titulus
Noun
huius textus situs retis mundialis
http://www.uni-erfurt.de/sprachwissenschaft/personal/lehmann/CL_Publ/noun.pdf
dies manuscripti postremum modificati
06.12.1999
occasio orationis habitae
-
volumen publicationem continens
Booij, Geert et al., Morphology. *An international handbook on inflection and word formation*. Berlin & New York: W. de Gruyter (Handbooks of Linguistics and Communication Sciences, 17.1).
annus publicationis
2000
paginae
732-757

73. Noun

1. The term *noun*

Following Aristotle, Dionysios Thrax (Alexandria, 1st c. BC) uses the term ὄνομα ‘name’ to designate the Ancient Greek noun. In his classification of parts of speech, the adjective, the numeral and various kinds of pronouns are species of the noun. While the first Roman grammarians, including Varro (1st. c. BC), still reserve the Latin term *nomen* ‘name’ for ‘proper noun’, later Latin translations of the parts-of-speech system use this term in the broader sense of ‘noun s.l.’ (see below). In the Romance languages, the words for ‘name’ and ‘noun’ are the same to this day (French *nom*, Ital./Port. *nome* etc.). The same is true for the term *ismun* of traditional Arabic grammar.

The earliest classifications of parts of speech are based on the morphological criterion of inflectional categories that apply to them. Here, the term *nomen* refers to anything that inflects for case (a criterion already used by Dionysius Thrax and Varro). Priscianus (5th/6th

c. AD), codifying the tradition of Latin grammar, subclassifies *nomina* as follows: *nomen substantivum* ('noun with a substance', cf. 3), *nomen adiectivum* ('attached noun'), *pronomen* (pronoun) and *nomen numerale* ('numerical noun'). Subsequently, the compound terms were simplified, yielding *adjective* and *numeral*. In most of continental Europe, *nomen substantivum* was thus shortened to forms equivalent to English ***substantive***. In this tradition, the term *noun* is used as a supercategory to cover the substantive and those word classes that are grammatically like it in the language in question, generally (as in Priscianus) the adjective, numeral and pronoun (including quantifier and determiner). In other parts of Europe, mostly in Britain, the meaning of *nomen* was narrowed, so that *noun* became opposed to *adjective* etc. The Committee on Grammatical Terminology (1911) recommended the use of *noun* instead of *substantive*. In German grammatical terminology, the term *Nomen* acquired the new meaning 'noun' by semantic loan in the second half of this century when grammatical concepts were imported from anglophone sources, and it began to both abandon its old broad meaning and to oust the traditional term *Substantiv*. The traditional hyponymy between *substantive* and *noun* is, however, alive both in some English sources (e.g. in Indo-Europeanist writings up to the middle of the 20th century) and when we speak of the substantivation of adjectives or of the nominalization (in the sense of 'adjectivalization') of relative clauses. Even more recently, some anglophone authors to whom the term *substantive* seemed functionless have begun using it with the meaning of Latin *nomen*, so that the traditional and the modern meanings and hyponymy relations of *noun* and *substantive* are exactly reverse. In what follows, the term **noun s.l.** ([sensu lato] noun in the wide sense) will be used for the supercategory.

2. The concept 'noun'

Like any other grammatical category, the word class 'noun' has no universal status *a priori*; rather, it is a language-specific category. However, and again like with all other grammatical categories, there is a universal (cognitive or communicative) basis to it. Languages have a class of expressions which designate **entities**, i.e. concepts that are reified, and which can be used to refer to specific entities. The prototypical representatives of this kind of concept are concrete individual physical objects such as a bird or an apple. The status of this class of expressions in the language system may vary. It need not, in principle, be a grammatical class, let alone one definable by morphological criteria. However, if there are grammatical criteria for assigning words (lexemes) to a class with these semantic properties, then this is the class of nouns of the language. Up to now, probably all grammars have made use of a grammatical category of noun. In particular, nouns generally seem to form a distinct class by syntactic criteria, although not necessarily by morphological or phonological criteria. Unlike other

word classes like the adjective and the numeral classifier, the noun is therefore universal in the sense that there is an empirical generalization that every language described so far has a syntactic class which corresponds to the notional definition of the noun.

The word classes of each language are delimited on distributional grounds. Essentially, if a class of stems such as that of nouns is to be defined as a **distributional class**, then a class of elements that constitutes the relevant criterial environment needs to be given beforehand so that it can be used without circularity in the definition of the stem class. Generally, this will be a class of elements with which the definiendum forms a close grammatical (including morphological) construction, such as those treated in 4. In the clearest cases, the criterial class is one of morphological markers, in the present instance, a nominal morphological category such as gender or case. In the absence of such morphological markers, the closest syntactic environment is chosen as criterial, e.g. a class of determiners or nouns of multitude.

The class of elements which thus figures in the distributional definition of a word class could itself be conceived as a distributional class, and its definitional environment could, in principle, be the noun. This would obviously lead to circularity. If this is to be avoided, the classes of elements which are criterial in the definition of a word class such as ‘noun’ must be grammatical categories which are defined by direct recourse to the functions of language in communication and cognition, such as are discussed in chapter XII of this handbook. The selection of the particular definitional criteria is, in theory, arbitrary. In practice, only such word-class systems have met with general acceptance whose definitions are heuristically guided by semantic prototypes like the one mentioned above for nouns.

Declension is the inflection of nouns. This concept has an ambiguous position in the definitional hierarchy, since we can, in principle, either define the noun on independent grounds and then define declension as whatever inflection appears on nouns, or else we can define declension as inflection for certain morphological categories and then define the noun as the word which is declined. Given the definitional procedure for nouns which we outlined in the preceding paragraph, it appears that only the second way is passable. This means that declension in Latin is inflection for gender, number and case, while declension in Turkish is inflection for number, case and possessor. Analogous considerations apply, of course, to the concept of conjugation as the inflection of verbs.

3. Semantic properties

Concepts differ in their time-stability, i.e. in the extent to which corresponding phenomena

are prone to change (cf. Givón 1979: ch. 8). For instance, the assignment of an entity to a class is more stable than a property that it has, which in turn is more stable than a state that the entity is in, and so forth, moving rightward in F1. The noun-verb distinction can be associated with **time-stability** in the sense that the most dynamic concepts of all languages are manifested by verbs, whereas the most static concepts are manifested by nouns. For those languages that have them, adjectives range between the two poles.

time-stability	static	<----------			> dynamic
concept type	class	property	state	process	event
part of speech	noun	adjective			verb

Abbildung 1: Scale of time-stability

Thus nouns typically designate (members of) classes such as birds or apples. These are entities which are not just features of an event, but conceptually independent participants of it. Less typically, nouns designate properties, like a beautiful one or a green one (cf. 5 below and Art. 72: 2.3 on adjectives in Quechua). The concept types further to the right in F1 are not directly expressed by nouns. Abstract, typically derived nouns such as *sickness, occupation* and *conquest* may be used to designate states, processes and events as reified entities (cf. Art. 94). Thus, a noun such as *sickness* does not designate a state or property as conceived in F1.

The noun is minimally distinct from the adjective. For example, the German adjective *tot* designates the property ‘dead’, the noun *Toter* designates the class of dead persons, whose intension is, of course, the property in question. From Aristotle on, nouns were said to designate ‘substances’, which here does not mean ‘masses’, but ‘entities with ontological independence’. This provides the motivation of the term *nomen substantivum* introduced in 1. Intuitively, the difference between the meaning of a noun (‘substance’) and the meaning of an adjective (‘property’) is that if all the properties are subtracted from the adjective meaning, nothing is left, but if they are subtracted from the noun meaning, something is left (viz. ‘person’ in the case of *Toter*).

Entities may be classified according to diverse criteria. The classification which is most relevant to linguistic structure is one according to the empathy which the speaker has with the type of entity. Since this is a matter of degree, the classification takes the form of an **empathy**

hierarchy (cf. Kuno & Kaburaki 1977). One of the basic distinctions in the hierarchy is between animate and inanimate beings, which is why the hierarchy has also been known by the name of **animacy hierarchy** (e.g. in Comrie 1981: ch. 9). In general, the speaker has most empathy with such entities that are closest to and maximally like himself. These are the speech-act participants (SAP). In fact, for most purposes, the speaker himself forms the top of the hierarchy. The speaker has least empathy with phenomena that are so little individuated and thing-like that they cannot even properly be regarded as entities s.s. [in the strict sense], viz. with propositions (abstract concepts) and locations. Other entities occupy intermediate positions on the hierarchy, as shown in F2. Different languages may make finer or grosser distinctions.

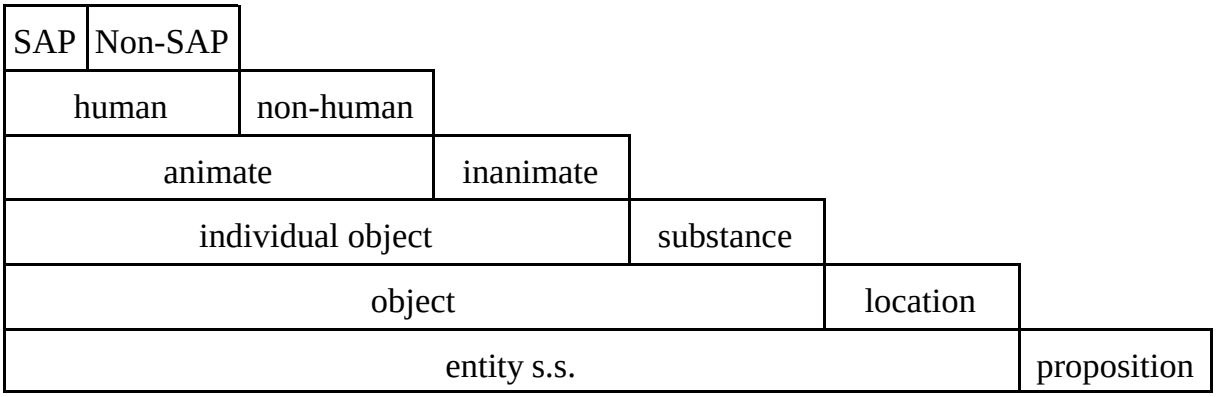

Abbildung 2: Empathy hierarchy

The empathy hierarchy is relevant to diverse structural features and grammatical rules in all known languages. Aspects of it also underlie subclassifications of nouns (cf. 5), no matter whether these manifest themselves at the morphological level, e.g. in the form of noun classes, or only at the syntactic level, e.g. in constructional differences between mass and count nouns.

It was said in 2 that nouns such as *apple* and *bird* are focal instances of their species. The prototypical noun designates a concept which comprises a class of concrete individual physical objects. This, however, presupposes that the object in question can be subsumed under a class in the first place. This is not so for those entities which form the top of F2. They are so highly individuated that they cannot even be assigned to a class. The structural correlate of this fact is that they are normally not represented by nouns, but by pronouns. On the other hand, concepts at the bottom of the empathy hierarchy do not provide typical noun meanings either, because they are not sufficiently individuated. If we consider the empathy hierarchy as a continuum between the poles of the SAP and the proposition, it may be seen that the prototypical noun designates an entity which occupies a central position on this

continuum. Speech act participants on the one hand and abstract entities on the other hand are peripheral to the class of nouns.

4. Nominal categories

This section surveys a range of morphological categories which are also included in the onomasiological treatments of ch. XIII and XIV. Here we focus on their nominal character, i.e. they are seen as categories which may provide the relevant context for a distributional definition of the noun in the sense of 2. For surveys of the inflectional categories of nouns, cf. Givón 1984: 57-64 and Anderson 1985a: 174-189.

Although we concentrate on nominal categories qua morphological categories, it should be clear that all of the notional categories coded in nominal morphological categories can also be coded in other ways. On the one hand, they may appear as independent words, which may be grammaticalized to different degrees. For instance, the relations coded by case may also be coded by adpositions, and these may be either concrete or grammatical. On the other hand, such notions may also be lexical-semantic features of nominal stems. For instance, definiteness may be a feature of proper names; and arguably, denominal adverbs such as *home* (in *go home*) embody a case. Similar considerations apply to all of the categories treated below. Subsections 4.1 – 4.8 review the range of nominal categories in inflection and derivation, while the remaining subsections make generalizations about the distribution of nominal categories over languages and within a language.

