanGerman

(14)   Germanlan]German (Indoeuropean; own knowledge)
       [NP *Friedrich* [NP *der Große*]] 'Frederick the Great'

3 The syntax-morphology interface

3.1 Morpho-syntax

An inventory of grammatical features relevant to morphology and its interfaces with semantics and syntax has recently been systematized and presented on-line by Kibort (2008); grounded in other work, for instance by Aronoff (1994); Corbett (1987); Castairs-McCarthy (1999); Corbett (2006); Corbett & Baerman (2006); Bickel & Nichols (2007))[1] Kibort's typology of morpho-syntactic features will be evaluated in the following sections. It will be shown that true morpho-syntactic features (i.e. features not interfacing with semantics) relevant to noun phrase structure are missing but have to be added to such an inventory.

Note that the term "morpho-syntax" is sometimes exaggeratedly used for any type of syntactic construction in which morphological processes take place. It is also commonly used as a homonym for "grammar" thus subsuming all kinds of morphological and syntactic structure of a language. For the present study, however the scopes of syntactic and morphological processes are differentiated from each other. Consequently morpho-syntax is here understood as the interface between syntax and morphology, i.e. syntactic structure assigning morphology on one or more of its constituents.

3.1.0.0.1 Morphological features True morphological features have only inherent values, i.e. the assignment of these values is not sensitive to syntax. Morphological features include values which are either fixed, i.e. supplied on the lexical level, or selected from a range of values. The selection of these values is based only on formal criteria. A prototypical example of a purely morphological feature is inflection class.

3.1.0.0.2 Morpho-semantic features Morpho-semantic features also only have inherent values whose assignment is not sensitive to syntax. The values of morpho-

---

[1] A volume on the same topic edited by Anna Kibort and Greville Corbett (*Features: perspectives on a key notion in linguistics*) was announced by Oxford University Press but unfortunately has not yet been published before completion of this thesis in July 2010.

[
[
[
[
[
Buchholz, Oda
Fiedler, Wilfried
Albanische Grammatik@*Albanische Grammatik*
[
Beyer, Arthur
Bochmann, Klaus
Bronsert, Siegfried
Grammatik der rumänischen Sprache der Gegenwart@*Grammatik der rumänischen Sprache der Gegenwart*

semantic features are selected from a range of values. However, unlike purely morphological features, the selection is based on semantic criteria. A prototypical example of the assignment of a morpho-semantic feature is definite marking.

3.1.0.0.3 Morpho-syntactic features   Morpho-syntactic features are sensitive to syntax because either agreement or government is involved in the assignment of their values. In the case of agreement, however, a morpho-syntactic feature belongs per definition both to morpho-syntax – due to its contextual assignment to the agreement target – and to pure morphology (or morpho-semantics) – due to its inherent status to the agreement trigger.

The difference between morpho-syntactic and purely morphological (or morpho-semantic) features can be illustrated by definiteness marking in Albanianlan]Albanian, Bulgarianlan]Bulgarian and Rumanianlan]Rumanian. The definite markers in these three Balkanlan]Balkan languages languages are bound morphemes in post-position, cf. (1a) (2a) (3a). The syntactic behavior of the definite marker in all three languages is also similar: In noun phrases with modifying adjectives the marker attaches enclitically to the first constituent.

(1)   Albanianlan]Albanian (Indoeuropean; Buchholz & Fiedler 1987)

    a.   *djal=i*
        boy(M)=DEF:M.SG
        'the boy'

    b.   *djal=i*   *i*   *mire*
        boy(M)=DEF:M.SG ATTR:DEF.M.SG good.M.SG
        'the good boy'

    c.   *i*   *mir=i*   *djalë*
        ATTR:DEF.M.SG good=DEF:M.SG boy(M)
        'the GOOD boy'

(2)   Rumanianlan]Rumanian (Beyer, Bochmann & Bronsert 1987)

    a.   *băiat=ul*
        boy(M)=DEF.M.SG
        'the boy'

    b.   *băiat=ul*   *bun*
        boy(M)=DEF.M.SG good.M.SG
        'the good boy'

    c. *bun=ul*   *băiat*
         good=(M)-DEF.M.SG boy(M)
         'the GOOD boy'

(3)   Bulgarianlan]Bulgarian (own knowledge)

    a. *momče=to*
         boy(N)=DEF.N.SG
         'the boy'

    b. *dobro=to*   *momče*
         good=DEF.M.SG boy(N)
         'the good boy'

