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Universal and typological aspects of agreement

Christian Lehmann

Abstract

The purpose of this paper is to give a comprehensive characterization of the syntactic properties of agreement on a crosslinguistic level, to classify kinds of agreement and to show the gradual transitions which exist between agreement and related phenomena.

§ 1 gives a brief survey of the recent literature. In § 2, a working definition of agreement is given, which serves as the basis for the inventory of agreement phenomena in § 3. In § 4 case agreement and person agreement are found to be in complementary distribution in the constructions which may exhibit agreement. The syntactic relation obtaining in the domain of case agreement is modification, while that obtaining in the domain of person agreement is government. The first agreement type is called internal agreement, the second external agreement. Both of them signal a relation to an NP, as is seen in § 5; but whereas internal agreement signals subconstituency under an NP, external agreement signals government of an NP. A unified account of all agreement can only be given on the semantic level: agreement appears in argument slots of semantic predicates and signals their referring to a certain argument.

Agreement may be grammaticalized to varying extents, so that grammaticalization scales of agreement may be set up. § 6 shows that external agreement is a grammaticalized form of anaphora, and that classificatory internal agreement is a more grammaticalized form of various techniques of nominal classification. In the less grammaticalized forms, agreement is not strictly triggered by the NP in question and should rather be called concord.

§ 7 combines known historical facts with implicative generalizations based on crosslinguistic comparison to formulate some laws and tendencies of the diachronic development of agreement. It is seen that both internal and external agreement have their ultimate diachronic bases in anaphora. § 8 puts agreement in a wider perspective, connecting it, on the one hand, with universal operational dimensions, and on the other, with typological characteristics of the languages exhibiting it.

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Language abbreviations completed

ABKhaz	GREenlandic	RUSsian
ACCadic	HOPi	SOUthern Paiute
AMHaric	HUNgarian	SPANish
ARAbic, Classical	HURrian	SWAhili
A R Osi	ITALian	SYRian Arabic
BASque	LATin	TOK Pisin
CAHuilla	LENakel	TOLai
CHAmalal	MOHave	TURkish
DYlrbal	NAHauatl	WALbiri
ENGLISH	NAVaho	YAPese
FINnish	PONca	YUCatec Maya
GERman		

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1. Introduction

Several recent papers on agreement concentrate on its crosslinguistic aspects. The various grammatical categories involved in agreement are examined in Moravcsik 1971 and 1978; the relevant "universals" from Greenberg 1963 are integrated to a large extent, and the connection between agreement and anaphora is established. This connection is especially evident in the personal agreement of the verb. This is dealt with in Hale 1973, Moravcsik 1974 and Givón 1976, Hale and Givón concentrating on its diachronic aspects. The diachronic development of noun class agreement markers out of determiners is treated in Greenberg 1978. The regular relationship between mechanical and semantic agreement is the subject of Corbett 1979.¹

Recent work of the research group UNITYP treats agreement as part of the more general problem of the linguistic apprehension of objects. Heine 1982 and Walter 1982 examine various aspects of the classification and individuation of objects which is effected by gender and noun classes; Biermann 1982 treats agreement in connection with number, and Ostrowski 1982 concentrates on the functions of agreement within that general framework. These four papers have been published in vol. I (Seiler/Lehmann (eds.) 1982) and thus do not require review here.

It has happened rather by coincidence than because of scientific necessity that in the first-mentioned works the syntagmatic aspects of agreement are in the centre of discussion, whereas in the papers proceeding from UNITYP emphasis is laid on the paradigmatic aspects. This does not, of course, exclude consideration of the opposite aspects in either of the groups nor in any of the papers contained therein. The syntagmatic aspect of agreement has been taken into consideration, for example, in Ostrowski 1980 and especially in Seiler 1979, §§ 5.6 and 5.7, namely in connection with the problem of "keeping the linguistic object constant". However, due to the concentration on the nominal sphere, verbal agreement, and with it the relationship between agreement and anaphora, which is the essential syntagmatic aspect of agreement, has remained marginal. Therefore, while fully recognizing that the essentials of agreement are already contained in the sum of the works listed, we may still consider it worthwhile to combine the disparate points of view and to establish a comprehensive frame of reference in this area. Due to lack of space I cannot repeat here all the evidence adduced in previous work, and therefore must refer the reader to the above-mentioned literature for further examples and more detailed descriptions.

2. The notion of agreement

If one wanted to define agreement on a purely structuralistic basis in the traditional static way, one might resort to something like the following formulation:²

¹ A different type of work investigates the syntactic regularities governing agreement (esp. verbal agreement) within a language and seeks to formulate these in a descriptive model. Lawler 1977, Bokamba 1980 and Jake 1980 belong to this group. Lapointe 1980, which deals with agreement in a few 'Standard Average European' languages, only came to my knowledge when this article was already at the publishers'.

² Cf. the definition of agreement in Moravcsik 1978:333, which, however, appears to contain a flaw as regards the reference of her A and B, and also the characterization of agreement in Ostrowski 1981, § 0. In Lapointe 1980:1 the following definition is proposed: "*grammatical agreement* ... will be used to refer to all phenomena which exhibit the following property: the specific morphological form appearing in a sentence correlates with the presence, absence, or form of some other word appearing in the sentence." The context makes it clear that this is not so much an overly broad understanding of the concept 'agreement' but rather a misuse of the term for what "ancient grammarians viewed ... as constituting the major part of the study of syntax" (l.c.).

I. Definition of agreement

Constituent B agrees with constituent A (in category C) if and only if the following holds true:

1. There is a grammatical or semantic syntagmatic relation between A and B.
2. A grammatical category C with a form paradigm of subcategories exists.
3. A belongs to a subcategory *c* of C, and A's belonging to *c* is independent of the presence or nature of B.
4. *c* is expressed on B and forms a constituent with it.

The properties of this definition require some comment. The first condition guarantees that we do not speak of agreement when there is a coincidental categorial conformity between two constituents not grammatically or semantically related to each other. I will leave it open in this paper whether coordination of A and B should be considered a possible instance of the syntagmatic relation here required. Consider a Latin phrase like *dominum et servas* "the master (acc.) and the maids (acc.)". They show the same case, and this could not be otherwise; but they differ in gender and number, and this is in no sense a violation of any agreement rule. On the other hand, nominal agreement in Latin otherwise does include gender and number, as well as case, agreement. The parallelism in the case of the two NPs might be explained by the fact that they bear the same syntactic relation to some third term. The situation is somewhat analogous to the agreement of the nominal apposition; see §5.3.5.

By requiring, secondly, that there be a form paradigm for C, I want to characterize certain phenomena as borderline cases of agreement with regard to C. In the cases I have in mind, markers relating to some category other than C appear on B if A belongs to a specific subcategory *c* of C, and otherwise no markers appear. This is the case, for example, whenever the verb agrees with its object only if the latter is definite (see example (23b) below and Moravcsik 1971, § 3.2.3). If we said that here the verb agrees with the object in definiteness, our conception of agreement would be somewhat wider than condition 2 allows.³ Similarly, suppose that an adjective agreed with its head noun in gender only if the noun were singular, and otherwise no agreement signs appeared on the adjective. We would not want to say that such an adjective agrees with its head noun in number.

As for condition 3, notice first that its first clause presupposes that C is a grammatical category of A. This formulation conceals a complex theoretical issue, because C may be either lexically inherent in A or may "land" on A by the rules of syntax and morphology. If A = noun, then the former is true if C = gender or noun class, and the latter is true if C = number, definiteness or case. In the former situation, A may belong to a certain category without this being expressed on A. Therefore condition 3 does not require C/*c* to be expressed on A (contrast this with condition 4). Consider an NP such as Latin *frigida hiems* "cold winter". Looking at *hiems* in isolation and even knowing its declension, one cannot see whether it is of masculine or feminine gender. In saying that *frigida* agrees with *hiems*, we evidently do not require that this be expressed on *hiems*. Still less do we require (I only recall what is generally accepted) that *c* be expressed on A and B by the same morph. There may, of course, be allomorphy; agreement is not a kind of alliteration.