4.1. Nominal classification

The entities of our cognitive world fall into many different categories, such as concrete and abstract objects, animate and inanimate beings, natural objects and artefacts. Such classes figure in the selection restrictions of verbs and adjectives perhaps of all languages and to that extent are relevant to semantosyntax. The classification of entities may be grammaticalized to different degrees in a language (cf. Seiler 1986). Some classifications of nouns are signalled by words, such as numeral or possessive **classifiers**. If so, then any noun that can partake in the relevant syntactic construction at all (i.e., can combine with a numeral and a possessive pronoun, respectively) is combined with one of the classifiers and to that extent belongs to a particular class. However, these classes tend to be shiftable in the sense that the combination of a noun with a different classifier is not ungrammatical, but, rather, it leads to a different (possibly less usual) interpretation.

A more grammaticalized form of nominal classification is found in **noun classes** (cf. Art. 98). These are generally based on cognitive categories such as individuality, animacy, humanness, etc. Any given noun stem is assigned to one of the classes. The class may be marked morphologically on the noun itself, as are the noun classes in Bantu languages (cf. Art. 140). A shift of noun class is a derivational process which is subject to constraints that are partly semantically motivated, partly idiosyncratic, as is typical for processes of word-formation. Noun classes appear on other constituents of the sentence, such as determiners, adjectives and verbs if they agree with the noun. Class markers may have different allomorphs for nouns and the various word classes that agree with them.

The most grammaticalized form of nominal classification is **gender**. Gender is typically sex-based, whereas noun class is mostly not. It is common for a language to have two or three genders. One type of twofold subdivision yields animate and inanimate gender. In Menomini, nouns designating animate beings, including large plants, all belong to one gender which Bloomfield (1962) calls animate, while nouns designating inanimate entities may be of either animate or inanimate gender. Hittite, too, has an animate and an inanimate gender, which, on the basis of relations to Indo-European cognates, are called common gender (*genus commune*, i.e. indifferent to the masculine vs. feminine distinction) and neuter. Another type of twofold subdivision produces a masculine and a feminine gender, as in the Romance languages. Three genders are often masculine, feminine and neuter, as in Latin, Russian and German.

Gender is an inherent grammatical category of a nominal lexeme, i.e. it is not assigned by a syntactic rule. It need not be, and often is not, marked separately on the noun itself, but (just as noun class) appears on sentence constituents that agree with a noun. On the noun itself, gender is often bound to **declension class** (cf. Art. 65). In Latin, for instance, the relation is twofold. First, a given declension class may only contain nouns of one particular gender. For instance, the *a*-declension contains only feminine nouns (with few exceptions). Second, gender may determine allomorphy within a declension class. For instance, in all Latin declension classes the nominative is syncretic (cf. Art. 66) with the accusative for neuters, but not for the other genders (cf. also T2 for Hittite). Moreover, the nominative has an *-s* ending in most declension classes on masculine and feminine, but not on neuter nouns; e.g. in the *-u*-declension: *fructu-s* (nom. m.) ‘fruit’, *domu-s* (nom. f.) ‘house’, *cornu* (nom./acc. n.) ‘horn’. Even more commonly than for noun classes, the gender of a noun is copied, by agreement, to other parts of speech, and then exponents of the genders may differ for nouns and those other parts of speech. In Russian, for instance, each gender has only one morph in the singular of past verbs (*-0, -a, -o*), while on singular nouns there is abundant allomorphy.

Gender is inherent in a noun stem and so highly grammaticalized that there are no generally

productive processes for its change. The exception is what has traditionally been called **motion** (‘movement into a different gender’): in nouns designating animate beings, gender may designate sex, and then it may be changed more or less productively, as in Latin *lup-us* (m.) ‘wolf’ – *lup-a* (f.) ‘she-wolf’; Span. *muchach-o* ‘boy’ – *muchach-a* ‘girl’. The high degree of grammaticalization of gender correlates with two other features which distinguish it from other nominal classification systems. First, the classification by gender is almost exhaustive, in the following sense: If a language has gender, then almost every noun has a determinate gender which shows up either on the noun itself or on some agreeing constituent. There may be some exceptions to this; for instance in German, gender is neutralized in the plural, so that pluralia tantum are of indeterminate gender. In other systems of nominal classification, the number of nouns of indeterminate class is much larger. In numeral classification, for instance, all the nouns that do not combine with numerals never co-occur with a classifier and thus fall into no corresponding class. Second, while the weakly grammaticalized systems of nominal classification may classify concepts, with relatively few arbitrary assignments of nouns to classes, gender essentially classifies nouns. I.e., gender classifies not designata, but linguistic signs. In this sense, the classification is metalinguistic.

Most languages have at least one grammatical category that somehow classifies nouns. Languages such as Turkish, which – apart from syntactic reflexes of the empathy hierarchy – do not possess any grammatical category of nominal classification, are relatively rare. At the pole of low grammaticalization, sometimes more than one classificatory system may coexist in a language. An admittedly extreme case is Yucatec Maya, which has numeral classification, possessive classification and a prefixal sex distinction (with metaphorical extensions reminiscent of gender). The three classifications are completely independent of each other and in (1) co-occur in one noun phrase.

(1)

ka'-túul	in	w-àalak'	h-taman
two-CL.anim	POSS.1.SG	0-CL.domestic	M-sheep

‘two of my rams’

4.2. Number and collection

The prototypical noun designates a concept which comprises a class of individual concrete objects. In a given moment of discourse, either the concept as such may be designated, or reference to entities falling under the concept may be intended. In the former case, the noun is used generically, in the latter case, specifically (cf. Art. 95). If reference is specific, then one individual, various individuals or a collective of them may be meant. At this point, grammatical categories such as number and the collective/singulative distinction come in. The distribution of number across subcategories of the nouns of a language follows the empathy

hierarchy downward; i.e. if nouns at a given level of the hierarchy have number, then the subcategories above that level have number, too (cf. Smith-Stark 1974). In Kobon, e.g., only kin terms and personal pronouns, in Mandarin, only human nouns and personal pronouns have number (cf. Mithun 1988: 212 for North-American languages), etc.

Unlike nominal class, number is generally not inherent in a noun stem; and unlike case, it is generally not imposed on a noun by rules of syntax. Instead, it is generally freely chosen for a nominal on semantic grounds, from where it may be transferred to other sentence components (cf. Art. 100). A typical case is (2).

(2) (a) The girl is there.
(b) The girls are there.

However, it is not unusual for a noun to have its number fixed lexically. Many nouns do not form a plural, among them proper nouns such as *Iran* and *Saturn*, collective nouns such as *cattle* and *police*, mass nouns such as *milk* and *rubbish*, and abstract nouns such as *advice* and *specificity*. On the other hand, some nouns, including *trousers* and *ashes*, or German *Einkünfte* ‘revenue(s)’, do not form a singular. A noun that is only used in the singular is a **singulare tantum** (Latin ‘singular only’), and one occurring only in the plural is a **plurale tantum**. In both cases, the number opposition is neutralized. To the extent that these are nouns of the lower levels of the empathy hierarchy, it may be said that on its spreading downward the hierarchy, number does not reach these subcategories.

Often the bare noun stem or at any rate a morphologically unmarked form serves as the singular, against which the plural is marked overtly. However, the opposite also occurs, for instance in Arabic. The unmarked stem may designate a **collective**, as in (3a). From this a **singulative** may be formed, as in (3b), which may again be the basis for a plural form, as in (3c). Neither the collective nor the singulative, but only the plural can directly combine with a numeral.

(3) (a) t̲alāt̲a ru'ūs baqar
three head\PL cow.COLL
‘three heads of cattle’
(b) baqar-a
cow-SGLV
‘cow’
(c) t̲alāt̲a baqar-āt
three cow-PL
‘three cows’ (Premper 1986: 4)

On the other hand, collective nouns may also be derived from stems which bear a number distinction. Portuguese, e.g., derives collective nouns from individual nouns with the suffix *-ada*, as in *menino* 'boy, child' – *meninada* 'group of children'.

Only highly grammaticalized number, such as in the Indo-European languages of the archaic type, is obligatory, so that even nouns combined with a numeral or quantifier are in the plural. Less grammaticalized number is usually optional. At the pole of lowest grammatical status, we find the so-called **nouns of multitude** as plural markers. In the evolution of the Indo-Arian languages, nouns such as Sanskrit *sakala* 'all' > Old Bengali *saẽla*, *jana* 'people' > *jaṇa*, *loka* 'world' > *lōa* develop the grammatical function of plural markers. They are combined with their host nouns in what is formally a compound, as in (4) from Old Bengali (Kölver 1982: 247).

(4) (a) maṇḍala-saẽla bhājai
mandala-all broken
'(all) the mandalas were broken'
(b) bidujaṇa-lōa
scholar-world
'the scholars'

In Middle Bengali, more nouns of this kind are recruited as plural markers, and several of them appear as plural suffixes of present day Bengali.

Number is not only copied to other parts of speech by agreement, but – in contrast to nominal class – it also has an independent status on the verb (cf., again, Art. 100). On verbal plurality, see Dressler 1968; for a comparison of nominal and verbal plurality, see Mithun 1988 and Gil l991. Just as with the other nominal categories, the number paradigm may be the same on nouns and on other word classes, or the allomorphy may differ. Thus, while in Russian or German, adjectives and nouns take different suffixes for the same number-and-case categories, in Latin, for example, the affixes taken by adjectives form a proper subset of the pool of nominal affixes. Especially where verbal number is in a cross-reference relationship with the number of some verb actant, the same number paradigm may be used on nouns and verbs. Turkish has the suffix *-ler* on plural nouns and on third person plural verb forms, and the same goes for Yucatec *-o'b* and for the Hebrew (Gil l991: 8f.) and Hungarian plural markers. Reduplication is also often used for expressing plurality in either lexical category.

4.3. Case and stem alternations

Case is an inflectional category which appears on a noun phrase or its constituents and

expresses the former's syntactic or semantic function in the construction. **Case marking** is the grammatical technique of signalling case. In recent anglophone literature, the term may also include the marking of categories of actants (generally person and number) on the verb in the form of pronominal affixes, and even verbal voice. However, this usage is inappropriate (cf. Lehmann 1988: §5). Case is very widespread in the world's languages. In particular, languages with verb-final word order almost always have case (Greenberg 1963: #41).

Case systems are surveyed in article 102. As indicated in the definition, the locus of case is the noun phrase (cf. also 7 below). If the noun phrase is governed by its dependency-controller, then its case will typically be a grammatical case (rather than a concrete or semantic one), and it may be analyzed as assigned by the controller, as the accusative of *seruam* in (5) from Latin is assigned by *uerberat*. If the noun phrase, instead, modifies its controller, then its case will typically be a concrete case, and it may be analyzed as chosen for this NP on semantic grounds, as the ablative of *baculo*.

(5) domina uerberat seruam baculo
mistress:NOM.SG.F beats servant:ACC.SG.F stick:ABL.SG.N
'the mistress beats the servant with a stick'

In either instance, the case of the NP may percolate from there to its subconstituents. One frequent possibility is case marking on the head noun as the representative of the noun phrase, as in the Turkish (6).

(6) küçük ev-den
small house-ABL
'from the small house'

In Bété (Kwa, Ivory Coast), there is one case, the genitive, and it is marked by lengthening the final vowel of the noun, as in (7).

(7) lʊ́ɛ́-ɛ́ gə̀í
elephant-GEN tail
'elephant's tail'

In such languages, the noun is usually the last constituent of the noun phrase. Grammatical analysis has to ascertain whether case in this instance is a morphological category of the noun or is instead attached to the entire noun phrase.

Another possibility is for case to spread to the modifiers and determiners of a noun, as in the

Latin (8). As far as marking external syntactic or semantic relations of an NP is concerned, this spreading of case only increases redundancy. Like other forms of agreement, it signals coreference of the constituents so marked.

(8) ill-um porc-um siluatic-um
D3-ACC.SG.M pig-ACC.SG.M forest:ADJ-ACC.SG.M
'that forest pig (acc.)'