The feature SPECIES,[2] however, does not belong to morpho-syntax in all of these three languages. Even though the definite marker shows the same syntactic behavior (i.e. attaching in second-position), the morphological feature SPECIES is sensitive to syntactic government only in Albanianlan]Albanian. Whereas definiteness is a purely morpho-semantic feature not involved in any syntactic triggering in Bulgarianlan]Bulgarian and Rumanianlan]Rumanian, in Albanianlan]Albanian a second marker of definiteness occurs on the adjective. This marker is required by syntax through the mechanism of agreement. Hence, only definiteness in the Albanianlan]Albanian example is morpho-syntactic. In Bulgarianlan]Bulgarian and Rumanianlan]Rumanian definiteness is purely morphological.

3.2 Morpho-syntactic features

As shown in the previous section, *morpho-syntactic marking* can basically be defined as *morphological marking relevant to syntax*. According to Kibort 2008, the syntactic relevance of a certain morphological marker is determined by the involvement of this marker in either agreement or government. Kibort's view of morpho-syntax, however, is based on definitions of agreement and government which imply obligatory interfacing of the respective grammatical features with

---

[2] Typical values of SPECIES are, for instance, DEFINITE, INDEFINITE or SPECIFIC. The use of the term SPECIES (from Latinlan]Latin|fn* 'appearance, form') is borrowed from Swedishlan]Swedish|fn* and Finnishlan]Finnish|fn* grammatical terminology, cf., e.g. Holm & Nylund 1970; Itkonen 1980. It will be used throughout this investigation instead of the commonly known "definiteness" because it seems terminologically odd to have a feature DEFINITENESS exhibiting a value with the similar label DEFINITE.

Kibort,
    Anna
A typology
    of gram-
    matical
    fea-
    tures@*A*
    typology
    of gram-
    matical
    features
[
[
Mahootian,
    Shahrzad
Persian@*Persian*
[
[
[

all three components: morphology, syntax and semantics. Hence, a "more accurate term [...] would be 'morpho-semantico-syntactic' features" (Kibort 2008).

Both agreement and government require a syntactic constituent as trigger and another constituent as target of morpho-syntactic marking. Kibort's terms *trigger* and *target* are used in the case of agreement marking, whereas *governor* and *governee* are the respective labels in the cases of government. Consequently, Kibort's *government* covers only morpho-syntactic marking assigned by triggers (governors) which are constituents – like a head noun marked for certain gender and number values triggering gender and number *agreement* on the modifier.

Instances of morphological marking triggered not by constituents but by the syntactic structure as such seem to fall outside the range of Kibort's typology of morpho-syntactic features. A prototypical example of morpho-syntactic marking without a trigger inside the noun phrase is attributive state marking in Persianlan]Persian.

(4) Persianlan]Persian (Mahootian 1997)

a. "Construct state" (i.e. attributive state)
    xane-ye   bozorg
    house-CONSTRUCT big
    'large house'

b. "Absolute state" (i.e. predicative state)
    in   xane   bozorg ast
    DEM house(ABSOLUTE) big   is
    'the house is large'

In Persianlan]Persian, a nominal head is obligatorily inflected in the construct state if an adjective is present. The trigger of the head-marking attributive suffix *-ye* in Persianlan]Persian is the syntactic structure alone. Since no other value than [+construct] is assigned, semantics cannot be involved. It could be argued that semantics is relevant to the choice of whether to use the adjective as attribute or as predicate and that the attributive inflection on the head noun is inherent (i.e. morpho-semantically assigned). Semantics (or pragmatics) is of course relevant to the speaker's decision to utter a noun phrase instead of a predication. Semantics is, however, irrelevant to the argumentation about the syntactic structure requiring certain morphological marking: Once the speaker has made her or his decision, it is the syntactic structure alone which is involved in the assignment of the relevant morphological marking. Consequently, attributive construct state in Persianlan]Persian is an example of true morpho-syntactic marking.

Attributive construct state marking morpho-syntactically similar to the Persianlan]Persian construct state marking occurs in many other languages. In Bulgarianlan]Bulgarian, for instance, some nouns require a special inflection after numerals.