As for number, definiteness and case, however, these are, on the semantic level, categories of the nominal or NP and not of the noun (for number, see Moravcsik 1971, § 3.2.2 = 1978, § 2.1.1). Therefore an analysis of a certain language L_i according to which these are grammatical categories of the noun can be substantiated only if there is a form paradigm of these categories for the L_i nouns.⁴ If the number, definiteness or case of an NP of a language L_j were expressed on its determiners and/or attributes, but not on the noun, condition 3 would not allow us to say that L_j

³ The condition would be satisfied if the verb had distinct agreement affixes for definite and indefinite objects; but this, apart from being *ex hypothesi* excluded above, is actually never the case.

determiners or attributes agree with their head nouns in these categories. This can be illustrated by case inflection in Rushi (Pamir), where the structure is [(Dem-Case) N]_{NP},⁵ and by definiteness marking in Lithuanian, where the structure is [(Adj(-Def)) N]_{NP}. The situation is no different where, in the absence of determiners or attributes, the number, definiteness or case signal "lands" on the noun; it would still not be a grammatical category of the noun. For example, the structure for case agglutination in Basque is [[N (A)]-Case]. The Persian and Yucatec examples discussed below with respect to condition 4 are also relevant here. In none of these cases is the first clause of condition 3 fulfilled, and therefore these attributes and determiners do not agree with their head nouns in the categories of number, definiteness or case, although we shall see in § 4.3 that they may be said to show agreement in a different sense.

Further, we must disallow, as we do in condition 3, that the categorization of A as c could depend on B, because otherwise one could, in the case of a verb agreeing with its subject, direct and indirect object, say that the verb agrees with its arguments in syntactic function (case function).⁶ This condition also characterizes definiteness agreement within the NP as a marginal form of agreement, namely insofar as the definiteness of the NP depends on the agreeing constituents. In Latvian, Croatian and Slovenian, definiteness of an NP may be shown exclusively by the inflection of its adjective attributes (see Krámský 1968, § 3), and in German it is shown *inter alia* by this. In Arabic, the signs of definiteness and indefiniteness of the noun reappear on the attributive adjective (cf. ex. (44) below and Ostrowski 1982, § 1.2). For the Baltoslavic and German definiteness, agreement with the head noun is already excluded by the first clause of condition 3. Apart from this, in all of these cases including the Arabic one, its second clause is not fulfilled to the extent that the attribute contributes to the determination of the head noun.

Turning finally to condition 4, its first clause has to be read with two different emphases. On the one hand, we have to postulate that c be expressed on B, because otherwise nothing would prevent us from talking about number agreement of the adjective with the head noun in English. On the other hand, the condition means that c be expressed on B; i.e. the expression of c must be in some way morphologically bound to B. In § 6.3.3, article, possessive and numeral classifiers will be discussed, and the conclusion will be drawn that they are marginal to agreement. There are languages in which such elements are free forms; for instance, numeral classifiers are free in Burmese and Palauan (Serzisko 1980), and possessive classifiers are free in Lenakel (Lynch 1978:80-82). Here the mere fact of not fulfilling condition 4 excludes these phenomena from agreement.

The second clause of condition 4 is necessary in order to exclude from agreement agglutinative marking of c on the outermost subconstituent of a phrase. Consider Persian *āb-e garm-rā* ([water-AT warm]-ACC) "warm water" or Yucatec *he? kačal-oob* ([egg broken]-PL) "broken eggs". These phrases, superficially rather similar to those discussed above with respect to the first clause of condition 3, differ crucially from most of them in that B and c do not form a constituent. One might say that such constructions are sufficiently excluded from agreement by condition 3, because here A does not belong to c (i.e. *āb* is not in the accusative, and *he?* is not in the plural). However, in the

⁴ This difference between the lexically inherent and the morphosyntactically acquired categories of a noun results in our being used to recognizing gender or noun class agreement even if these categories are not expressed on the noun; and it makes sense to speak of overt vs. covert nominal classes (Heine 1982, § 2.2.1, whereas there is no parallel distinction between overt vs. covert number, definiteness or case. Cf. also § 6.4.

⁵ The situation is similar in large parts of German nominal inflection. For example, in the declension of *die Gleichung* "the equation", case is expressed exclusively by the article, or by other determiners or attributes. In phrases of this kind, the article cannot be said to agree with the noun in case. One might also recall number inflection in French, which in an article-noun syntagm is shown primarily and often (depending on liaison) exclusively by the article.

⁶ This idea seems actually to be involved in the conception of verbal agreement presented in Chafe 1977.

framework to be developed in § 4.3, this would be an inappropriate objection, for reasons that it would be premature to discuss here.

Agreement is to be strictly distinguished from **government** (= rection).⁷ The following definition will suffice for our purpose:

II. Definition of government

Constituent A governs constituent B if the following holds:

1. B is subordinate to A;
2. this syntagmatic relation between A and B is semanto-syntactically inherent in A so that A determines the syntactic function which B has in the construction. This entails that if this syntactic function is expressed by morphological categories appearing on (or with) B (mainly cases or adpositions), then their selection is also determined by A.⁸

In the spirit of this definition, a verb may be said to govern its object, or a preposition its complement, even if the object or the complement are not marked for case. Thus, the nature of the syntagmatic relation between A and B is specified more narrowly for government than for agreement (cf. I, condition 1); on the other hand, the requirement that the relationship be morphologically expressed on B, which had to be imposed on agreement (condition 4), seems unnecessary in the case of government. We shall see in §4 that agreement may be superimposed on a government relation, which is one more reason for keeping the two apart.

A terminological remark may be appended now that the concept of agreement has been clarified. In English linguistics *agreement* and *concord* are often used as synonyms (e.g. in Lyons 1968:239). A synchronic lexical analysis of the alternative terms might perhaps not show it, but an etymological analysis would lead us to consider *agreement* as a non-symmetrical relation (x agrees with y, but not necessarily vice versa), and *concord* as a symmetrical relation (x and y concord with each other). Now, the above definition leaves no doubt that the specific relation between two constituents A and B that we are used to calling agreement (or concord) is not a symmetrical relation. I therefore propose to use the term 'agreement' for what has been defined in I, and to reserve the term 'concord' for whatever such a term might be needed for (cf. below § 6.4).

Even if definition I is "descriptively adequate", it is nevertheless unsatisfactory because it teaches nothing about the functioning and the use of agreement. If one wants answers to such questions, one must abandon the static view contained in the definition and conceive of agreement as an agglomerate of linguistic procedures implementing certain operations with certain functions. This will be attempted in §§ 5ff.

3. Inventory

3.1. Forms of agreement

First of all we differentiate between *elements* which agree in the sense that they bear agreement markers, and *grammatical categories* which agree in the sense that they constitute agreement markers. The elements which display agreement can be classified either in word classes (parts of speech) or in constituents with specific syntactic functions.⁹

⁷ Both are subsumed under the broad definition of agreement proposed by Lapointe (see fn. 2).

⁸ This definition leaves open the possibility that other phenomena, too, might be called government. For instance, the phenomenon of verbal mood in a subordinate clause being governed by the conjunction (if this is a correct statement of certain facts), is not covered by the definition.

⁹ The list of agreeing "constituents" given in Moravcsik 1978:363f actually disregards this distinction.

1.a. All **word classes** belonging to the nouns (in the traditional generic sense) and verbs can agree: substantives (nouns in the specific sense), adjectives, numerals, pronouns of all kinds, articles, full and auxiliary verbs; furthermore, adpositions (i.e. pre- or postpositions).¹⁰ These are in fact all the major word classes; excluded from the list are only conjunctions, particles, interjections, and the like.

1.b. The division into **syntactic constituents** first of all shows that agreement can take place in the noun phrase (NP), verb phrase (VP), and adpositional phrase (AdpP).

Inside the NP, determiners and attributes agree with the head noun. These include articles, demonstratives, numerals, adjective attributes, relative clauses, and nominal appositions; furthermore, among the possessive attributes, both possessive pronouns and nominal possessors. With the attributive genitive, the opposite case is also possible, namely agreement of the head noun, the possessum, with its nominal possessor. Finally, when the NP consists only of a (substantival) pronoun, this agrees with its repraesentatum, i.e. with the NP it refers to.

Now for the VP, we observe agreement of the full or auxiliary verb with its arguments, i.e. with the subject, the direct and indirect objects, and occasionally with others. A nominal predicate may agree with the subject. Finally, in the AdpP the adposition agrees with its nominal complement.