(9) d-en alt-en Frau-en
the-ACC.SG.M/DAT.PL old-OBL.SG.M//GEN/DAT.SG.F/N//PL woman(F)-PL
'to the old women'

A slightly different form of marking case is found in German. In noun phrases such as (9), case is marked neither on the NP nor on the noun, but only on the latter's co-constituents (determiners and modifiers). The declension involves so much syncretism that the grammatical categories of the NP – dative plural feminine in the instance of (9) – have to be factored out as the intersection of the sets of possibilities contributed by each word form (marked by the slash in the gloss of (9); cf. Werner 1979).

Noun stems frequently undergo alternations under case marking. Various languages have a morphological opposition between one *casus rectus* (lit. 'upright case'), which is the absolutive or nominative, and the remaining cases, which are *casūs obliqui* (**oblique cases**). The Tamil paradigm in T1 shows that the oblique cases are based on a different stem from the nominative. The oblique stem is essentially equal to the genitive, except that this has an added "enunciative vowel".

nominative	*maram*
genitive	*maratt-u*
accusative	*maratt-e*
dative	*maratt-ukku*
instrumental	*maratt-aale*
comitative	*maratt-oo‿e*
locative	*maratt-ile*
ablative	*maratt-ile-runtu*

Tabelle 1: Declension of Tamil *maram* 'tree' (Asher 1982: 103)

This kind of noun stem alternation is called **heteroclisis** and is also known from Hittite and other ancient Indo-European languages. Here, heteroclitic neuter stems such as the one of T2 end in *r* in the nominative/accusative, but in *n* in the other cases.

nominative/accusative	*watar-0*
genitive	*weten-as*
dative	*weten-i*

Tabelle 2: Some singular case forms of Hittite *watar* ‘water’

A different kind of stem alternation which may be found in declension is **apophony** (German *Ablaut*) familiar from Indo-European languages and shown in T3. In a couple of declension classes, the stem has full grade (*a*) in the locative, lengthened grade (*ā*) in the nominative and zero grade (no vowel) in the genitive.

nominative	*rājā-0*
locative	*rājan-i*
genitive	*rājñ-as*

Tabelle 3: Some singular case forms of Sanskrit *rājan-* ‘king’

Various languages of the Americas make a morphological distinction between that form of a noun which forms a syntactic constituent and that form which is a morphological part of the verb, either a stem incorporated in the latter or functioning as a derivational morpheme (cf. Art. 88). In Nahuatl, the noun appears in the **absolutive** form (which here is not a case – Nahuatl has no case) if it is independent (10a), but as a bare stem if it is incorporated in the verb (10b).

(10) (a) ni-ki-kwa in naka-tl
SBJ.1-OBJ.3-eat DEF meat-ABS
‘I eat the meat’

(b) ni-naka-kwa
SBJ.1-meat-eat
‘I eat meat’

Among the entity concepts which often function in derivation, body parts are prominent. If

a body part is used as an instrument, Yucatec Maya has the alternative of either constructing an instrumental adjunct, as in (11a), or incorporating the notion into the verb, as in (11b).

(11) (a) t-u yach'-ah yéetel u k'ab / yòok
PRT-SBJ.3 crush-CMPL with POSS.3 hand foot

(b) t-u yach'-k'ab-t-ah / yach'-chek'-t-ah
PRT-SBJ.3 crush-hand-TRR-CMPL crush-foot-TRR-CMPL
'he crushed it with his hand/foot'

While there is no morphological alternation in most of the noun stems which undergo this process, there is suppletion in the case of 'foot'. This suppletion among independent and bound noun stems is even more extensive in Kwakw'ala (Wakashan) (Anderson 1985a: §2.1)

4.4. Possession and attribution

4.4.1. Possessive affixes

Assume a configuration in which NP_2 directly depends on NP_1 in some kind of possessive relation (cf. Art. 103 for details), such that NP_1 represents the possessum and NP_2 represents the possessor. Then first of all the possessum NP is generally not an NP at all, but a nominal (or common noun phrase). Second, since typical possessors are high on the empathy hierarchy, the possessor NP is often represented by a pronoun, viz. a possessive pronoun. This, in turn, may be affixed to the possessed nominal or the latter's head noun. Such possessive affixes are widespread in the world's languages. For instance, Eskimo, Quechua, Hittite, Persian, Indonesian, Uralic, Altaic and Semitic languages have possessive suffixes, Abkhaz, Hixkaryana, Navajo, Dakota and Yuman languages have possessive prefixes (cf. Manzelli 1990 for European languages). T4 shows the Turkish paradigm.

number / person	singular		plural	
1st	*şapka-m*	'my hat'	*şapka-mız*	'our hat'
2nd	*şapka-n*	'your hat'	*şapka-nız*	'your hat'
3rd	*şapka-sı*	'his hat'	*şapka-ları*	'their hat'

Tabelle 4: Possessive suffix paradigm of the Turkish noun *şapka* 'hat'

Just like any other bound personal markers, possessive markers may either have full

pronominal function, i.e. occur without or even exclude a coreferential NP in the same phrase – in this case: the possessor NP –, or else co-occur with such an NP, agreeing with it in pronominal categories such as person, number, gender, as in the Turkish (12) (cf. Art. 75).

(12) oğlan-ın şapka-sı
boy-GEN hat-POSS.3
'the boy's hat'

The paradigm of possessive affixes in a language is mostly identical or similar to an affix paradigm that appears on the verb to cross-reference an actant (see Seiler 1983: ch. 5). In Turkish, the paradigm of possessive suffixes is cognate, and in some forms identical, with the paradigm of person endings on the verb. In Quechua, the verb has personal suffixes cross-referencing the subject and the object, and the former are virtually identical with the possessive suffixes on the noun. In Abkhaz, the verb has personal prefixes for absolutive, ergative and indirect object, the latter two paradigms being virtually identical with each other and with the possessive prefix paradigm on nouns. In Arabic, the suffixes cross-referencing the object on the verb are from the same paradigm as the possessive suffixes on the noun.

The similarity between possessive affixes on nouns and person affixes on verbs is best manifested for specific subcategories of nouns and verbs. From among nouns, it involves alienable nouns only if it also involves inalienable nouns. From among verbs, it involves intransitive, imperfective, modal, independent verb forms only if it also involves transitive, perfective, indicative, subordinate verb forms.

4.4.2. Other possessive morphology

If the possessor is actually represented in the form of an NP, rather than by an affix, the relation of the possessor NP to the possessum NP must be somehow indicated. The relation may be inherent in the possessed noun, as when it designates a body part, a kin relation or another relational concept (cf. 5). In this case, the internominal relation is commonly not specifically marked. Otherwise, the possessed noun may be equipped by a relator (a relational marker) which converts it into a relational noun. Or else the possessor NP may be equipped with a relator which converts it into a modifier or determiner. The relator in the last-mentioned technique is a genitive case or, at any rate, a case marker or adposition with a similar function, and is therefore included in the treatment of 4.3.

The distinction between relational and non-relational nouns appears as a grammatical one in many languages, in the form of the two classes of alienable and inalienable nouns. In Andoke (isolate), **inalienable nouns** only occur with a possessive pronoun or affix, as in (13a), while

alienable nouns may occur without them, as in (13b).

(13) (a) ha-domi b-óya – *domi b-óya
POSS.2.SG-hand ASS-CL2 hand ASS-CL2
'it is your hand' – 'it is a hand' (Landaburu 1979: 133)

(b) dú'u b-ʌi
water ASS-CL1
'it is water'

In some languages, possessive attribution to alienable nouns requires additional structural means. In Yucatec Maya, nouns fall into a number of grammatical classes depending on whether they do or do not occur in possessive vs. non-possessive contexts. Kin terms, a subclass of inalienable nouns, directly combine with a possessive pronoun (14b). If they are to be used without a possessive pronoun, they must first be absolutivized, i.e. be equipped with an **absolutive** marker (and this is the third meaning of this term), which blocks their relational slot (14a). On the other hand, there is a subclass of alienable nouns, exemplified in (15), which enter non-possessive contexts without further ado (a), but must be relationalized, i.e. converted into the class of relational nouns, if they are to take a possessive pronoun (b).

(14) (a) le tàatah-tsil-o'
DEF father-ABSOL-D2
'the father'

(b) in tàatah
POSS.1.SG father
'my father'

(15) (a) le nah-o'
DEF house-D2
'the house'

(b) in nah-il
POSS.1.SG house-REL
'my house'

Some languages use the relational affix not only for alienable nouns, but in all possessive constructions. Hixkaryana, e.g., has *kanawa* 'canoe' – *kanawa-rɨ* 'canoe-REL, canoe of', as in (21). This relator does the same syntactic service as English *of*, but unlike the latter, forms a constituent with the possessed noun.

The Semitic languages have, in addition to case, a morphological form of the noun called

construct state (**status constructus**, lit. ‘the state [of a noun which is] in [a certain] construction’). This form appears if the noun is directly followed by a genitive attribute. (16a) shows the noun in a case form, (16b) shows its construct state.

(16) (a) uzn-um ša ard-i
ear-NOM of servant-GEN
‘ear of servant’
(b) uzun ard-i
ear\STAT.CONSTRservant-GEN
‘servant’s ear’

The construct state is apparently a morphological manifestation of the syntactic fact mentioned at the beginning of 4.4.1, viz. that the possessed item is not a full NP. This kind of possessive construction is structurally close to nominal compounding.

4.4.3. Other attributive morphology

The relators seen so far render a noun capable of taking a possessive attribute. There are, however, more general relators that link a noun to just any attribute.

(17) (a) mored-e nazar
target-AT glance
‘target of glance’
(b) ru-ye u
face-AT he
‘his face’
(c) dālān-e derāz-e tārik
corridor-AT long-AT dark
‘long, dark hall’

Persian (Farsi) has an enclitic morpheme *-e* called *ezāfe* which fulfills this function. As may be seen from (17), it enables its carrier to take any kind of attribute. However, as becomes clear from (17c), it is not limited to nouns but also attaches to a complex nominal that is followed by an attribute.

4.5. Determination

Much like for case, the semanto-syntactic locus of determination is the NP (cf. Art. 95). Nevertheless, subcategories of determination are often marked on constituents of the NP. See Art. 74 for definiteness marking on the adjective. Nouns may be marked for determination

in various ways. Affixal definite articles are relatively widespread. They are suffixal in Romanian, Swedish [e.g. *gris-en* 'pig-DEF (the pig)'], Danish, Basque, Ijo (Kwa), Koyo (Kru) and Yuman languages. Prefixed articles occur in Abkhaz (Caucasian) [e.g. *a-jəyas* 'DEF-river (the river)'], Gola (Niger-Congo) and Arabic vernaculars. As for non-segmental definiteness marking, see 6.4 on final vowel lengthening for definiteness in Hausa. Sometimes, as in certain Bantu languages (Greenberg 1978), a nominal prefix codes noun class and definiteness or specificity at the same time. Diachronically, many noun class affixes appear to stem from earlier independent determiners.

4.6. Person

Person is, first and foremost, a pronominal category. Its morphologization on verbs and other parts of speech is not at issue here (cf. Art. 96). There are two principal ways it may appear on nouns. First, in the form of possessive affixes as discussed in 4.4. Here, the noun and its affix have distinct reference. Second, in the form of person affixes which are coreferential with the noun. Here, two subcases must again be distinguished. First, if the noun functions as the predicate of the clause, it may bear person and number inflection just like a verb. This is common in Altaic languages and elsewhere and may be seen, e.g., in the Turkish (18).

(18) (a) türk-in
Turk-1.SG
'I am a Turk'
(b) türk-iz
Turk-2.SG
'you are a Turk'

Here, the nominal predicate is treated grammatically like the verbal predicate, and such nominal forms are not used for reference. The second subcase, the appearance of person on referential nouns, is much rarer. Classical Nahuatl has person prefixes which attach to nouns and verbs. The paradigm of the subject agreement prefixes of verbs differs from that of the possessive prefixes on nouns. Elements from the former set can appear on nouns, too, as in (19).

(19) ceme an-cihuâ
one 2.PL-woman
'one of you women' (Humboldt 1994: 121)

While independent personal pronouns in apposition to nouns are widespread, person affixes in the same semanto-syntactic function are remarkable.