(5) Bulgarianlan]Bulgarian (own knowledge)
 dva stol-a
 two chair(M)-CONSTRUCT

 'two chairs'

Unlike attributive construct state marking in Persianlan]Persian which occurs obligatorily in noun phrases with different types of modifiers (adjectives, nouns, and some other), attributive construct state marking in Bulgarianlan]Bulgarian is restricted with regard to both dependent and head. Thus, it occurs only in noun phrases in which the modifier is a numeral higher than 'one' and in which the head noun belongs to the class of non-human masculines. In Bulgarianlan]Bulgarian grammatical tradition this inflectional marking is called the "counting form".[3] The marker originates historically from the genitive singular inflection of masculines. The diachrony, however, does not affect the analysis of this marker as belonging to the morpho-syntactic feature STATE from a synchronic-typological point of view. Even though attributive construct state marking in Bulgarianlan]Bulgarian is much more restricted than in Persianlan]Persian, it clearly belongs to the same type of syntactically assigned inflection on the head noun.

The term *state* here is adapted from Mel'čuk (2006: 114–116) who defines it as an inflectional category of nouns heading a noun phrase. According to Mel'čuk, the function of morphological state marking is licensing the syntactic relationship between the phrase constituents. In the case of head-marking state, as in Persianlan]Persian and Bulgarianlan]Bulgarian (4+5), the head noun is inflected and shows the morphological value [+construct] if it is the governing member in the present syntactic relation (i.e. the noun phrase).

Even though *state* in Mel'čuk's (and others') terms is usually associated with head-marking constructions of the Persianlan]Persian type (cf. example 4), a similar morpho-syntactic mechanism applies to dependent marking construct states in other languages. Consider, for example, Kildinlan]Saami, Kildin Saami in which the dependent noun phrase of a postposition is obligatorily inflected in the genitive case.

---

[3] Bulgarianlan]Bulgarian|fn* *brojna forma*

[
[
[
[
[
[
[
[
Mel'čuk, Igor Aspects of the theory of morphology@*Aspe of the theory of morphology*
[
[
[
[

(6)   Saami, Kildinlan]Saami, Kildin (Uralic; own knowledge)
      tuel'   al'n
      chair\GEN on
      'on the chair'

It could be argued that the genitive inflection of 'chair' in example 6 is a morpho-
logical value of the feature CASE assigned to the dependent noun phase by the
mechanism of *government*. But since genitive is the obligatory and only possible
marker in postpositional phrases in Kildinlan]Saami, Kildin Saami, there is no
motivation for assuming that any case value is marked here. There is no semantic
connection to a genitive case which marks a possessor noun in Kildinlan]Saami,
Kildin Saami either.[4] Since this modification marker is assigned by the syntax
of the specific construction alone, and since the only function of this marker is
licensing the given syntactic relation (i.e. an adpositional phrase), a more appro-
priate gloss could be CONSTRUCT.

   Several languages also exhibit dependent marking construct state in noun phrases▪
The matching value is usually glossed as ATTRIBUTIVE. In Kildinlan]Saami, Kildin
Saami, for example, members of one (lexically defined) subclass of adjectives are
obligatorily inflected for attributive state if they are used as modifiers in a noun
phrase.

(7)   Saami, Kildinlan]Saami, Kildin (Uralic; own knowledge)

   a. Attributive adjective (cf. "attributive state")
       vīl'k-es'   puaz
       white-ATTR reindeer
       'white reindeer'

   b. Predicative adjective (cf. "absolute state")
       puaz   lī vīll'k-e
       reindeer is white-PRED
       'the reindeer is white'

The assignment of attributive inflection on (adjectival) modifiers of nouns as well
as the assignment of genitive inflection on (nominal) modifiers of adpositions
thus follow a similar syntactic mechanism in Kildinlan]Saami, Kildin Saami: A

---

[4] This is true from a synchronic point of view. Historically, the origin of the genitive marking
in adpositional phrases is easily accounted for and goes back to possessor marking in noun
phrases with relational head nouns. But again, the diachrony of a certain marker is not relevant
to its synchronic-typological categorization.

certain syntactic relationship (i.e. an adpositional phrase or a noun phrase, respectively) is licensed by marking the dependent phrase constituent with the feature STATE.

Finally, the feature STATE may not only be dependent-marked, as in Kildinlan]Saami, Kildin Saami, but can even interfere with other features. Whereas attributive state marking is invariable in Kildinlan]Saami, Kildin Saami, in other languages it shows interference with semantic values assigned through the mechanism of agreement. The agreement inflection of attributive adjectives in Russianlan]Russian, for instance, marks the syntactically governed feature STATE simultaneously with the morpho-syntactically governed features NUMBER/GENDER/CASE.