2. Among the agreeing grammatical **categories**, we can distinguish two major groups, the lexical and the syntactic categories. All class divisions of nouns, whether verbal classification, numeral classification, possessive classification, article classification, noun classes or gender, belong to the lexical agreement categories (to the extent that the term agreement is at all appropriate here; see §§ 6.3.3f). We therefore call agreement in lexico-grammatical categories of nouns **class agreement**. On the other side we have agreement in syntactic categories such as person, number or case (on definiteness see above § 1).

This exhausts the list of the agreeing word classes, constituents and categories.¹¹ There are various other phenomena which have been tentatively regarded as agreement (cf. Moravcsik 1971:47 and 49f): the semantically empty repetition of a negation on several sentence constituents, restrictions on the cooccurrence of tenses and moods in main and subordinate clauses as well as on the cooccurrence of tenses and moods with adverbs and particles, and finally the concord of subject and predicate with regard to genericness belong here. None of these conforms to definition I or exhibits the further essential characteristics to be investigated below. They can thus be excluded.

3.2. Illustration

I will now exemplify the different forms of agreement according to subdivision 1.b above, which is for the present the most important one; the other subdivisions will necessarily, if unsystematically, be corepresented. Preferential weight will be given to the less familiar forms of agreement.

3.2.1. Agreement inside the NP

Article

- (1) a) il caso (m) "the case" – la casa (f) "the house"
 ITA b) il lupo (m) "the wolf" – la lupa (f) "the she-wolf"

¹⁰ It is unclear under which conditions adverbs may agree; see Drossard in Seiler/Stachowiak (eds.) 1982, part II, § 1 on Awar.

¹¹ For one or two exceptional agreement phenomena not accounted for here see fn. 20 and fn. 76.

- (2) a) der Laster (m) "the truck" – das Laster (n) "the vice"
 GER b) der Wolf (m) "the wolf" – die Wölfin (f) "the she-wolf"

The examples show agreement in the lexical category gender, thus class agreement. Number and – in (2) – case are present, too.

Demonstrative, numeral and adjective

- (3) a) illorum duorum bonorum virorum (m) "of those two good men"
 LAT b) illarum duarum bonarum feminarum (f) "of those two good women"

- (4) a) ki-kapu ki-kubwa ki-moja
 SWA CL7-basket CL7-large CL7-one
 "one large basket"

vi-kapu vi-kubwa vi-tatu
 CL8-basket CL8-large CL8-three
 "three large baskets" (Welmers 1973:171)

- b) m-shale u-le – ki-su ki-le
 CL3-nail CL3-that CL7-knife CL7-that
 "that nail" "that knife" (Welmers 1973:173)

In (3) we see agreement in gender, number and case. In (4) the noun class varies, which in (4a) means a variation in number.¹²

Instead of agreeing with their head nouns, as the numerals in (3) and (4) do, numerals can also be accompanied by numeral classifiers. This will be discussed in § 6.3.3.

Nominal apposition

- (5) Moskvj (f), etoj krasnoj stolicy (f)
 RUS "of Moscow (f), that red capital"

- (6) a) Bactra (n.pl.), regionis eius caput (n.sg.)
 LAT "Bactra, the capital of that region" (Curt. 7, 4, 31)

- b) Garunna (f) flumen (n)
 "the river Garonne" (Caes. B.G. I, 1, 2)

All these examples show agreement in case. The agreement in gender and number displayed by (5) is a coincidence, as the examples in (6) illustrate. If the formulation of condition 1 of our definition of agreement were perfect, it would provide for the fact that gender and number are not involved in the syntagmatic relation at hand, nominal apposition.

¹² Class 8 is the plural of class 7, and the same pairing of singular and plural occurs in most of the other Bantu noun classes.

Relative clause

The agreement of a relative clause with its head is rare. It occurs in Hurrian (an ancient language of North-West Meopotamia and South-East Asia Minor), Dyirbal, Kaititj (both Australian), Yaqui and Shoshoni (both Uto-Aztecan) (for details, see Lehmann 1979, ch. IV. 2.3.2). Some examples are:

(7) a) tuppe nihar-rē-we ar-us-au-sse-ne-we
 HUR tablet dowry-SG-GEN give-PRT-1-REL-SG-GEN
 "the tablet of the dowry that I gave" (Mit. III 40f)

b) wur-au-sā-sse-na-mān tiwē^{MEŠ}
 wish-1-PL-REL-PL-however thing-PL
 "the things we wish, however" (Mit. I 80)

(7a) shows case agreement, and b) number agreement.

(8) Yibi yara-ŋgu njalŋga-ŋgu djilwa-ŋu-ru burā-n.
 DYI woman man-ERG child-ERG kick-REL-ERG see-REAL
 "The man whom the child had kicked saw the woman." (Dixon 1969:38)

In Dyirbal, the relative clause agrees with its head in case, as (8) shows.

Possessive pronoun

(9) a) cuyo(s) amigo(s) (m) "whose friend(s)"
 SPA cuya(s) amiga(s) (f) "whose girl-friend(s)"

b) nuestro(s) amigo(s) (m) "our friend(s)"
 nuestra(s) amiga(s) (f) "our girl-friend(s)"

(10) a) v č'ej komnate (f) "in whose room"
 RUS v č'em dome (m) "in whose house"

b) v našej komnate (f) "in our room"
 v našem dome (m) "in our house"

All these examples show agreement in gender and number; moreover, case agreement is to be seen in (10). The b)-examples show the familiar (personal) possessive pronouns, whereas in the a)-examples interrogative possessive pronouns appear. These can agree if they are genuine adjectives, as they are in Spanish and Russian, and not genitive case forms of the substantival interrogative pronoun, as in English or German.

The above possessive pronouns are free. Possessive affixes almost never agree with the noun to which they are bound, i.e. the possessum. In Swahili possessive suffixes are bound not to the head noun but to the attributor, which in turn takes class prefixes:

(11) m-shale w-a-ngu – ki-su ch-a-ngu
 SWA CL3-nail CL3-AT-my CL7-knife CL7-AT-my
 "my nail" "my knife" (Welmers 1973:173)

The complex result is a free possessive pronoun agreeing in noun class (incl. number) with its head noun. This construction is similar to the possessive construction involving possessive classifiers, which will be exemplified in § 6.3.3.

Possessor noun phrase

The agreement of the nominal possessor (genitive attribute) with its possessum (head noun) is equally rare as that of the relative clause. Here are phrases from Chamalal (East Caucasian):

- (12) a) hekva-ssu vac – hekva-ssu-b-e vac-be
 CHA man-Ø:CL1 brother(CL1) man-Ø-CL1/2-PL brother(CL1)-PL
 "man's brother" "man's brothers"
- b) hekvy-ssv-i jac – hekva-ssu-b-e jac-be
 man-Ø-CL2 sister(CL2) man-Ø-CL1/2-PL sister(CL2)-PL
 "man's sister" "man's sisters"
- c) hekva-ssu-b čatv – hekva-ssv-ij-e čat-e
 man-Ø-CL3 horse(CL3) man-Ø-CL3-5-PL horse(CL3)-PL
 "man's horse" "man's horses"
- d) hekva-ssu-l ĭca – hekva-ssv-ij-e ĭca-be
 man-Ø-CL4 cheese(CL4) man-Ø-CL3-5-PL cheese(CL4)-PL
 "man's cheese" "man's cheeses"
- e) hekva-ssv-i anna – hekva-ssv-ij-e anna-be
 man-Ø-CL5 ear(CL5) man-Ø-CL3-5-PL ear(CL5)-PL
 "man's ear" "man's ears" (Magomedbekova 1967:388f)

Nouns do not show their own noun class. Possessive attributes are constructed according to the following formula:

declension_stem_of_possessor_noun -possessive_suffix (-e)

The possessive suffix occupies the same slot as the case suffixes. It consists of the class agreement affix of the possessum, if the possessor belongs to class I (human masculine); otherwise it is an invariable *-L* (lateral affricate), which may be considered as a genitive ending. In addition to this partial class agreement, there is number agreement: a final *-e* is added if the possessum is plural (cf. also Drossard in Seiler/Stachowiak (eds.) 1982, part II, § 8.5.1).