4.7. Tense

While tense is regularly encountered on the verb, far fewer languages have it on the noun. The same subdivision as for person applies to nominal tense. First, it may be limited to possessive relations (see Art. 103). Where this occurs, tense is normally fused with the marking of possession to distinguish between present and past possession. This entails that tense appears on the possessor or on the possessed noun depending on whether the possessive relator attaches to one or the other of these. In (20) from Dyirbal, tense fuses with the genitive of the possessor noun.

(20) (a) waŋa yaɽa-ŋu
boomerang man-GEN
'man's boomerang'
(b) waŋa yaɽa-mi
boomerang man-GEN.PAST
'man's former boomerang' (Dixon 1972: 108-110)

In (21) from Hixkaryana, tense fuses with the relational suffix on the possessed noun.

(21) (a) ro-kanawa-rɨ / Waraka 0-kanawa-rɨ
POSS.1.SG-canoe-REL Waraka POSS.3-canoe-REL
'my / Waraka's canoe'
(b) ro-kanawa-tho / Waraka 0-kanawa-tho
POSS.1.SG-canoe-REL.PAST Waraka POSS.3-canoe-REL.PAST
'my / Waraka's former canoe' (Derbyshire 1979: 68, 98f.)

By the same token, some of these languages have tense/aspect on verbal nouns. Thus, Hixkaryana combines the suffix *-nhɨrɨ* REMOTE with (an allomorph of) the past relationalizer seen in (21b), as in (22).

(22) o-n-menho-thɨrɨ-nhɨrɨ
SBJ.2-PAT.NR-write-REL.PAST-REMOTE
'the thing you wrote long ago' (Derbyshire 1979: 99)

Second, tense may be marked on any noun. Again, two subcases must be distinguished. If the noun functions as the predicate of the clause, it may accept inflection for tense in the same way as it accepts inflection for person and number. This is common in Altaic languages. Cf. the Turkish *mühendis-ti-m* 'engineer-PAST-1.SG (I was an engineer)'. Nominal tense which is independent both of possessive and of predicative morphology occurs in the Americas. Kwakw'ala uses the same future and past suffixes on nouns as on verbs, e.g. in *xʷakʷəna*

'canoe' – *xʷakʷəna-ƛ* 'canoe that will be, that will come into existence' – *xʷakʷəna-xdi* 'canoe that has been destroyed' (Anderson 1985b: 30). In the Tupi-Guarani language Tupinamba, the verb has no tense/aspect morphology (there are temporal particles, though). The tense morphemes may be suffixed to nouns, as in T5 (from Aryon D. Rodrigues p.c.).

	suffix	example	
past	*-pwer*	*rók-wér-a*	ˈformer house'
tenseless	*0*	*rók-a*	ˈhouse'
future	*-ram*	*rók-wám-a*	ˈfuture house'
		rók-ám-wér-a	ˈex-house-in-spe; what was to be a house'

Tabelle 5: Nominal tense in Tupinamba

The tense morpheme situates the referent of a noun in time relative to the time of the clause containing it.

While there may be agreement between a nominal dependent and its verb in other categories, tense is not an agreement category. Even where both the noun and the verb have tense, tense is selected independently for a verb and its nominal dependents, as in *My ex-wife is visiting me, my future wife visited me*, etc. Nevertheless, tense markers in nouns and verbs may be phonologically identical. Potawatomi (Hockett 1958: 238), Kwakw'ala (Anderson 1985b: 30), and Tagalog (Schachter & Otanes 1972: 153f.) for example, use the same affixes, but they are completely distinct in Hixkaryana (Derbyshire 1985: 201, 196) (cf. also the difference between the English verb *married* and the noun *ex-wife*).

4.8. Denominal derivation

Both nominal and denominal derivation are extensively developed in many languages. While nominal derivation is treated in 6, we will here survey a couple of denominal processes. Languages such as Latin can derive stems of all classes productively from nominal stems. From the base *milit-* 'soldier', the noun *milit-ia* 'military service', the adjective *milit-aris* 'military' and the verb *milit-are* 'serve as a soldier' are derived. And from the noun *gutta* 'drop' the adverb *guttatim* 'dropwise' may be formed.

4.8.1. Derivation of nouns and adjectives

Assume a nominal base designating X and a noun derived from it and designating Y. Then

Y may be a kind of X, or it may be altogether distinct from X. The first derivation is an instance of modification and therefore semantically endocentric. In the second derivation, the derivational formative is the structural head of the construction, which is semantically exocentric. We will treat these two types in turn.

Given a nominal base meaning X, a **diminutive** is a noun meaning 'little X', and an **augmentative** is one meaning 'big X', as in Italian *libr-o* 'book' – *libr-ino* 'book-DIM (booklet)' – *libr-one* 'book-AUG (big book)' (cf. Art. 99). Common connotations of diminutives include 'cute, weak, unimportant, contemptuous', common connotations of augmentatives include 'strong, important, ugly'. Italian has special suffixes for some of these meanings, e.g. *libr-accio* 'trashy book'. Similar examples can be found in Baltic and Slavic languages and all over the world. Since these derivations are structurally and semantically endocentric, they should be recursive, and in some languages they are. Thus, in Italian we have *canna* 'tube' – *cannello* 'little tube' – *cannellone* 'tube-DIM-AUG (big little tube)' (type of noodle), and again *viòla* 'viol' – *violone* 'bass-viol' – *violoncello* 'viol-AUG-DIM (cello)'.

Shift of gender or noun class (motion in the sense of 4.1) may be used to derive diminutives and augmentatives. Thus, Kxoe (Central Khoisan) has *yìí* 'tree' – *yìi-má* 'tree-M (tall tree)' – *yìi-hɛ́* 'tree-F (small tree)' (Heine 1982:191). In Swahili, noun class 5 comprises paired and diverse other items, while class 7 comprises artefacts and other objects. In derivation, class 5 creates augmentatives [e.g. *m-tu* 'CL1-man (person)' – *ji-tu* 'CL5-man (giant)'], while class 7 creates diminutives [e.g. *ki-tu* 'CL7-man (dwarf)'].

We now turn to the semantically exocentric type of denominal derivation of nouns and adjectives. These derivations center around the notion of **possession** in the broadest sense. If X is the meaning of the base, then the smallest common denominator of the derived meanings is 'Y related to X'. Specific kinds of relation between X and Y may be distinguished. Since these are relations between two nominal concepts, they can, in principle, be expressed by adnominal cases, too. It will be seen that for each specific relation, there may either be a clear alternative between a derivational process and case marking, or the distinction may be blurred in a particular language.

A **possessive adjective** is one which is derived from a noun meaning X and which means 'belonging to X, related to X'. Latin has various suffixes in this function, among them *-ilis*, as in (23), and *-arius*, as in *funus* 'burial' – *funer-arius* 'funerary'. In Russian, the suffix *-nyj*, as in *želez-naja doroga* 'iron-related:F road:F (railway)', is even more widely used, competing with the genitive. The semantic type of the possessive adjective is also instantiated by nouns. The Latin adjectives in *-arius* can be substantivized, and thus the same suffix can derive

nouns of the semantic type ‘Y related to X’. Examples are *aqua* ‘water’ – *aquarius* ‘Water Bearer’, *herba* ‘herb’ – *herbarium* ‘container of herbs’. This formation becomes highly productive, yielding, among others, the Germanic suffix *-er* as in *potter* (lit. ‘someone related to pots’).

(23) domus eri / erilis
house:NOM.SG master:GEN.SG master:POSS.ADJ:NOM.SG
‘master’s house’

(24) dibirdibi-karran-ju dulk-u
Rock.Cod-GEN-PROP place-PROP
‘with Rock Cod’s place’ (Evans 1995: 151)

Possessive adjectives are related to possessive noun attributes formed with the **genitive**, both within a language and cross-linguistically. For instance, Latin has the alternative of (23). In several Australian languages, the genitive is like derivational categories in allowing the addition of another case suffix, as in (24) from Kayardild (Pama-Nyungan).

The semantic converse of the possessive noun or adjective is the type ‘Y having X, Y provided with X’, as in Latin *barba* ‘beard’ – *barbatus* ‘bearded’. If X is a body part, then the derivation normally presupposes some modification of X, as in *long-legged, blue-eyed*. Just as one normally does not say ‘the girl has legs’, there is also no derivation *legged (girl)*. This derivation, too, has a case form corresponding to it: the **proprietive**. (25) is again from Kayardild (cf. also (24)).

(25) dun-kuru-ya maku-y
husband-PROP-LOC woman-LOC
‘near a married woman’ (Evans 1995: 146)

The proprietive has a negative counterpart: a **privative** adjective is one meaning ‘lacking X, without X’. In English, such adjectives are derived with the suffix *-less*, as in *hairless, verbless*. In Kayardild, this is again expressed by a case, to be seen in (26). The paradigmatic relationship of proprietive and privative derivation is brought out by (27) from Mangarayi (non-Pama-Nyungan, Australia).

(26) dangka-warri-wu dulk-u
person-PRIV-PROP place-PROP
‘with uninhabitated places’ (Evans 1995: 158)

(27) (a) ña-mawuj-(j)i
2.SG-food-PROP
'you have got food'
(b) ña-mi-wi
2.SG-food-PRIV
'you have no food' (Merlan 1982: 73)

4.8.2. Derivation of other parts of speech

A verb derived from another part of speech consists of a base and a derivational element whose meaning is some verbal archisememe A such as 'be', 'become', 'make', 'act'. Given a nominal base meaning X, the derived verb designates a situation whose core is A and in which X is a participant. The semantic types of denominal verb derivation may then be differentiated by the participant role of X. In German, all of these verbalizations may be achieved by converting the noun stem into a verb stem without any morphological means (cf. Art. 90). Here are some types (cf. Fleischer [2]1971: 288f.): X is subject complement: *Spitzel* 'spy' – *spitzeln* 'to spy'. X is object complement: *Knecht* 'servant' – *knechten* 'reduce to servitude'; X is an (effected) object: *Knospe* 'bud' – *knospen* 'to bud'; X is an adverbial: *Bürste* 'brush' – *bürsten* 'to brush'. A subtype of the last-mentioned type are **ornative verbs**, which follow the pattern 'to provide Y with X': *Sattel* 'saddle' – *satteln* 'to saddle'. Their negative counterpart are **privative verbs** like *Kopf* 'head' – *köpfen* 'behead'.

Denominal adverbs may be analyzed as an adverbial case form of the base X, e.g. 'in X'. German has an adverbializing *-s* suffix in this function, as in *Morgen* 'morning' – *morgens* 'in the morning', *Anfang* 'start' – *anfangs* 'in the beginning'. In analogous fashion, adpositions and conjunctions may be formed, e.g. *Zweck* 'purpose' – *zwecks* 'for', *Fall* 'case' – *falls* 'if'.

4.9. Distribution of nominal categories

It was mentioned on several occasions that a concept that is expressed as a nominal category may also be marked on other word classes. This may be so either because such a grammatical category is selected independently for other word classes or because it is copied on them by agreement. In general, most of the nominal categories mentioned may be marked on the noun s.l. In fact, as far as word classes (as opposed to nominal groups) are concerned, the functional locus of several nominal categories, such as nominal class, determination and person, is not the noun, but the pronoun. For more on this, see 5. Some grammatical categories are shared between the noun s.l. and the verb. These include the ones just

mentioned plus number/collection and tense. Those categories that are really pronominal (rather than nominal) are not shared between noun and verb by virtue of some commonality of these word classes. Rather, the noun carries these categories to the extent it behaves like a pronoun, while the verb carries these categories by virtue of carrying pronominal indices. Number/collection covers a class of concepts that take different shapes on nouns and on verbs. Finally, tense is marked on nouns only exceptionally. In sum, there are, at a universal level, no morphological categories that are exclusive to nouns proper. A few, above all case and determination, appear on verbs only to the extent that pronominal indices on the verb may show them, but otherwise mark the noun s.l. off from the verb. To this extent, typology confirms the approach to the definition of the concept ʽnounʼ taken by Dionysios Thrax (cf. 1).