(8) Russianlan]Russian (Indoeuropean; own knowledge)

  a. Attributive adjective inflection (cf. "attributive state")

    belyj   *olen'*

    white:ATTR:M.SG reindeer

    'the white reindeer'

  b. Predicative adjective inflection (cf."absolute state")

    olen'   *bel*

    reindeer white:PRED:M.SG

    'the reindeer is white'

3.3 An ontology of morpho-syntactic features

Besides introducing a few very basic notions connected to noun phrase structure and adjectival modification, the syntax-morphology interface has been discussed in the theoretical sections above. In particular, Kibort's (2008) inventory of grammatical features relevant to morphology and its interfaces with semantics and syntax have been critically evaluated. True morpho-syntactic features (i.e. features not interfacing semantics) are not yet included in her inventory of grammatical features. The argumentation in the present chapter aims at establishing a new feature STATE, which according to Kibort's own definitions must be regarded as a true morpho-syntactic feature and which should definitely be added to Kibort's (2008) list.

Figure 3.1 shows the morpho-syntactic features relevant to the present inventory of noun phrase types. Note that only the rightmost feature (6) in that figure can be characterized as being of true *morpho-syntactic* nature. The group of features under (5) must be characterized as *morpho-semantico-syntactic* because the syntactic assignment of these features on the agreement target requires their

semantically based assignment on the agreement trigger as well. The group of features under (2–4) are *morpho-semantic* features. The group (1) is purely *morphological*. Note also that the feature CASE shows up in several leaves because it can be assigned both in morpho-syntax (through agreement on adjectives) or in morphology (through the assignment of either grammatical or semantic cases on head nouns). In the next part of this investigation, dependent marking *state*
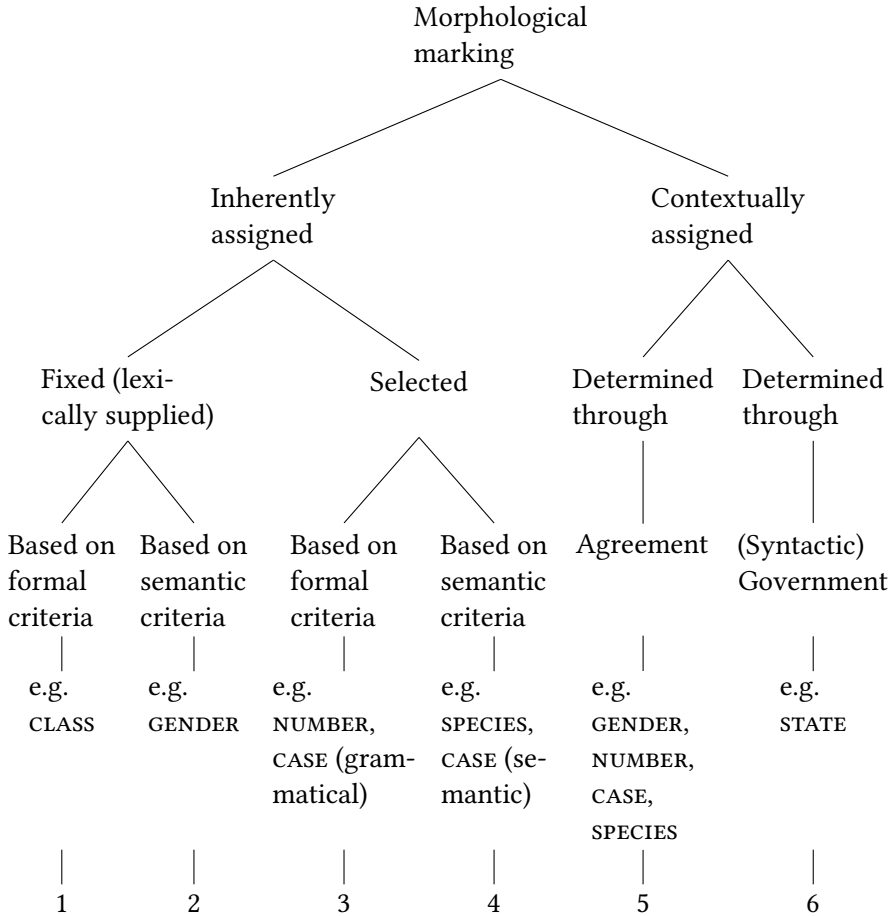

Figure 3.1: An ontology of morpho-syntactic features relevant to the present inventory of noun phrase types (adapted from Kibort 2008 and extended with the feature STATE)

will be dealt with in more detail since this type occurs in several languages of

the geographic area under investigation.