A similar number agreement of the possessor occurs in Hurrian:

- (13) DINGIR^{MEŠ}-na umi-ni-bi-na ^{URU}Hatte-ni-bi-na asduhi-na
 HUR gods-PL land-SG-GEN-PL Hatti-SG-GEN-PL female-PL
 "the female gods of the land Hatti" (KUB XXVII 1 II 72f) (Speiser 1941:201f)

The possessive attribute is put into the genitive; and to this, by a process called suffix resumption (Suffixaufnahme), the suffixes of the possessum are added. This agreement, which has already been observed in (7), extends also to case (there are no noun classes or genders in Hurrian):

(14) a) sen-ifu-we-ne-we asti-we nihari
 HUR brother-my-GEN-SG-GEN wife-GEN dowry
 "the dowry of my brother's wife" (Mit. IV 48)

b) sen-ifu-we-ni-s asti-s
 brother-my-GEN-SG-ERG wife-ERG
 "my brother's wife (trans.subj.)" (Mit. III 7)

The same case agreement of genitive attributes occurs in Dyirbal (cp. (8) above):

(15) bagul waŋal-gu baŋul-djin-gu yaɾa-ŋu-njdjin-gu
 DYI DET:DAT boomerang-DAT DET:GEN-Ø-DAT man-GEN-Ø-DAT
 "to the man's boomerang" (Dixon 1972:106)

The suffix *-(nj)djin* here seems to have a function parallel to the Hurrian suffix *-ni* (provisionally transcribed as a singular marker): they mediate the agreement¹³ and are therefore similar to the Swahili attributor encountered above, ex. (11), in possessive pronouns. The latter's function becomes still clearer here in nominal attribution:

(16) a) ki-su ch-a Hamisi
 SWA CL7-knife CL7-AT Hamisi
 "Hamisi's knife"

b) ny-umba y-a m-tu yu-le
 CL9-houseCL9-AT CL1-man CL1-that
 "that person's house" (Welmers 1973:275)

This construction is frequent in Niger-Cordofanian languages, but it also occurs in Hindi. It may be subsumed under the agreement of the nominal possessor, because the complex consisting of the class prefix and the attributor is proclitically attached to the possessor noun. In other languages such as Tswana, it is prefixed to it;¹⁴ and the same occurs in Swahili if the possessor is pronominal, as we have seen above.

Possessed noun

In one type of genitive nominal attribution which is very frequent in the languages of the world,¹⁵ the possessum has affixes through which it agrees with its possessor NP.

(17) ben-im ev-im – sen-in ev-in – Ahmed-in ev-i
 TUR I-GEN house-my you-GEN house-your Ahmed-GEN house-his
 "my house" "your house" "Ahmed's house" (cf. Wendt 1972:80)

(18) sarà sà-y^onə̀ – à-c'k^oən yə-y^onə̀ – à-c'k^oən-c^oa rə-y^on-k^oà
 ABK I OBL.1.SG-house ART-boy OBL.3.SG.HUM.M-house ART-boy-PL OBL.3.PL-house-PL
 "my house" "the boy's house" "the boys' houses"

¹³ Speiser (1941:101f) calls *-ni* a relational particle, Dixon (1972:106) *-djin* a catalytic suffix.

¹⁴ See Ostrowski 1982, § 1.2.

¹⁵ See the examples and lists of relevant languages in Keenan 1974:303 and Ostrowski 1982, § 1.2. Further such languages are Abkhaz, Accadic, Finnish, Hungarian, Lakhota, Mohave, Nahuatl, Navaho, Palauan, Woleaian and Yucatec Maya.

(Hewitt 1979:116)

The examples in (17) show possessive suffixes agreeing in person, those in (18) show prefixes agreeing in person, number and class/gender.¹⁶

Personal pronoun

- (19) the man ... he – the woman ... she
 ENG the man ... they – the women ... they

Agreement of (anaphoric) personal pronouns in gender and number is common. We will also say that they agree in person, though one may doubt that there can be anaphora of first and second person in the same sense as there is anaphora of third person.¹⁷ Agreement of other (substantive) pronouns, e.g. indefinites, will not be dealt with.

3.2.2. Agreement of the predicate

Verb with subject

- (20) adam çalış-ıyor – adam-lar çalış-ıyor-lar
 TUR man work-PRS man-PL work-PRS-PL
 "the man works" "the men work" (cf. Wendt 1972:56)

- (21) žurnal gorel (m) – kniga gorela (f) – pis'mo gorelo (n) – knigi goreli
 RUS "the journal burnt" "the book burnt" "the letter burnt" "the books burnt"

The Turkish verb agrees with its subject in person and number, the past verb in Russian agrees in gender and number.

Verb with direct object

- (22) a) au ome-si-a i noni.
 ARO SBJ.1.SG see-TR-OBJ.3.SG NTOP man
 "I see the man."

- b) iraa na mwani noni rau ome-si-'i i mwani haka.
 they TOP PL man SBJ.3.PL see-TR-OBJ.3.PL NTOP PL ship
 "The men see the ships." (Capell 1971:67)

- (23) a) Ni-li-mw-ona m-toto.
 SWA SBJ.1.SG-PRT-OBJ.CL1-see CL1-child
 "I saw the/a child."

¹⁶ In Finnish, possessive suffixes may function in agreement only if the possessor is a non-reflexive personal pronoun; see Pierrehumbert 1980:615 and cf. (36) below. – In the Maa languages (Eastern Nilotic) Maasai (Tucker/Mpaayei 1955:38) and Camus (Heine 1980:110 and 1982:205), possessor and possessum agreement cooccur in the relator of genitive attribution. In the construction 'possessum – relator – possessor', the relator shows first the gender of the possessum, then the number of the possessor.

¹⁷ On this issue, cf. Harweg's (1968:24-30) distinction between multidimensional and unidimensional syntagmatic substituents.

- b) Ni-li-ki-ona ki-tabu.
 SBJ.1.SG-PRT-OBJ.CL7-see CL7-book
 "I saw the book."

The verb in Arosi agrees with its object in person and number. The Swahili verb shows class (incl. number) agreement with its object, if this is either animate (23a) or (inanimate and) definite (23b). Verb agreement in animateness, besides person and number, occurs in Woleaian (Sohn 1975:107f).

Verb with indirect object

- (24) ni-k zu-ri liburu-a da-kar-kizu-t.
 BAS I-ERG you-DAT book-DEF ABS.3.SG-carry-DAT.2.SG-ERG.1.SG
 "I bring you the book." (Biermann 1980:9)
- (25) (sarà) a-x°ǎč'-k°à a-š°q°'-k°à Ø-rə̀-s-to-yt'.
 ABK I ART-child-PL ART-book-PL ABS.3-DAT.3.PL-ERG.1.SG-give.DYN-FIN
 "I give the books to the children." (Hewitt 1979:105)

The Basque verb in (24) displays person and number agreement with the indirect object, and the Abkhaz verb in (25), in addition, gender agreement.

Verb with other arguments

It is extremely rare that a verb has agreement affix slots for arguments other than the subject, direct, and indirect object. Abkhaz is one language where a pronominal verb prefix may refer to other oblique arguments, as in (26).

- (26) a-žah°à s-a+la-yə̀-sə-yt'.
 ABK ART-hammer ABS.1.SG-OBL.3.SG.NHUM+with-DAT.3.SG.HUM.M-hit-FIN
 "I hit him with the/a hammer." (Hewitt 1979:114)

But even here there is no separate slot for such oblique arguments; the agreement signs occupy, together with the postposition specifying the role of the argument, part of the slot reserved for non-absolutive and non-ergative arguments.¹⁸

The situation in Swahili is similar. (27) shows agreement of the verb with a locative adverbial.

- (27) ku-le m-ji-ni ku-me-ugua wa-tu wengi.
 SWA CL17-D3 CL3-village-LOC CL17-PRF-fall.ill CL2-man CL2:many¹⁹
 "In the town many people are ill." (Polomé 1967:160)

But here as in Abkhaz, there is no separate agreement slot for such adverbials. In sentences such as (27), they behave as subjects and therefore control subject agreement.²⁰

¹⁸ In Tabassaran, verbal subject agreement suffixes appear to be optionally followed by suffixes which may agree with just any complement or adjunct of the verb and consist of a truncated form of the respective personal pronoun plus the case suffix, as it appears on the referent NP in the clause (Ostrowski 1981:5).

¹⁹ *M-ji-ni*, being a locative expression, triggers class 17, i.e. locative, agreement. An alternative interpretation of *ku-le* would be (LOC-D3) "there".