There is a systematic dependency between verbal and nominal morphology: if a language has nominal inflection, it has verbal inflection. Most languages have morphology in both categories. Japanese is an example of a language with verbal, but without nominal inflection. Thirdly, there are languages without inflection, such as Thai, Burmese, Vietnamese and Yoruba. However, the fourth logical type – languages with nominal inflection but no verbal inflection – has not been evidenced. For a similar dependency between pronominal and nominal inflection, see 5.

Languages differ in the nominal categories that they possess and in the extent to which they develop subcategories of these categories. One systematic dependency seems to hold for gender and number: If a language has gender, then it has number (Greenberg 1963: #36). Similarly, it seems that if a language has case, it also has number. In fact, number appears to be the most widespread nominal category. No implicational relationships involving possessive marking are known.

The above observations involve the distribution of nominal categories over word classes and their subclasses. The question of how nominal categories can co-occur in one noun form will be taken up in 6.5.

4.10. Incomplete distribution of nominal categories

Frequently, an inflectional category does not apply equally to all the members of a given word class. Such lack of generality may range from some erratic exceptions to whole subclasses of the word class in question. With respect to nouns, two cases have to be distinguished (analogous considerations apply to other word classes):

1) **Defectivity**: A grammatical category is not available for a certain noun or class of nouns (cf. Art. 67). This means that the noun cannot be used in a syntactic environment which would require this category. For the category of number, this is the situation for the singularia and pluralia tantum seen in 4.2, which can combine with articles or predicates of only one of the numbers. For the category of case, this kind of restriction is rarer. In German, the generic pronoun *man* 'one' is a case in point; it cannot be used in the oblique cases and in their corresponding syntactic functions. (In the latter, forms of *einer* 'one' have to be used; but this is not an instance of suppletion, since *einer* has a nominative of its own.)

2) **Zero marking**: A grammatical category is not marked on a certain noun or class of nouns (cf. Art. 45). This presupposes that the noun can be used in syntactic environments that require the category in question but the category is not expressed. In French, large groups of nouns have no number marking (even if one takes liaison into account). What is orthographically *classe* 'class', plural *classes*, is phonologically /klas/ in both numbers. In German, certain classes of feminine nouns have no case marking; e.g. *Frau* 'woman', plural *Frauen*, in either number has the same form in all four cases [cf. also (9)]. This kind of failure to undergo inflection is frequent in loans. German *Epos*, plural *Epen*, which is neuter and has no case marking, is a typical instance.

In cases of defectivity, we say that the noun in question does not have the category in question. In cases of zero marking, one would hesitate to propose this diagnosis. Although it seems weird to distinguish, for a noun like *Frau*, a paradigm of four cases none of which may be seen or heard, the syntax treats such a noun just like one on which the cases are marked. Nevertheless, it is worth noting that if a grammatical category gets lost altogether in diachronic change, this does not happen because defectivity spreads over the word class in question, but because zero marking spreads. For instance, English and the Romance languages lost the category of case not because fewer and fewer nouns could be used in syntactic environments which required oblique cases, but because fewer and fewer nouns were marked for case. From this perspective, it does seem correct to say that *Frau* has no case.

5. Major subclasses

Just like word classes themselves, their subclasses may be grammatical and even morphological classes or may be recognizable only on semantic grounds. In this section, we deal with the major classes of nouns that are manifested at least syntactically, if not morphologically, in most languages. Classes formed by such language-specific classification

systems as gender and noun class have been discussed in 4. Most of the distinctions to be reviewed here are based on the empathy hierarchy of F2.

In many languages, the category of the noun proper belongs to the supercategory of the **noun s.l.**, which commonly includes nouns s.s., adjectives, numerals and pronouns (cf. 1). In languages such as Latin, all of these word classes are morphologically alike in that they inflect for gender, number and case. Moreover, they are syntactically alike in some ways, for example, that a word of any of these classes can function as a noun phrase. Nouns and adjectives, in particular, form a natural class in many languages (cf. Art. 74). In Quechua, the grammatical potential of adjectives includes that of nouns. They differ by only two grammatical features: First, if an adjective and a noun are combined in an attributive construction, then the former precedes the latter. Second, adjectives, but not nouns, undergo an inchoative derivation. Apart from these two differences, adjectives and nouns share all their grammatical properties (cf. Schachter 1985: 17f.): they inflect for number and case, they may constitute referential noun phrases (there is no process of substantivization of adjectives), and they require a copula if used as a predicate. Even more languages have derivational processes which apply to substantival and adjectival bases alike. For example, in English, two different derivational affixes, *-hood* and *-ness*, provide for abstract nouns depending on whether the stem is adjective or noun, but in Persian, the same suffix *-i* can be used in both cases: *mard-i* 'manhood' and *bozorg-i* 'greatness' (Windfuhr 1989: 531). Similarly, the Hungarian suffix *-ság*/*-ség* deriving abstract nouns can join both nominal and adjectival stems: *ember-ség* 'man-ABSTR (humanness)' and *szép-ség* 'beautiful-ABSTR (beauty)'. The same goes for Hungarian *-talan/-telen* 'without'.

Successively narrowing down on nouns proper, the first subdivision is between lexical nouns and pronouns (see Art. 76 for the morphology of pronouns). By its name, a **pronoun** should be a substitute for a noun. However, since most pronouns incorporate categories of determination (definiteness, specificity etc.), they are actually substitutes for noun phrases. Insofar, a pronoun is a substitute for a noun only if the noun can form a noun phrase by itself. This, in turn, is true for proper nouns in most languages (see below) and for all nouns in such languages as Latin and Russian where determiners are optional. Moreover, pronouns can be substitutes for nouns only if they are independent words. Many languages have pronominal clitics or affixes which are, of course, not in a distribution class with nouns, but often may co-occur with them.

In most languages, the morphology of pronouns and nouns proper differs markedly. In any given language, pronouns are at least as richly inflected as nouns. In particular, if a language has gender or number or case or any combination of these in the noun, then it has the same

categories in the pronoun (Greenberg 1963: #43; Plank l989: 298). For instance, English and the Romance languages have case in the pronoun, but not in the noun. This relationship is related to the effects of the empathy hierarchy, since pronouns essentially include person pronouns, which refer to speech act participants, which in turn occupy the top of the hierarchy (see Art. 76 for the internal differentiation of the class of pronouns). The universal is true for the categories of nominal class, number and case at the generic level. Within the category of number, the dual is special in that there are a few languages, including Hopi, which have dual in nouns but not in pronouns (Plank 1989: 297f.). Nouns and pronouns may also differ in their declension class. The ancient Indo-European languages have a pronominal inflection pattern which does not appear on nouns. For instance, Latin has a genitive singular allomorph *-ius* in pronouns (e.g. *qui* 'who' – gen. *cuius*, *alter* 'the other' – gen. *alterius*), which no noun has.

Lexical nouns are further subdivided into proper nouns and common nouns. **Proper nouns** are **names**, i.e. nouns whose designation is not a concept, but an individual. Any other noun is a **common noun** or *nomen appellativum*. The term *nomen proprium* was motivated by the ambiguity of the term *nomen* noted in 1. Proper and common nouns often belong to different distribution classes such that the distribution of common nouns usually includes the distribution of proper nouns. First, names are semantically definite. Therefore, restrictions on the combination of proper nouns with articles are common. A proper noun does not generally combine with the indefinite article (**a Linda*); and if it does, it is thereby turned into a common one. Proper nouns may require a definite article (e.g. English *the Alps*) or they may admit no article (e.g. *Linda*). Second, proper nouns are generally defective for number (**the Alp, *Lindas*), and they undergo fewer derivational processes (*mountainless* vs. **alpless*).

Common nouns are subdivided into count vs. mass nouns, designating individual, separate objects and continuous substances, respectively. A **count** or countable **noun** is one which combines with the indefinite article and with numerals, such as *a girl, two cookies*. A **mass noun** does not so combine; cf. **a milk, *two airs*. If mass nouns can be pluralized, the result is a **sortal plural**, as in *three wines*. Otherwise, a numeral must first be combined with a **mensurative** (or mensural classifier; cf. Art. 101), and the resulting phrase can then combine with a mass noun, as in *three bottles of wine*. Moreover, mass nouns may occur without an article in contexts in which count nouns may not: *Linda ate butter/*cookie*. Nevertheless, these classes do not have distinctive morphological properties in many languages.

Common nouns are also subdivided into concrete vs. abstract nouns. *Girl*, *apple* and *milk* are concrete, *time, grammaticalization* and *kindness* are abstract. A semantic definition of this distinction presupposes a notion of **abstraction**, the operation of creating an abstract concept.

The standard way of doing this is to orient the concept to the situation (property, action, event etc.) itself while disregarding ("abstracting away from") its arguments. The grammatical/ derivational operation that achieves this is the formation of action nouns by **nominalization**. A prototypical **abstract noun** is an action noun formed by nominalization. All nouns which are grammatically or semantically like the prototypical ones are abstract nouns. A **concrete noun** is then simply a common noun which is not abstract in the sense defined. Grammatical properties that abstract nouns have in common include the same as for mass nouns: They may occur without an article (cf. *Linda worked on the file / on grammaticalization*) and hardly combine with the indefinite article and with numerals (**a grammaticalization, *three kindnesses*). Thus, on grammatical grounds, abstract nouns may be a subclass of mass nouns. This is motivated by the fact that they do not designate individual objects. On the other hand, and in contrast with mass nouns, abstract nouns often do have morphological characteristics, insofar as most of them are formed by nominalization. T6 presents some derived abstract nouns of Latin (in the genitive, for the sake of morphological clarity) from different base categories.

base	derived noun	gloss	meaning
noun	*ciui-tat-is*	citizen-ABSTR-GEN.SG	of citizenship
adjective	*pulchri-tudin-is*	beautiful-ABSTR-GEN.SG	of beauty
verb	*migra-tion-is*	wander-ABSTR-GEN.SG	of migration

Tabelle 6: *Latin derived abstract nouns*

Other base categories, such as adverbs and numerals, play a negligible role in nominal derivation. If a language has denominal derivation, it has nominal derivation. Burmese is a language which has verb-to-noun derivation but, apparently (Wheatley 1989: 849), no productive pattern of denominal verb derivation (cf. also Hopper & Thompson 1984: 737f.). It is possible that nominalization is the most important derivational operation at all.

Concrete nouns may be further subdivided into collective and individual nouns. A **collective noun** designates a collection of similar entities which has a quality of its own, i.e. it is more than a set of such entities. Examples are *bunch (of flowers), flock (of sheep),* but also *police*. Some languages have productive processes for the derivation of collective nouns (cf. 4.2). In English, subclasses of them may be delimited on grammatical grounds. For instance, nouns like *bunch* and *flock* are count nouns which form a specific possessive attribute construction, while *police* shares some features with mass nouns. In this area, many distinctions can be made (cf. Leech & Svartvik ^{2}1994: 39ff., *Collins COBUILD English Grammar* 1990). Nouns

of measure may grammaticalize to mensuratives, unit nouns may grammaticalize to numeral classifiers. Such classes are, however, of no known morphological relevance.

Concrete nouns, whether individual or collective, are subdivided into **animate** and **inanimate nouns**, and the former into **human and nonhuman**. Some aspects of grammatical structure in perhaps all languages are sensitive to these distinctions. With certain well-motivated exceptions, the principle is that within any of the nominal categories of 4, more differentiation is found in nouns which are higher up on the empathy hierarchy. Thus, several Australian languages have a separate accusative only for nouns from a given position of F2 upward, e.g. only for human noun phrases (Arabana) or only for animate noun phrases (Thargari). While these are predominantly ergative languages, something similar is true for the (accusative) ancient Indo-European languages (cf. T2), which syncretize the accusative with the nominative in neuter nouns. Again, several languages mark number only on nouns from a given position of F2 upward. For example, Mandarin Chinese has obligatory number in pronouns, optional number in human nouns and no number in nouns of less empathy.