Bibliography

Aronoff, Mark. 1994. *Morphology by itself: stems and inflectional classes*. Cambridge: MIT Press.

Beyer, Arthur, Klaus Bochmann & Siegfried Bronsert. 1987. *Grammatik der rumänischen Sprache der Gegenwart*. Leipzig: Enzyklopädie.

Bickel, Balthasar. 2007. Typology in the 21st century: major current developments. *Linguistic Typology* 11. 239–251.

Bickel, Balthasar & Johanna Nichols. 2002. Autotypologizing databases and their use in fieldwork. In Peter Austin, Helen Dry & Peter Witternburg (eds.), *Proceedings of the International LREC Workshop on Resources and Tools in Field Linguistics, Las Palmas, 26–27 May 2002*. Nijmegen: ISLE & DOBES. http://www.uni-leipzig.de/~autotyp/download/canary.pdf.

Bickel, Balthasar & Johanna Nichols. 2007. Inflectional morphology. In Timothy Shopen (ed.), *Grammatical categories and the lexicon*, 2nd, vol. 3 (Language typology and syntactic description), 169–240. Cambridge: Cambridge University Press.

Buchholz, Oda & Wilfried Fiedler. 1987. *Albanische Grammatik*. Leipzig: Enzyklopädie.

Castairs-McCarthy, Andrew. 1999. Category and feature. In Geert Booij, Christian Lehmann, Joachim Mugdan & Stavros Skopeteas (eds.), *Morphology: An international handbook on inflection and word-formation* (Handbücher zur Sprach- u. Kommunikationswissenschaft 17), 264–272. Berlin: Mouton de Gruyter.

Corbett, Greville G. 1987. The morphology-syntax interface. *Language* 63. 299–345.

Corbett, Greville G. 2006. *Agreement* (Cambridge Textbooks in Linguistics). Cambridge: Cambridge University Press.

Corbett, Greville G. & Matthew Baerman. 2006. Prolegomena to a typology of morphological features. *Morphology* 16(2). 231–246.

Derbyshire, Desmond C. 1979. *Hixkaryana syntax*. London: University of London PhD thesis.

Bibliography

Haspelmath, Martin. 2008. Framework-free grammatical theory. In Bernd Heine & Heiko Narrog (eds.), *The Oxford handbook of grammatical analysis*, 341–365. Oxford: Oxford University Press.

Hengeveld, Kees J., Jan Rijkhoff & Anna Siewierska. 2004. Parts-of-speech systems and word order. *Journal of Linguistics* 40(3). 527–570.

Holm, Britta & Elizabeth Nylund. 1970. *Deskriptiv svensk grammatik*. Stockholm: Skriptor.

Itkonen, Terho. 1980. Spesies suomessa ja germaanisissa kielissä. *Virittäjä* 84. 27–38.

Kibort, Anna. 2008. A typology of grammatical features. In Anna Kibort & Greville G. Corbett (eds.), *Grammatical features*. http://www.grammaticalfeatures.net/inventory.html.

Mahootian, Shahrzad. 1997. *Persian* (Descriptive grammars). London: Routledge.

Mel'čuk, Igor. 2006. *Aspects of the theory of morphology*. David Beck (ed.) (Trends in linguistics. Studies and Monographs 146). Berlin: Mouton de Gruyter.

Nichols, Johanna. 1986. Head-marking and dependent-marking grammars. *Language* 62. 56–119.

Poppe, Nicholas. 1964. *Bashkir manual: Descriptive grammar and texts with a Bashkir-English glossary* (Uralic and Altaic Series 36). Bloomington: Indiana University.

Rijkhoff, Jan. 2002. *The noun phrase* (Oxford studies in typology and linguistic theory). Oxford: Oxford University Press.

Testelets, Yakov G. 1998. Word order variation in some SOV languages of Europe. In Anna Siewierska (ed.), *Constituent order in the languages of Europe* (Empirical Approaches to Language Typology 20:1), 649–679. Berlin: Mouton de Gruyter.

Wetzer, Harrie. 1996. *The typology of adjectival predication* (Empirical Approaches to Language Typology 17). Berlin: Mouton de Gruyter.