²⁰ See Givón 1976, § 9.1.1 for further discussion. – Mention may be made, in this connection, of the agreement of the verb with the possessor of the subject or absolutive argument instead of with the subject or absolutive argument itself, which is said to occur in Wichita (Rood 1976), Tangut (Cornrie 1980:232) and Tabassaran (Ostrowski 1981:1-3). I venture the hypothesis that this is to be explained neither as the agree-

Auxiliary verb with arguments

(28) Aurr-a-k gizon-a-ri liburu-a eman di-o.
 BAS child-DEF-ERG man-DEF-DAT book-DEF given ABS.3.SG:AUX-DAT.3.SG(ERG.3.SG)
 "The child gave the man the book."

(29) ηαtjulu-ļu kapi-na-ηku kaηa punta-ηi njuntu-ku.
 WAL I-ERG FUT-SBJ.1-OBJ.2 woman take-NPAST you-DAT
 "I will take the woman from you." (Hale 1973:334)

In Basque, there is an auxiliary verb stem of its own, though it is fused with the affixes. In Walbiri, there is no such stem; the elements showing person and number of the subject and object are suffixed to a tense marker and, together with this, form the auxiliary.

Nominal predicate

(30) Mors certa (f), hora incerta (f).
 LAT "Death is certain, the hour is uncertain."

In many languages, the nominal predicate (adjective or participle) agrees with the subject in gender and number, as in (30). If the predicate is a noun, agreement in these categories is a coincidence, as (31) shows.

- (31) a) Homo (m) homini lupus (m).
 LAT "Man is a wolf to man." (Hobbes)
- b) Bellum (n) pater (m) omnium.
 "War is the father of all things." (Heraclitus)
- c) Quod (n.sg.) fuimus lauda, si iam damnas quod sumus!
 "Praise what we were, if you condemn what we are!" (Phaedr. 5, 10, 9)

It is less known that the nominal predicate may also agree in case with the subject (cf. Ostrowski 1982, § 1.3):

- (32) a) estque aliud iracundum (acc.m.) esse, aliud iratum (acc.m.) (Cic.Tu. 4, 27)
 LAT "It is one thing to be irascible, another thing to be angry."
- b) sentiri ... putat ... nivem esse albam (acc.f.) (Cic.fi. I 30)
 "He believes it can be sensed that snow is white."
- c) quieto (dat.m.) tibi licet esse (Pl.Ep. 338)
 "You may be quiet."

ment of the verb with an adnominal "non-term" (which is improbable in itself) nor as a category shift by which "for purposes of agreement, the person and number of the [subject or absolutive argument] is deemed to be that of the possessor, rather than that of the possessed" (Comrie l.c.), but instead as a replication of the possessor in the form of a dativus ethicus, which constitutes the agreement affix.

As (32a) shows, the nominal predicate takes the accusative (the unmarked case) when there is no subject to agree with. It takes the nominative if the subject is in the nominative (ex. 30), and as can be seen from (32b) and c), it takes the accusative and dative according to whether its subject is in the accusative or dative, respectively. What matters here is not how regular or widespread this is, but only the fact that such agreement occurs.

3.2.3. Agreement of the adposition

The agreement of an adposition with its complement (i.e. the NP that it governs) is comparatively rare and has not so far been dealt with in the literature on agreement. Whereas there are many languages in which adpositions take pronominal complements as affixes, there are only a few in which these affixes remain present when the adposition has a nominal complement (incl. a free pronoun), so that one may speak of syntactic agreement (cf. below § 4.2).

Preposition

(33) a) na 'ari bei-a i gare-na.
 ARO SBJ.3.SG go with-OBL.3.SG NTOP son-POSS.3.SG
 "He went with his son." (Capell 1971:43)

b) iia a boi bei-rarue do'ora-gu.
 he SBJ.3.SG comewith-OBL.3.DU brother-POSS.1.SG
 "He came to [sic] my two brothers." (Capell 1971:45)

(34) a-tu"kw a kani-a
 SOU it-under house-ACC "under the house" (Langacker 1977:27)

The agreeing prepositions of Arosi have suffixes, those of Southern Paiute have prefixes.²¹ The agreement in (33b) is imperfect, because the preposition shows dual number while the complement does not²² (cf. §§ 4.2 and 6.4).

Postposition

(35) a) én-után-am – a fiu után
 HUN I-behind-POSS.1.SG the boy behind
 "behind me" "behind the boy"

b) az én rész-em-re – a fiu rész-é-re
 the I part-POSS.1.SG-SUBL the boy part-POSS.3.SG-SUBL
 "for me" "for the boy"

The personal pronoun *én*, which cliticizes to the postposition in (35a), is structurally unnecessary and emphatic in both constructions. The construction in a) is the more common one, where the suffixes of the third person do not appear on the postposition if it has a nominal complement. There are, however, a few postpositions to be constructed as in b). The combination *rész ... re* can only be

²¹ According to Langacker (l.c.), we deal with an 'inverted postposition' in (34).

²² It is common in Arosi to express the number of an NP only through the agreement suffixes referring to it; cf. Capell 1971:61 et pass.

etymologically analyzed as above. It is a discontinuous postposition taking agreement suffixes as quasi-infixes. Here the paradigm is complete even in the third person.

A situation similar to that in (35a) obtains in Finnish:

(36)	min-un	taka-na-ni	– hän-en	taka-na-nsa	– talo(-j)-en	taka-na
FIN	I-GEN	back-ESS-POSS.1.SG	he-GEN	back-ESS-POSS.3.SG	house-PL-GEN	back-ESS
		"behind me"		"behind him"		"behind the house(s)"

Here, too, the suffixes on the postposition disappear as soon as its complement is a full NP rather than a free pronoun. – While the postpositions of Hungarian and Finnish agree by suffixes, those of Hopi and Abkhaz agree by prefixes:

(37)	haki-y	a-w		
HOP	someone-ACC	him-to	"to someone"	(Langacker 1977:26)

(38) a)	(sarà)	s-q'ə+n+t ^o	
ABK	I	OBL.1.SG-from	"from me"

b)	a-jəyas	a-q'+nə̀	
	ART-river	OBL.3.SG.NHUM-at	"at the river" (Hewitt 1979:103)

This concludes the illustration of the various forms of agreement. Comments have been deliberately confined to elucidation of the examples; discussion of the regularities and restrictions on agreement is the subject of the subsequent sections.

4. Two types of agreement

4.1. Case-domain and person-domain agreement

The inventory of the forms of agreement presented in § 3 was arranged according to criteria not based on agreement itself. In an attempt to establish, among the rather different forms of agreement, an order which is pertinent to the empirical domain, we find the criterion most pertinent which corresponds to the question: which constituents may agree in which grammatical categories? We first note that class and number agreement do not lead to a subdivision here, since they are possible for all the constructions listed. Agreement in person and agreement in case, however, are in complementary distribution amongst the constructions: the attributes, appositions and determiners of a noun and the nominal predicate may agree in case, but not in person;²³ possessum, verb and adposition may agree with their nominal complements, and the anaphoric pronoun with its repraesentatum, in person, but not in case.²⁴ With regard to these two agreement categories, the

²³ The only exception that I am aware of has been brought to my attention by B. Heine: In standard Swahili, the quantifier *w-ote* "all" is supposed to show only class agreement. However, in modern colloquial Swahili it also shows person agreement, namely when in construction with a personal pronoun. Thus: *sisi s-ote* "we all", *ninyi ny-ote* "you all", *wao w-ote* "they all" This type of person agreement is otherwise unknown in Swahili. I have presently no explanation for this exception, but I suspect that it has to do with the separability of the quantifier from its head NP ("quantifier floating"). Furthermore, the free personal pronoun is optional in these collocations, which makes them really look very much like certain constructions in the domain of person agreement; cf. p. 20f.

²⁴ I am aware of one possible exception to this claim, namely such (supposedly) Proto-Romance constructions as *Petrus habet scriptam epistulam* "Peter has written a letter". Here the transitive verb might be said to agree with its object not only in gender and number, but also in case. There are, however, various objections

agreeing constructions therefore fall neatly in two groups. The examples in § 3.2 testify to this claim. The fact that this division is achieved by two of the agreement categories in the same way, completely free of overlapping, gains strength from the second fact that an alternative division, which might be established by the other agreement categories, does not exist.²⁵ There is thus reason to take the two groups seriously. We will say that those constructions which may show case agreement are in the **domain of case agreement**, and those which may show person agreement are in the **domain of person agreement**. This is illustrated in figure III.