A stem which contains at least one position for a governed argument is called **relational**; otherwise, it is **absolute**. In this sense, all verbs except the avalent ones are relational. Among nouns, those designating kin (like *sister*), body parts (*hand*), personal attributes (*name*) and spatial regions (*top*) as well as certain **verbal nouns** such as *nomination* are relational, while nouns designating physical objects such as *apple*, *woman* are absolute. It will be seen that prototypical nouns as defined in 2 are absolute nouns, while relational nouns are more verb-like. Apart from differing syntactically from absolute nouns, relational nouns are often marked off from absolute nouns at the morphological level, too. The relevant facts are reviewed in 4.4.

The marking of nominal categories is often subject to allomorphy that is morphologically or lexically conditioned. If it is, then the conditioning environment is usually one of the subcategories of nouns reviewed in the present section. For instance, allomorphy in possessive marking may be conditioned by the alienable or inalienable character of the noun. Number marking is another example: it is often different for human or animate nouns as opposed to non-human or inanimate ones. For example, Latin and Greek have allomorphy in the plural of masculine and feminine nouns, but only the form *-a* for neuter plural, which is not among the plural allomorphs of the other genders. The same subclasses which condition the applicability of a nominal category in one language may condition its allomorphy in another language. Cf. also 4.10 for the conditioning of zero allomorphs.

6. Morphological structure

While the noun shares much of its morphological structure with words of other classes, the following subsections concentrate on those morphological properties which mark the noun off from other word classes. There are distinct processes of stem formation which have the noun as their target; and there are distinct processes of stem formation and inflection which presuppose the noun as their base. A given type of grammatical concept may be expressed by diverse kinds of morphological processes. T7 illustrates this for sex/gender.

process	language	male	female
suppletion	English	*son*	*daughter*
compounding	Hungarian	*tanar*	*tanar-no* teacher-woman
derivation	German	*Lehrer*	*Lehrer-in* teacher-ess
inflection	Latin	*fili-us* offspring-M	*fili-a* offspring-F
zero marking	English	teacher	teacher

Tabelle 7: Processes of sex/gender marking

In the following subsection, the levels of word structure in the noun are introduced. Sections 6.2 – 6.4 review the formal processes operative at the levels of compounding, derivation, inflection and theme formation. Finally, the mutual relationship of diverse markings on a stem is considered.

6.1. Morphological levels in the noun

If ‘noun’ is taken as a syntactic (distributional) category, then nominals or phrasal nouns and even nominalized clauses will count as nouns. Following common practice, the concept is restricted here to the word level. As with other inflecting word classes, the internal morphological structure of a noun is a hierarchy of the following three levels:

word form
stem
root

We forego the possibility of positing a level ‘phrasal stem’ between ‘word form’ and ‘stem’ (cf. Art. 87). The formation of units at the upper two levels is recursive; i.e. a word form may consist of word forms, and a stem may consist of stems, but a root may not consist of roots. This may be represented by the set of expansion rules given in T8:

		Rule			Morphological process
(1)	(a)	word form	→	word form + word form	periphrastic inflection
	(b)			word form + inflectional element	synthetic inflection
	(c)			stem	
(2)	(a)	stem	→	stem + stem	compounding
	(b)			stem + derivational element	derivation
	(c)			root	

Tabelle 8: Formation of nouns

Again, a process of phrasal compounding could be posited between synthetic inflection and compounding. ‘Inflectional element’, ‘derivational element’ and ‘root’ are terminal, i.e. unexpandable units. The rules apply in the usual way: Start with the unit ‘word form’ and apply expansion rules until only terminal units are left. T8 is, in principle, valid for any word class. Specialties of nouns will be mentioned below.

T8 accounts for the morphological complexity that may be found in nouns. In particular, since compound and derived stems may be formed from compound and derived bases, nominal stems may get as complex as the English word *decompartmentalization*. Sanskrit is famous for its morphological complexity in the nominal sphere. However, such examples stand out against the majority of the languages of the world, where morphological complexity is more developed in the verbal sphere.

The alternation among morphological variants of noun stems is treated in 4.3. The operations for the formation of entity concepts of various classes and, thus, of nouns, are treated in Art. 94. Here the various formal processes of producing a noun stem are discussed.

6.2. Compounding

Compounding as a morphological process (by rule (2a) of T8; cf. Art. 87) is most productive in nominal morphology. Germanic languages abound in compounds of arbitrary complexity such as English *1997 physics nobel prize winner* or German *Turm-uhr-zeiger* 'tower-clock-pointer (hand of steeple clock)'. The determinative nominal compound, where one stem serves as the base and is determined by the other one, is the most common type in the languages of the world, probably because it is in a virtually regular paradigmatic relationship with the syntactic construction of possessive attribution. For instance, there is a regular relationship – which has often been analyzed by means of transformations – between *linguistics student* and *student of linguistics*. Examples of this type of compound may also be cited from Mandarin (Li & Thompson 1981: 48ff.): *chuang-dan(zi)* 'bed sheet', *jiu -bei(zi)* 'wine cup'. In these languages, the order of the stems is 'determinans-determinatum'. The opposite order is common in languages that have had head-dependent order for a long time. Yucatec Maya has *chúumuk-k'ìin* 'middle-day (noon)', *éet-kàahal* 'companion-place (compatriot)', *táan-ho'l* 'front-head (forehead)'. Tagalog (Schachter & Otanes 1972: 107ff.) has *mata-ng-lawin* 'eye-LINKER-hawk (keen eyes)', *bata-ng-lasangan* 'child-LINKER-street (homeless child)'.

The determinans of a denominal nominal compound may also belong to another category, as in *blackbird, washing machine* and *jack-in-the-box*. Further types of nominal compounding may be distinguished by diverse criteria. First, the construction need not be semantically endocentric. It is not, for instance, in English *redcap* 'suitcase carrier' or *pick-pocket*. Second, there does not need to be a nominal base in order to compose a noun stem. There is none in English *see-saw* and Mandarin *kai-guan* 'open close (switch)'.

Compound nouns constitute a specific formal subclass of nouns, but there is, among all the designata of nouns, no specific kind of entities designated by compound nouns, witness such cross-linguistic synonyms as *eyebrow* = French *sourcil*, *fingernail* = French *ongle* etc. (cf. Andersen 1978).

6.3. Processes of inflection and derivation

The notion of **periphrasis** (see Art. 68) has occasionally been extended to noun inflection. Just like Italian *è venuto* 'has come' is periphrastic with respect to Latin *uēnit*, so Italian *del lago* 'of the lake' may be called periphrastic with respect to Latin *lacūs*. However, there is a crucial difference in that *è venuto* consists of two verb forms, while *del lago* does not

consist of two noun forms. There are, in fact, no periphrastic noun forms in this narrow sense. Therefore, the notion of periphrastic inflection as defined by rule (1a) in T8 is not applicable to nouns. However, several of the nominal categories mentioned in 4 may be expressed by grammatical words. Grammatical words which express a nominal class are classifiers as mentioned in 4.1. Words indicating plurality or a collective, i.e. nouns of multitude, have been seen in 4.2. Words expressing case are adpositions. For possession, we have possessive pronouns, attributors like *of* and possessive classifiers. Grammatical words expressing determination and person are, of course, determiners and personal pronouns. By grammaticalization, all such grammatical words may develop into nominal inflections.

Synthetic inflection of nouns may involve any of the formal processes treated in ch. VIII. **Affixation** is most prominent. All of the nominal categories mentioned in 4 may be expressed by suffixes. Nominal classes may also be expressed by prefixes, e.g. in Bantu languages. Here, nominal number fuses with the category of noun class. Case prefixes are exceedingly rare (Sanders 1978; Hawkins & Gilligan 1988). They do occur in some Semitic and Bantu languages (cf. Hetzron 1980: 278) and in Mangarayi, where they are fused with gender and combined with case suffixes, so that the case system might also be analyzed as consisting of circumfixes. T9 shows a major fragment of the declension paradigm.

gender / case	masculine	feminine
accusative	N	*ŋan-* N
nominative	*n̥a-* N	*ŋaḻa-* N
genitive/dative	*n̥a-* N *-w₁u*	*ŋaya-* N
locative	*n̥a-* N *-y₁an*	*ŋaya-* N *-y₁an*
allative	N *-(ga)ḻama*	*ŋaya-* N *-(ga)ḻama*
ablative	N *-w₁ana*	*ŋaya-* N *-w₁ana*

Tabelle 9: Mangarayi declension

Infixation (cf. Art. 55) is chiefly found in verbal morphology and only very rarely applies to noun stems. In Miskito (Misumalpan, Central America), possessive affixes differ according to the alienability of the noun. Inalienable nouns have possessive infixes of first and second person possessors (the third is marked by a prefix), as in *napa* ‘tooth’ – *nampa* ‘your tooth’. The relative rarity of nominal infixation is probably a computable consequence of the overall

rarity of infixation and the relatively low average complexity of nominal (as compared to verbal) morphology.

Transfixation and its importance in Semitic languages is treated more fully in Art. 56. Here it suffices to mention that it also figures among the various processes of plural formation in Arabic. Plurals formed by transfixation, called **broken plurals**, are especially common in non-human nouns. In each dialect, there are more than a dozen different patterns of broken plural formation. T10 shows some examples from Gulf Arabic (Holes 1990: 150-154):

meaning	singular	plural
visitor	zaayir	zuwwaar
book	kitaab	kutub
house	beet	buyuut
mountain	jabal	jibaal

Tabelle 10: Gulf Arabic broken plural formation

In nominal morphology, **reduplication** is mostly used for plural formation. Sumerian has plural suffixes, but also toal reduplication, as in *kur* 'mountain', *kur-kur* 'mountains'. Mangarayi (Merlan 1982: §2.1.1.8), too, uses mainly suffixing, but also has various forms of reduplication. Total reduplication is seen in *bugbugbug* 'old people'. For most nouns, reduplication is limited to their use as the basis for proprietive derivation, and there it is often partial reduplication, as in *malam* 'man', *malalam-yi* 'having husbands'. Elsewhere, reduplication is also used as a process of nominal derivation, e.g. Malay *lamit* 'sky', *lamit-lamit* 'cloth canope', 'palate of the mouth'; Ewe *fo* 'beat', *fo-fo* 'beating'.

The employment of **internal modification** (cf. Art. 58) in nominal morphology is well-known from Indo-European languages. Apophony was exemplified in T3. **Metaphony** (German *Umlaut*) is common in German inflection. In plural formation, it may be the sole mark of the plural, as in *Mutter* 'mother', plural *Mütter*, or it may co-occur with suffixation, as in *Sohn* 'son', plural *Söhne*. Other operations of nominal morphology involving metaphony include diminution, where the diminutive suffixes *-lein* and *-chen* trigger metaphony, as in *Mütterlein, Söhnchen*. Consonant mutation is operative, although again as a concomitant feature, in English plural formation of the type *wolf – wolves*. While metathesis does not appear as a productive process in nominal morphology, all kinds of **suprasegmental processes** may be employed. Accent shift occurs in English nominalizations of the type

contrást – cóntrast, addréss – áddress. Tonal changes expressing case are reported from Turkana (Dimmendaal 1983: ch. 5.3). Vowel lengthening in the same function was seen in (7).

Subtraction of final syllables in declension occurs in Mangarayi plural formation. Ordinary nouns form a plural in *-gaḻa*, like *malam-gaḻa* 'man-PL (men)'. However, the plural of *gaḏugu* 'woman' is *gaḏu-gaḻa*, with subtraction of the final stem syllable. Plural formation of social subsection terms involves a suffix *-w_2u* plus various stem alternations, one of which is subtraction. Thus *jamijin* (a section), plural *jamij-bu*, *ŋarijbalan*, plural *ŋarijban-bu*.

Apart from these formal processes, nouns may also be paradigmatically related to stems of other categories by conversion and suppletion. Conversion (or polycategoriality) is common in English, as in *dance*, *go*, or *fit*. Suppletion is the general pattern in Kunjen, an Australian language of North Queenland. Cf. *egna* 'dance' (verb), *odnden* 'dance' (noun) (Sommer 1972: 74).

As mentioned repeatedly, most languages use several of these processes in nominal morphology. Not infrequently, two different processes co-occur in one word form, and even as the (discontinuous) significans of one grammatical meaning. Among all the different techniques, affixation is dominant. While total reduplication may be found – in isolating languages – as the sole process of nominal derivation and inflection, the use of all the other processes of nominal derivation and inflection in a language implies the use of affixation.