III. Domains of case and person agreement

agreeing constituents	determiner	adjective attribute	relative clause	possessor (← possessum)	apposition	nominal predicate	possessum (← possessor)	adposition	verb	personal pronoun	
agreement categories											
class	+	+	+	+	(+) ²⁶	(+)	+	+	+	+	
number	+	+	+	+	(+)	(+)	+	+	+	+	
person	-	-	-	-	-	-	+	+	+	+	
case	+	+	+	+	+	+	-	-	-	-	
	domain of case agreement						domain of person agreement				

We will call whatever agreement – regardless of the grammatical category actually involved – that takes place within the domain of case agreement **case-domain agreement** and whatever agreement that takes place in the domain of person agreement **person-domain agreement**. These are purely descriptive terms which will be substituted by less clumsy ones once we have clarified the nature of these two types of agreement.

There are at least two things to be explained about the fact that agreement of person and of case are in the described complementary distribution: firstly the incapability of the constructions in the domain of case agreement to agree in person, and of the constructions in the domain of person agreement to agree in case; and secondly, the complementary distribution of person and case, which indicates a close relationship between the two categories.

The first fact may be explained separately for each of the two groups. For the determiners and attributes of a noun, there is no category of person (qua generic category with sub categories) which would be determined by the head noun and in which they might agree: since the first and second persons are definite, they can take no determiners or attributes (as already noted by Moravcsik

against this analysis. First, it is doubtful whether we must at all postulate any analytic agreeing verb form *habet scriptam* as a separate stage between the plausible stages *habet epistulam scriptam* or *epistulam scriptam habet*, which have not yet an analytic verb form, and *habet scriptum epistulam*, with a non-agreeing analytic verb form. On this question, see Ramat 1981. Secondly, even if such a stage must be assumed, there would still be no case agreement here because the case is not variable. This is, of course, a consequence of the fact that condition 3 of definition I is not fulfilled for the category of case here. Thirdly, the relation of *scriptam* to *epistulam* is parallel to that of the nominal predicate to the subject; in this respect, the construction belongs in the first of the above groups. Therefore, this is an apparent rather than a real exception.

²⁵ If we took definiteness agreement into account, we would probably find it to be distributed like case agreement.

²⁶ The parentheses indicate that such agreement is not excluded, but hardly ever obligatory.

(1971:37 = 1978:359f)). The same may be valid for the nominal apposition; or else it is to be conceived like the nominal predicate. For the latter, agreement in person is excluded by definition; i.e. it would not be a nominal predicate if it agreed in person.

For the possessum, the verb and the adposition there is likewise no case which would be determined by their nominal complements and in which they might agree. Furthermore, the possessum, as well as the personal pronoun, may have a case, but then this is determined independently of the agreement construction.

As regards the complementary distribution of person and case, we have to recall first of all that the other two important agreement categories, namely class and number, are represented in all the forms of agreement, whereas case and person are restricted each to one of the main groups. This means that class and number are typical agreement categories. Especially noun classes and gender practically do not occur without agreement (cf. Moravcsik 1978:338; for the exception of Lobi see below fn. 70). Person and case, on the other hand, often appear without agreement; agreement is not essential to them.

As for the complementary distribution itself, it seems to be significant that though each of these two categories is excluded from agreement in one group of constructions, it does occur in this same group in a different way. Thus person does play a role in the NP, namely in the person deixis brought about by the demonstratives and the possessives. And on the other hand, case does play a crucial role in expressing the syntactic relations in the constructions 'possessum – possessor', 'verb – arguments' and 'adposition – complement'. It appears as though person and case are two central relational grammatical categories, which achieve the integration of the sentence and its reference to the speech situation: case relates the arguments to the relational expression and ultimately to the expressed event; person relates the relational expression to the arguments and ultimately to the participants of the speech situation.

There are a variety of attempts in the literature to give a general account of agreement. This presupposes that the constructions which involve agreement can be described in such a way as to have something in common which can be made a – necessary or sufficient – condition for agreement. We will be better able to assess such attempts when we learn something about these constructions, concentrating not only on their similarities but also on the differences among them. For this purpose it will be convenient to subdivide the discussion according to the two types of agreement found above and to deal in turn with the constructions in the domain of person agreement and those in the domain of case agreement. For each of these groups, we will try and see whether a general answer can be provided to the following questions:

1. What sort of element triggers the agreement? This asks for the nature of A in definition I.
2. What sort of element shows the agreement? This asks for the nature of B in definition I.
3. What sort of construction is formed by the elements A and B?
4. What sort of syntagmatic relation exists between A and B?

We will see that almost none of these questions has a straightforward answer, and that some of them have different answers for the two types of agreement. This is what makes a general account of agreement so difficult.

4.2. The constructions in the domain of person agreement

At first glance, question 1 seems to have a simple answer in the domain of person agreement: it is an NP which triggers the agreement. In particular, the possessor which triggers possessive agreement, the complement with which the governing adposition agrees, the arguments which trigger subject-verb, object-verb etc. agreement, and finally, the repraesentatum with which a personal pro-

noun agrees, are all NPs. It is in fact correct that they are NPs, but we must examine more closely whether they can correctly be said to trigger the agreement. Consider the following examples:

(39) Nadie lo vimos.

SPA "Nobody of us has seen him." (Moravcsik 1978:351)

(40) a) ḡarka ka-npa puḷa-mi.

WAL man PRS-SBJ.2 shout-NONPRT

"You man are shouting." (Hale 1973:317)

b) ḡarka ka-lu puḷa-mi.

man PRS-SBJ.3.PL shout-NONPRT

"(The) men are shouting" (Hale 1973:315)

(41) walaag-meew ea rea piin neey

YAP brother-POSS.2.DU CONN SG woman this

"the brother of you [sg.] and this woman"²⁷ (Jensen 1977:188)²⁸

In each of them there is an NP A which is an argument of the agreeing term B and which the agreement affix relates to. However, since A and B differ in the categories of person or number, there is no agreement in the strict sense, nor can we say that the categories of person and/or number as shown by B are triggered by A. In these examples at least, the grammatical categories in question are represented correctly and completely only by the agreeing term, while term A, supposed to trigger the agreement, is deficient in this respect. Note that the issue is not whether the agreement categories are expressed on A. I have made it clear from the beginning (§ 2) that this is not required in order for agreement to be recognized. The problem here is rather that term A does not appear to belong to the grammatical categories in question, so that condition 3 of definition I is not fulfilled.²⁹

We may pursue this argument by observing that in most cases of person-domain agreement, term A may be completely absent from the construction or even from the sentence. The agreement affixes assume then pronominal (possibly anaphoric) functions and serve, themselves, as the arguments to term B. For instance, an ordinary Latin clause need have no overt subject; this is sufficiently represented, as regards its person and number, in the verbal endings.

The problem imposing itself here is whether we are justified in saying – as I have been implying all the time – that person and number are nominal categories.³⁰ After all, a nominal category should be expressible on nouns, and as far as person is concerned, this is never the case.³¹ It is not

²⁷ This is to be interpreted as "the brother of you two, including this woman". Similar constructions are common in Yapese; see Jensen 1977:185-189. Cf. also Russian *my s toboj* (lit. we with you) "I and you".

²⁸ With (40b) and (41), cf. (33b) above.

²⁹ Hale (1973, § 4 and 5) proposes a transformational solution to this problem: person and number are abstract features of (possibly complex) NPs which are transferred onto the auxiliary by rules and may be deleted on the NP. We would then have quite regular agreement, with condition 3 being fulfilled. However, as I recognize no underlying level of structure, this (sort of) solution is precluded for me. Note, moreover, that Hale's account is liable to run into problems with examples like (41).

³⁰ There are probably many linguists like Hale – see previous footnote – who would be prepared to go to great lengths in order to maintain this claim. Welmers (1973:176) argues for including the personal prefixes of Bantu languages within the class prefix system. Cf. also Lyons 1969:280f.

³¹ It should be clear that I am not concerned here with possessive affixes on nouns like those discussed in § 3.2.1. These do not, of course, express that the noun in question is in the first, second or third person.