6.4. Theme formation

If no more rules of stem formation (number 2 of T8) are applied, we should get to the level of the root. It is, however, frequently the case that an elementary noun stem consists of a root plus a stem-forming submorphemic unit. Many Latin nouns, for instance, have the general structure displayed in the head row of T11 and exemplified with nouns from three different declension classes.

	root	thematic vowel	case.number
significans	*turr*	*-i*	*-s*
significatum	tower	N	nom.sg.
significans	*mens*	*-a*	*0*
significatum	table	N	nom.sg.
significans	*duc*	0	*-s*
significatum	leader	0	nom.sg.

Tabelle 11: The Latin noun stem

At earlier stages in the language history, the **thematic vowel** was probably a nominal derivational device (cf. Benveniste [2]1935). Synchronically, it is mostly fossilized and forms the basis of declension classes; i.e. the thematic vowel and the case/number ending together form the desinence. For stems of such a structure, one may make an argument to the effect that the root signifies a pure, uncategorized concept, while the significatum of the thematic element is nothing but a category, which it confers to the concept. For Latin, the argument would suffer from the extensive homonymy between noun-forming and verb-forming thematic vowels, as all of the conjugation vowels have counterparts among the declension vowels. For Hausa, the case would be much clearer (cf. Greenberg 1978: § 5.3). Here, virtually all nouns end in a long vowel. Diachronically, this goes back to a definite article, but synchronically, final vowel length is the significans of the grammatical meaning ‘noun’ (N in T11).

In Latin, not all nouns have a thematic vowel. On the one hand, a noun may have a productive or unproductive derivational suffix that ends in a consonant, such as *clam-or* ‘shout-ing’. If these are discounted, the so-called **root nouns** remain, words such as *dux* ‘leader’ (in T11), *fur* ‘thief’ and *lux* ‘light’ which have the case/number suffix attached directly to the root. These may be analyzed as resulting from the application of rules 1.c and 2.c of T8. There are **root words** in every word class. One and the same root may be restricted to one word class or may be used in more than one. The examples just given are exclusively nominal. In such cases, the root itself is word-class specific. Roots which are used in more than one word class are frequent in German, e.g. *Lauf* (noun) – *laufen* (verb) ‘run’, *krach* (ideophone) – *Krach* (noun) – *krachen* (verb) ‘bang’. Refined and possibly historical analysis may ascertain the direction of derivation in some such cases. For instance, the fact that *laufen* inflects as a

strong verb (past *lief*) may point to the basic character of the verb stem, while the weak inflection of *krachen* (past *krachte*) argues for its derived status. This would still leave many cases unanalyzed, including *krach* as an ideophone and as a noun. Here, one may once more consider that the root signifies an uncategorized concept. However, the word class would not be contributed by a distinct element, but would be a purely distributional property of the root morpheme in question. The result of this discussion is that the distinction between the lexical and the grammatical portion of the meaning of a stem, its individual vs. categorial meaning, is sometimes reflected in morphology and sometimes not, and this variation is both language-internal and cross-linguistic.

6.5. Order of stem and affixes

One question here concerns the position of an affixal morphological category relative to the stem. Some preferences concerning the various kinds of affixes are stated in 6.3. A number of typological correlations exist between inflectional affix order and syntactic order (Hawkins & Gilligan 1988). These are summarized in T12.

implicans		implicatum	
Gender Affix	N	V	O
Gender Affix	N	Adp	NP
NP	Adp	N	Gender Affix
SO	V	N	Gender Affix
NP	Adp	N	Indef Affix
SO	V	N	Indef Affix

Tabelle 12: Affix order and syntactic order

From this it follows that the default for gender and indefiniteness affixes is to be suffixes. No exceptionless generalizations of this kind have been found for definiteness and number affixes. In general, nominal prefixation tends to imply verbal prefixation.

Another question concerns the co-occurrence of markings one a single stem. Different formal processes may apply to a given noun stem; no constraints on their combination are known. Both agglutination and fusion of morphological categories are widespread. In Altaic

languages, number and case receive separate expression. Neither conditions any allomorphy in the other, so this is typical agglutinative morphology. In Niger-Kordofanian languages, gender and number are usually fused in one morpheme. In ancient Indo-European languages, these are furthermore cumulated with case.

As regards the sequential order of different affixal categories on one stem, order constraints could, in principle, pertain to any kind of formal marker relative to another one or relative to the stem. In reality, however, the only generalizations that can be ascertained concern the order of an affix expressing some morphological category relative to the stem and its relative closeness to the stem. That is, there is no rule of the kind that one inflection has to precede another one (regardless of their position relative to the stem), or that a particular affix has to be second in the sequence of inflections.

The semantics of grammatical categories may be conceived in an operator-operand framework based on categorial grammar. Applying this to the specification of grammatical categories on a nominal stem, one may say that a morphological category such as number applies as an operator to a nominal stem as an operand. The order in which different operators may apply successively sometimes matters semantically, as in the Kayardild (28) and the Turkish (29).

(28) (a) maku-wala-nurru
woman-LOT-ASSOC
'having many wives'
(b) maku-nurru-walad
woman-ASSOC-LOT
'the many having wives' (Evans 1995: 123)

(29) (a) türk-ler-dir
Turk-PL-COP
'it is the Turks'
(b) türk-tür-ler
Turk-COP-PL
'they are Turks' (Anderson 1985a: 153)

Even where the morphological positions associated with the nouns of a language obey a fixed order, this may reflect, in an iconic fashion, operator-operand layering. The sequential order of morphological categories then reflects their semantic relevance to the stem (cf. Bybee 1985 and Anderson 1985: 25b). This is, in fact, an instantiation at the morphological level of Behaghel's first law. To the extent that operand-operator layering in nominal categories is, in fact, iconic, it tends to follow F3:

stem - derivation - gender/noun class - number - possessive - determination - case

Abbildung 3. Iconic ordering of nominal categories

F3 is meant to represent relative closeness of diverse categories to the stem, but not their left vs. right ordering with respect to the stem or to each other. Naturally, relative ordering in the sense of F3 is crucial only if the respective operators are affixed on the same side of the stem. The semantic motivation for F3 cannot be fully developed here. The following aspects are important: No order is postulated among diverse derivational categories. However, as in other word classes, these are, on the whole, closer to the stem than inflectional categories. Of the latter, gender/noun class is closest to the stem, since this is a lexical-grammatical category of the stem that is presupposed, but not changed by rules of syntax. All the following categories have the nominal or even the entire noun phrase as their semantic locus. The relative order of number and case is stated in Greenberg 1963, #39. Instantiations of F3 include T8 and T11. (30) from Hungarian also contains some of the categories in the canonical order.

(30) arc-ai-k-at
face-PL-POSS.3.PL-ACC
'their faces (acc.)'

However, orders that contradict F3 are not unheard of. Finnish, as illustrated in (31), has the opposite order of Hungarian (cf. Comrie 1980):

(31) yslävä-lle-ni
friend-DAT-POSS.1.SG
'to my friend'

Similarly, while Turkish shows the canonical order of number and possessive, Chuvash has these suffixes in the opposite order (Johanson 1973: 91). German has some erratic exceptions to F3 such as *Kind-er-chen* 'child-PL-DIM (kids)' (Dressler 1989: 8f.). Orders of nominal categories that contradict the iconic principle embodied in F3 are manifestations of the fact that morphology is less iconic than syntax.

From the operator-operand model it also follows that there must be heavy restrictions on the re-application of a morphological category to the same stem. While this is indeed rare, it is not excluded in general. First, a phenomenon which only appears to be an instance of re-application should be noted. In languages where the possessed noun agrees in number and person with the possessor, possessed nouns may end up with two number markers, one

showing the number of the possessed noun, the other the number of the possessor, as is the case in Hungarian when the possessed noun is plural:

(32) (a) az én kabát-ai-m
the I coat-PL-POSS.1.SG
'my coats'
(b) a mi kabát-ai-n-k
the we coat-PL-POSS.1-PL
'our coats'

In such cases, there are really two different sequential slots in the morphological template of the noun form.

Second, there may be more than one case on a noun stem. Examples have already been seen in (24) and (25) from Kayardild; similar ones could be adduced from Yidiny and Old Georgian. The most common subtype of this phenomenon is known as suffix resumption (German *Suffixaufnahme*; cf. Plank (ed.) 1995). It occurs on a noun N_A which functions as an attribute to a noun N_H such that N_A first has a case affix which converts it into an adnominal modifier and second agrees in case with N_H. As was observed in 4.8.1, such adnominal cases are very close to adjectivizers. Here, too, the noun stem possesses sequential morphological slots for cases in diverse functions.

It remains to look at the third type of re-application of a morphological category to a noun, the (redundant) repetition of the same morphological meaning by another mark. As was observed in 4.8.1, some nominal derivations such as diminution and augmentation are recursive. Consequently, nouns with two diminutive suffixes, such as Italian *pezz-ett-ino* = German *Stück-el-chen* 'piece-DIM-DIM', are not hard to find. Empty re-application of the same inflectional category is rarer. It occurs in double plural marking, as in German *Junge-n-s* 'boy-PL-PL (boys)' (cf. Bybee 1985: 75f. for West Frisian). In Hungarian colloquial style, demonstrative and third person singular personal pronouns tolerate double accusative marking: e.g. *ez-t-et* 'this-ACC-ACC (this (accusative))'. Double stem formation can be seen in the (completely irregular) inflection stem of Latin *iecur* 'liver', e.g. gen. sg. *iec-in-or-is*. Double gender marking is unknown.

7. Syntactic functions

The system of syntactic functions presupposed for this section is conceived in a categorial variant of dependency grammar (see Lehmann 1985). A grammatical relation is one of

dependency or of sociation. **Dependency** is an asymmetric binary relation between two grammatical units which do not both belong to the category of the target construction and one of which has a relational slot to be occupied by the other. All the other grammatical relations are ones of sociation. A dependency relation is one of government iff the controller has a relational slot to be occupied by the dependent. It is one of modification iff the dependent element has a relational slot occupied by the controller. In modification, the target syntagm is of the same category as its head (it is endocentric), while in government, it is not.

The syntactic potential of a member of any syntactic category is determined precisely by this category. Because a noun designates an entity or a class of entities, it does not have a modifying slot. From this it follows that, unlike the adjective and the adverb, the noun is not a modifier. This is the functional motivation for the case morphology seen in 4.3 and some of the derivational morphology seen in 4.8.1. In particular, a case affix converts a noun (more generally: a nominal constituent) into a modifier. For instance, an NP in the instrumental case can function as an instrumental adjunct to a verb; an NP in the genitive can function as a possessive attribute to a nominal. A possessive adjective can modify a nominal, too.

If a noun is not case-marked, the only way it can depend on anything is by being governed. From this it follows that the primary syntactic functions of a bare noun are those in which an NP is governed. These include the functions of subject and object, of possessor of a relational noun and of complement of an adposition. To these, the function of the predicate nominal must be added. In most languages, the bare noun can bear this function and constitute the predicate either by itself, in a nominal clause, or in combination with a copula.

The whole gamut of syntactic functions can be fulfilled by nouns which are high in empathy. Consequently, such nouns inflect for the complete case paradigm. Anempathic entities cannot fulfill certain semantic functions such as agent, beneficiary, experiencer, etc. Consequently, low position on the empathy hierarchy correlates positively with defectivity in case inflection.

It was said in 6.5 (cf. F3) that nominal categories differ as to their ‘origin’. Some, including derivational categories and nominal classes, originate in the noun itself, as they are lexical properties of a noun stem. Others, including number/collection, may essentially be chosen for a noun phrase in itself. Yet others, including possessive, determination and case, are assigned to the noun by its syntagmatic or pragmatic context. As we have seen, these differences tend to be manifested in the relative closeness of the respective morphological categories to the noun stem.