As for number, things are a bit different since it may, of course, be expressed on nouns and insofar be a nominal category. On the other hand, examples like (40b) and (41) are by no means uncommon. They belong in the large realm of verbal number, together with phenomena such as the following: in many languages,³² plurality of action may be marked on the verb. This may mean, among other things, that the action is repeated or that there is a plurality of participants in the action. As these alternatives are not formally distinguished, there being no plural marker on the noun, we may conclude that plurality of participants is, in such cases, a form of verbal plurality. Thus, number may be a nominal category, but it may also be a verbal category.

In traditional grammar, person was a verbal category. The examples in § 3.2, in which person appears not only on verbs but also on (possessed) nouns and even adpositions, and on the other side languages like Chinese, Indonesian, or Japanese, in which person is not a verbal category, show that we would gain nothing by generalizing this claim. There seems to be no alternative to saying that person is (neither a nominal nor a verbal, but) a pronominal category. If person appears in a language – and it appears in almost all languages – it appears in the pronoun. We will see below the consequences of this fact for the nature of person-domain agreement.

Thus it is not correct to say that person-domain agreement is triggered by an NP. A more cautious formulation is in order: person-domain agreement signals a relation of the agreeing term B to a term A, which, if overtly present, must be an NP.³³ We have seen that the grammatical category expressed on B need not be identical to the category to which A belongs. It is, however, safe to assume that the two must in some sense be compatible. This will be taken up briefly in § 6.3.4.

Before we try to answer the remaining questions, it may be useful to make explicit a distinction within person-domain agreement which has already been used implicitly. If the agreeing element may occur, within the same construction, with the NP agreed with, i.e. if there is a syntactic place for the latter in the agreement construction, we have **syntactic agreement**. If it cannot occur with this NP, we have **anaphoric agreement**. For example, agreement of the verb with its object is syntactic agreement, while agreement of the personal pronoun with its repraesentatum is anaphoric agreement. Many languages have personal affixes on the verb, the possessed noun or the adposition. If the NP referred to may not be part of the construction in question, there is no syntactic agreement, and we would not say that in such cases the verb agrees with its arguments, or the possessum with the possessor, or the adposition with its complement. But we may nevertheless deal with agreement – namely with anaphoric agreement –, provided this personal affix agrees with its repraesentatum.

We now turn to question 2 and ask whether anything general may be said about the agreeing term. Is there a syntactic category which verbs, possessed nouns, adpositions and personal pronouns belong to? Quite obviously not. However, there is a way out, if we reconsider personal pronoun agreement. A personal pronoun, being an NP, always fills an argument slot in a given construction. Now suppose we regard not the pronoun, but the construction whose open slot it fills, as the agreeing expression B. For example, if the pronoun is the object of the verb and represents an NP A of a preceding clause, we would say that the verb phrase agrees, through the pronoun, with A. This view of personal pronoun agreement quite clearly disregards the distinction between syntactic and anaphoric agreement just introduced. Note, however, that it is consistent with definition I. The latter does not require that term B be a word, but that it be a constituent. And the construction whose argument slot is filled by a personal pronoun is obviously always a constituent. Moreover, as we shall see in § 6.2, this view of personal pronoun agreement helps a lot in describing the facts of person-domain agreement in a satisfactory way. Lastly, it does not do injustice to the personal pronoun:

³² Cf. Dressler 1968, especially for Latin and Hittite; Moshinsky 1974:64f, 85 for Pomo, and Iturrioz 1982, § 2.

³³ An NP may be constituted by a free personal pronoun.

a personal pronoun is constituted of little more than an agglomerate of agreement signs, i.e. of certain grammatical categories (person and/or number and/or gender) and their expression.

What have we gained by this? We can now say that the agreeing expression is a **relational expression**.³⁴ This means that it contracts a relation with an argument (to be expressed by an NP), and that it does so by opening a position for that argument, viz. the argument slot. This is true for agreeing verbs, possessed nominals, adpositions and whatever constructions contain a personal pronoun. The common denominator of the agreeing expressions in person-domain agreement is thus not a syntactic category, but a semantic property, namely the property of having an argument slot. The agreement marker indicates this slot.

Let us now ask about the nature of the whole construction formed by A and B in the domain of person agreement. Again, it is obvious that they do not belong to a common syntactic category: the agreeing verb forms a clause together with its subject, but a VP together with its object; the adposition forms an adpositional phrase and possibly an adverbial phrase together with its complement, and so on. However, most of the constructions in the domain of person agreement do have in common the fact that they are endocentric in the sense that they are potentially complete without the term A. Two examples from Yucatec may illustrate the point:

(42) a) u bin Pedro. – u bin.
 YUC 3 go Pedro 3 go
 "Peter goes." "He goes."

b) u haʔs Pedro – u haʔs
 3 banana Pedro 3 banana
 "Peter's banana" "his banana"

Though this is generally so in person-domain agreement, there are two quite different types of exceptions. On the one hand, the subject-verb construction in languages like Russian, German or French is not endocentric because the verb requires an overt subject. On the other hand, the configuration which consists of a construction containing a personal pronoun and the NP represented by the latter may be called endocentric in the sense indicated above, but it is obviously not a construction. Here the difference between syntactic and anaphoric agreement makes itself felt again. We shall see in § 6.2 that these two types of exceptions to the endocentricity of the constructions in the domain of person agreement are not fortuitous, but regular and explainable within a theory of agreement.

Examples like those of (42) illustrate an important fact about the agreement markers in person-domain agreement: they are of a basically pronominal nature³⁵ (note that I am not saying they are pronouns): they refer to an NP which they represent (this is why they are called pronoun copies in Langacker 1977:27). One may therefore say that person-domain agreement has a representative or referential function.

We come finally to question 4, which regards the syntagmatic relation between the expressions A and B. In the constructions in the domain of person agreement, this relation is one of **government** (cf. II above): the agreeing expression governs the argument which is represented by the agreement marker.³⁶ This formulation is deliberately ambiguous. It means either that the agreeing construction B may govern the term A (the supposed agreement-triggerer). This is the situation, for example, in

³⁴ in the sense of Seiler 1975, § 2.3 and Seiler 1976, § 4.2

³⁵ Therefore a distinction similar to the present one between case-domain and person-domain agreement is termed nominal vs. pronominal agreement in Heine 1982, § 2.4.

³⁶ Recall that in the case of personal pronoun agreement, the agreeing expression is that construction whose open slot is occupied by the pronoun.

German or French subject-verb agreement. Or it means that the agreeing expression governs the agreement marker, which represents the argument. This is the situation in personal pronoun agreement. Again, we shall see in § 6.2 that these two cases, associated with syntactic and anaphoric agreement respectively, are the extreme poles on a continuum which unites them. Here it will suffice to remember that the agreeing expression governs an argument, and that this argument is referred to by the agreement marker.

4.3. The constructions in the domain of case agreement.

The first question concerns the nature of the element triggering the agreement. An adequate answer to it requires some preparatory discussion. As will be explained in greater detail below, the syntagmatic relations in a construction of case-domain agreement differ from those in a construction of person-domain agreement. Whereas in the former a noun is the head of the construction, this is not true in the latter constructions. Therefore it is generally the case that what is semantically a category of a noun, is syntactically also a category of its NP; and what is semantically a category of an NP may be grammatically a category of its head noun (cf. the discussion in Lehmann 1979:353f). There is no analog to this in the constructions of person-domain agreement. It is, for instance, not the case that what is semantically a category of an object noun or NP, is syntactically also a category of its VP, or vice versa.

Now while gender, noun class, number, definiteness and case may simultaneously be categories both of an NP and of its head noun, there is an important asymmetry in this distribution which has to do with the difference, discussed on p. 5, between those nominal categories which are lexically inherent in a noun (gender, noun class) and those which may "land" on it by the rules of grammar (number, definiteness, case). Whether expressed on the NP as such or not, all these categories are semantically categories of the NP. Semantically, it is the NP and not the noun which is definite or indefinite, which bears a certain case relationship to something else and which has a certain number; and the NP cannot but belong, semantically, to the same gender or noun class as its head noun (exceptions see § 6.5). On the other hand, while the lexically inherent categories are always grammatical categories of the noun, it depends on the grammar of each language whether number, definiteness and case are categories of the noun; this is the case only if there is a form paradigm of these categories for the nouns of the language. Furthermore, even where this is the case, it is semantically irrelevant as far as the meaning of the noun is concerned (it is, of course, not irrelevant for the semantics of the syntax). That is, even if in Arabic nouns show signs of definiteness and indefiniteness, and even if in Latin nouns show signs of case, we would still not say that in these languages determination or case pertain semantically to the noun.