8. Linguistic evolution

As we said in 2, the noun is a universal word class. It is not easy to tell why this should be so. Entity concepts can be co-lexicalized with verbs, as the meaning of *kick* contains the concept 'foot'. Concrete nominal concepts can be formed freely by substantivization of adjectival expressions, as in *the old one*. This would, in fact, allow that there be just one concrete noun ('one'), with all the others formed by attribution. Abstract nominal concepts can be formed with equal freedom by nominalization, as we have seen in 5. However, human language appears to be organized in such a way that the goal of such operations must exist in the form of ready-made *Gestalten* which can serve as a model.

Nouns are relatively stable in aphasia (Dressler 1977). In the ontogeny of language, nouns are prior to the other word classes (Gentner 1982), which means they cannot be regarded as primarily derived from adjectives or verbs. The same can be assumed for the phylogeny of human language. The universality of nouns equally entails that diachronic change does not lead to the acquisition or loss of the category 'noun' in a language. What does happen, however, is the feeding and bleeding of the class of nouns. Nominal and denominal stem formation is one of the
ways in which this happens. But, in addition, various structures can turn into nouns or evolve from them in diachrony.

Noun phrases can develop into nouns. A common process is for a nominal consisting of a head noun and a genitive attribute to develop into a compound noun. Thus, the German suffix *-s* appearing at the juncture of such compounds as *Mannesmut* 'manly courage' goes back to the genitive suffix. Furthermore, compound nouns can develop into derived nouns when the determinatum is grammaticalized to a derivational affix. Thus, English derived nouns of the structure X-Y, where Y $\in$ {*-hood, -ship, -dom*}, stem from compound nouns in which X functioned as determinans and Y as determinatum.

Again, nouns may fade out of their class by grammaticalization. Some, or perhaps all, Japanese personal pronouns have nominal origin. For example, *wata(ku)si*, a first person singular pronoun, was earlier a noun *watakusi* meaning 'privacy' and *boku*, a masculine version of 'I', had the nominal meaning 'male servant'. At the early stages of their pronominal use, the element 'humble' was part of their meaning. This meaning property has dropped out later, and *watakusi* was shortened to *watasi* (Sugamoto 1989: 272f.). Similarly, relational nouns such as *front* develop into adpositions and finally into case affixes. Other

nouns develop into classifiers of various sorts. Thus, the noun has an important function in feeding various classes of grammatical formatives.

9. References

Andersen, Elaine. (1978), "Lexical universals of body-part terminology". In: Greenberg (ed.), *Vol. III*, 335-368

Anderson, Stephen R. (1985a), "Inflectional Morphology". In: Shopen (ed.), *Vol. III*, 150-201

Anderson, Stephen R. (1985b), "Typological distinctions in word formation". In: Shopen (ed), *Vol. III*, 3-56

Asher, R.E. (1982), *Tamil*. Amsterdam: North-Holland (Lingua Descriptive Studies, 7)

Benveniste, Emile (^{2}1935), *Origines de la formation des noms en indo-européen*. Paris: Adrien-Maisonneuve

Bloomfield, Leonard (1962), *The Menomini language*. New Haven & London: Yale University Press (William Dwight Whitney Linguistic Series)

Bybee, Joan L. (1985), *Morphology: A study of the relation between meaning and form*. Amsterdam: J. Benjamins

Collins COBUILD English Grammar (1990), London & Glasgow: Collins

Committee on Grammatical Terminology (1911), *On the Terminology of Grammar*. London: John Murray

Comrie, Bernard (1980), "The order of case and possessive suffixes in Uralic languages: an approach to the comparative-historical problem". *Lingua Posnaniensis* 23: 81-86

Comrie, Bernard (1981), *Language universals and linguistic typology: Syntax and morphology*. Oxford: B. Blackwell

Corrigan, Roberta & Eckman, Fred & Noonan, Michael (1989, eds.), *Linguistic categorization*. Amsterdam: Benjamins (CILT, 61)

Derbyshire, Desmond C. (1979), *Hixkaryana*. Amsterdam: North-Holland (Lingua Descriptive Studies, 1)

Derbyshire, Desmond C. (1985), *Hixkaryana and linguistic typology*. Dallas, Texas: Summer Institute of Linguistics

Dimmendaal, Gerrit J. (1983), *The Turkana language*. Dordrecht & Cinnaminson: Foris (Publications in African Languages and Linguistics, 2)

Dixon, Robert M.W. (1972), *The Dyirbal language of North Queensland*. Cambridge & London: Cambridge University (Cambridge Studies in Linguistics, 9)

Dressler, Wolfgang U. (1968), *Studien zur verbalen Pluralität: Iterativum, Distributivum, Durativum, Intensivum in der allgemeinen Grammatik, im Lateinischen und Hethitischen*. Wien: Hermann Böhlaus Nachf. (Österreich. Ak. d. Wiss., Philos.-Hist. Kl., Sitzungsber., 259. Bd., 1. Abhandl.)

Dressler, Wolfgang U. (1977), “Elements of a polycentristic theory of word formation”. *Wiener Linguistische Gazette* 15, 13-32

Dressler, Wolfgang U. (1989), “Prototypical differences between inflection and derivation”. *Zeitschrift für Phonetik, Sprachwissenschaft und Kommunikationsforschung* 42:3-10.

Evans, Nicholas D. (1995), *A grammar of Kayardild: With historical-comparative notes on Tangkic*. Berlin: Mouton de Gruyter (Mouton Grammar Library, 15)

Fleischer, Wolfgang ([2]1971), *Wortbildung der deutschen Gegenwartssprache*. Tübingen: M. Niemeyer [2. unveränd. Aufl.; [1]1969, Leipzig: VEB Verlag Enzyklopädie]

Gentner, Dedre (1982), “Why nouns are learned before verbs: linguistic relativity versus natural partitioning”. In: Kuczaj II., S. (ed.). *Language development. Vol. II: Language, thought, and culture*. Hillsdale, NJ: Lawrence Erlbaum Associates, 301-334

Gil, David. (1991), *Nouns, verbs, and quantification.* Strasbourg: European Science Foundation (EUROTYP Working Paper, series 10, number 1.)

Givón, Talmy (1979), *On understanding grammar*. New York etc.: Academic Press (Perspectives in Neurolinguistics and Psycholinguistics)

Givón, Talmy (1984), *Syntax:A functional-typological introduction, Vol. I.* Amsterdam & Philadelphia: J. Benjamins

Greenberg, Joseph H. (1963), “Some universals of grammar with particular reference to the order of meaningful elements”. In: Greenberg, Joseph H. (ed.), *Universals of language: Report of a conference held at Dobbs Ferry, New York, April 13-15, 1961*. Cambridge, Mass.: MIT Press, 58-90

Greenberg, Joseph H. (1978), “How does a language acquire gender markers?”. In: Greenberg (ed.), *Vol. III*: 47-82

Greenberg, Joseph H. (1978, ed.), *Universals of human language, Vol. 1-4*. Stanford, Cal.: Stanford University

Hawkins, John A. & Gilligan, Gary (1988), “Prefixing and suffixing universals in relation to basic word order”. *Lingua* 74, 219-259

Heine, Bernd (1982), “African noun class systems”. In: Seiler & Lehmann (eds.), 189-216

Hetzron, Robert (1980), “Universals of human language: a Monteverdian quartet in forty-six movements”. *Lingua* 50, 249-294

Hockett, Charles F. (1958), *A course in modern linguistics*. New York: MacMillan

Holes, Clive (1990), *Gulf Arabic*. London: Routledge (Croom Helm Descriptive Grammars)

Hopper, Paul J. & Thompson, Sandra A. (1984), “The discourse basis for lexical categories in universal grammar”. *Language* 60, 703-752

Humboldt, Wilhelm von (1994), *Mexicanische Grammatik*. Herausgegeben von Manfred Ringmacher. Paderborn: F. Schöningh (Schöningh Wissenschaft. W.v. Humboldt, Schriften zur Sprachwissenschaft, 3/2)

Johanson, Lars. (1973), “Sprachbau und Inhaltssyntax am Beispiel des Türkischen” *Orientalia Suecana* 22, 84-106

Kölver, Ulrike (1982), “Interaktion von nominalen Kategorien am Beispiel der Entwicklung des modernen Bengali”. In: Seiler & Lehmann (eds.), 244-251

Kuno, Susumu & Kaburaki, E. (1977), “Empathy and syntax”. *Linguistic Inquiry* 8: 627-672

Landaburu, Jon (1979), *La langue des Andoke: Amazonie colombienne*. Paris: SELAF (Langues et Civilisations à Tradition Orale, 36)

Leech, Geoffrey N. & Svartvik, Jan (^{2}1994), *A communicative grammar of English*. London: Longman

Lehmann, Christian (1985), “On grammatical relationality”. *Folia Linguistica* 19: 67-109

Lehmann, Christian (1988), “On the function of agreement”. Barlow, Michael & Ferguson, Charles A. (eds.), *Agreement in natural language: Approaches, theories, descriptions*. Stanford: Center for the Study of Language and Information, 55-65

Li, Charles & Thompson, Sandra (1981), *Mandarin Chinese: A functional reference grammar*. Berkeley: University of California Press

Manzelli, Gianguido (1990), “Possessive adnominal modifiers”. In: Bechert, Johannes & Bernini, Giuliano & Buridant, Claude (eds.), *Toward a typology of European languages*. Berlin & New York: Mouton de Gruyter (Empirical Approaches to Language Typology, 8), 63-111

Merlan, Francesca (1982), *Mangarayi*. Amsterdam: North Holland (Lingua Descriptive Studies, 4)

Mithun, Marianne (1988), "Lexical categories and number marking." In: Hammond, Michael & Noonan, Michael (eds.), *Theoretical morphology. Approaches in modern linguistics*. San Diego: Academic Press, 211-234.

Plank, Frans (1989), “On Humboldt on the dual”. In: Corrigan et al. (eds.), 293-333.

Plank, Frans (ed.) 1995, *Double case. Agreement by suffixaufnahme.* New York etc.: Oxford University Press.

Premper, Waldfried (1986), *Kollektion im Arabischen*. Köln: Institut für Sprachwissenschaft der Universität (Arbeitspapier Nr. 49)

Sanders, Gerald A. (1978), “Adverbial constructions”. In: Greenberg (ed.), *Vol. IV*, 51-84

Schachter, Paul (1985), “Parts-of-speech systems”. Shopen (ed.), *Vol. I*, 3-61

Schachter, Paul & Otanes, Fe T. (1972), *Tagalog reference grammar*. Berkeley: University of California Press

Seiler, Hansjakob (1983), *POSSESSION as an operational dimension of language.* Tübingen: G. Narr (LUS, 2)

Seiler, Hansjakob (1986), *Apprehension: Language, object, and order. Part III: The universal dimension of apprehension*. Tübingen: G. Narr (LUS 1, III)

Seiler, Hansjakob & Christian Lehmann (1982, eds.), *Apprehension: Das sprachliche*

Erfassen von Gegenständen. Teil I: Bereich und Ordnung der Phänomene. Tübingen: G. Narr (LUS, 1,I)

Shopen, Timothy (1985, ed.), *Language Typology and Syntactic Description, Vol. 1-3*. Cambridge etc.: Cambridge Univ. Press

Smith-Stark, Thomas C. (1974), "The plurality split". *Papers from the Tenth Regional Meeting of the Chicago Linguistic Society*, Chicago, IL: Chicago Linguistic Society, 657-671

Sommer, Bruce A. (1972), *Kunjen syntax*. Canberra: Australian Institute of Aboriginal Studies

Sugamoto, N. (1989), "Pronominality: a noun-pronoun continuum". In: Corrigan et al. (eds.), 267-291

Wheatley, Julian K. (1989), "Burmese". In: Comrie, Bernard (ed.), *The world's major languages*. London: Routledge, 834-854

Werner, Otmar (1979), "Kongruenz wird zu Diskontinuität im Deutschen". In: Brogyanyi, Bela (ed.), *Studies in diachronic, synchronic, and typological linguistics: Festschrift for Oswald Szemerényi on the occasion of his 65th birthday.* Amsterdam & Philadelphia: J. Benjamins (CILT, 11), 959-988

Windfuhr, Gernot L. (1989), "Persian". In: Comrie, Bernard (ed.), *The world's major languages*. London: Routledge, 523-546

Christian Lehmann, Erfurt (Germany)
Edith Moravcsik, Milwaukee, WI (U.S.A.)