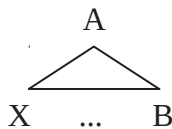
This complicated situation has the consequence that there is a double answer to the question asking which is the agreed-with term in case-domain agreement: it may be said to be either a noun (the head noun) or an NP (the superordinate NP), and because of the asymmetry mentioned, each of these answers will again have different consequences. We notice first that both of these conceptions of the agreement triggerer in case-domain agreement are in principle compatible with definition I. In particular, condition 1 does not specify whether the syntagmatic relation between A and B should be one of sequential cooccurrence or one of subconstituency. So the alternative cannot be decided from here.

The conception that case-domain agreement refers to the head noun is, of course, the traditional one. In this case, definition I, condition 3, first clause must be interpreted to presuppose that the agreement category C is either a lexically inherent or else a morphological (number, definiteness, case) category of the noun (cf. the discussion on p. 5f). There are a couple of weak points in this conception. The first is just this heterogeneity in the interpretation of the condition that C be a

grammatical category of A, which appears to conceal an inconsistency in the conception. Furthermore, the conception fails whenever an NP lacks a head noun but nevertheless belongs to one of the agreement categories. Such a headless NP may, for instance, have a gender. The gender of complement clauses is neuter in German and masculine in French, as may be gathered from the agreement which they trigger. While this may be explained away somehow,³⁷ it is more difficult to account for the gender agreement in sentences such as Span. *Quien recién dió a luz no debe considerarse enferma*. "She who recently gave birth is not to be considered sick." Lastly, there are cases where what is semantically a category of an NP is not a grammatical category of its head noun. For instance, the nouns in Russ. *tri komnaty* "three rooms" or German *drei Mann* "three men" are singular, but the NPs are plural, as becomes clear in agreement: *tri svetlye* (pl.) *komnaty* "three light rooms", *drei Mann kamen* (pl.) "three men came". The Russian *tri komnaty – svetly* (pl.) "three rooms are light" illustrates, moreover, that the predicate nominal – which is, as will be remembered, in the domain of case agreement – agrees with its subject NP and not with the head noun of the subject. All of these examples prove that an account of agreement exclusively based on lexical or morphological categories breaks down. Consequently, the conception according to which the agreement triggerer in case-domain agreement is a noun cannot be maintained.

If we try the alternative and regard the NP as the agreement triggerer in case-domain agreement, all of these difficulties disappear. The NP is specified for such categories as gender/noun class, number, definiteness or case, and the question of where these specifications come from is of no relevance for the functioning of agreement; both modifiers dominated by the NP and nominals functioning as predicates to the NP agree in categories specified for the NP. The configuration which case-domain agreement is based on would then be as shown in fig. IV.

IV. The source of case-domain agreement



X in fig. IV may be thought of as a nominal expression (a noun, nominal or NP), and B as an expression modifying X. Both are constituents of A, which is an NP in the cases under consideration (as for the nominal predicate, see below). The above reflections have led us to say that in case-domain agreement, B agrees with A in a configuration such as IV.

Whereas the alternative conception rejected before was bound up with the problem that certain empirically observed cases of agreement could not be accounted for, this conception runs into problems of the opposite kind: it cannot exclude certain phenomena which have never been regarded as agreement, and therefore clashes with traditional terminology. Namely, many of those cases where a nominal category is expressed only once in an NP are not excluded by definition I as a result of that interpretation of condition 1 where A = NP, and will consequently have to be considered instances of agreement.

Let us begin this consideration with a borderline case which we have succeeded in excluding by means of condition 4 of definition I. There we required that the term which is supposed to agree and

³⁷ For instance by markedness theory: Suppose neuter is the unmarked gender in German, as masculine is in French. We would then say that the neuter or masculine forms, respectively, shown by agreeing constituents are triggered by nothing, but are simply the unmarked forms. However, the main point of this section does not depend on the above argument.

the agreement sign form a constituent. We did this with configurations such as $[N X]_{NP-C}$ in mind, where C is a nominal category agglutinating to the NP as a whole.

Condition 4 enables us to avoid having to say that X agrees in C with N. This seems intuitively satisfactory, because in these cases there is a direct and unique mapping of C as a semantic category of NP onto C as a morphosyntactic category of NP, and thus no room for agreement. However, there is nothing in definition I to exclude configurations such as $[N [X-C]_{NP}]$ from agreement, even if C is neither lexically inherent to N nor morphologically marked on it. Recall that on p. 5f we commented that condition 3, first clause would exclude such cases if $A = N$; but now that $A = NP$, they are not excluded. Taking up one of the examples treated there, we would have to say that in the German *einiger schwieriger Gleichungen* "of some difficult equations", the determiner and the attribute agree with their NP in case. One might be prepared to accept this; after all, the German determiners and adjectives are generally said to show case agreement, and we have seen that they do not, at least, agree in case with the noun in this example, nor would we want to say that they agree with each other.

What is much worse, however, is that in configurations such as $[N-C (X)]_{NP}$, the head noun must be said to agree with its NP in C. For example, English nouns agree in number with their NPs.³⁸ This is clearly irreconcilable with the traditional notion of agreement.

We have arrived here at an impasse where the logical possibilities are exhausted; and we cannot avoid the conclusion that the traditional conception of agreement is either inconsistent or arbitrarily restricted. As for the arbitrary restriction, this can easily be appended to definition I. If we want to remedy only the last-mentioned cases, which most blatantly conflict with the traditional conception, we can add the following condition:

I.5. If B is the head of NP A, B is not said to agree.

Any attempt to treat, in addition, cases such as *einiger schwieriger Gleichungen* presupposes the elucidation of the intuitions which are behind the traditional notion of agreement and which may be found to admit this case, but to exclude Rushi case marking or Lithuanian definiteness marking (see 5 f.). I cannot at present solve this problem.

The question which prompted this discussion was: what sort of element triggers case-domain agreement? We answer that this is an NP in a configuration such as IV, and we thereby accept the conflict with traditional terminology. For practical purposes, we will proceed as if condition 5 were actually part of definition I; that is, we will simply keep silent about head nouns agreeing with their NPs. However, I do not believe that therefore definition I is inadequate as it was first formulated. It may be considered as characterizing a notion slightly broader than the traditional notion of agreement. That the notion defined in I is a valid and useful one will be seen in § 5.3, especially p. 35f, and § 6.3.4, especially p. 49. There it will be shown that the principle of case-domain agreement is the spreading of a semantic category of an NP over its subconstituents in order to mark their connexion and common reference; and it is of secondary importance on which or how many subconstituents the category is marked.

Next we come to the questions about the nature of the agreeing element and its syntagmatic relation to the source of agreement. The elements involved in case-domain agreement, viz. determiners, attributes, appositions and predicate nominals, are all of a nominal nature. 'Nominal' is here to be understood in its traditional sense, denoting elements which belong into one grammatical class with nouns and which mere substantivization, if necessary, enables to function as nouns (or NPs). If there is a head noun, they form an NP together with it. Semantically speaking, they **modify** the head

³⁸ Again, not every marking of C on N would count as agreement. For example, in the Turkish NP, number is marked on the N; but this still does not agree with its NP in number, because the configuration is $[XN]_{NP-C}$ (C = number), which falls victim to condition 4, second clause.

noun, forming a complex nominal concept on its basis. But they are not governed by it, they do not depend on the head noun in the same sense as an object depends on its verb or a nominal complement depends on a preposition.³⁹ The head noun and its modifiers jointly constitute the NP which triggers the agreement. There is a triangular relationship, represented in fig. IV, between the head noun and each of its modifiers, on the one hand, and between each of these elements and the NP, on the other. This relationship may be expressed by saying that the head noun and its modifiers are constituents of the same NP. From a syntactic perspective, this is what is signaled by case-domain agreement.

Digression: the syntactic relation of the nominal predicate

One may well wonder whether what has been said about the agreeing elements in the domain of case agreement is valid for the nominal predicate, too. Is there independent evidence for the claim that its relation to the subject is one of modification, not of government, or is this claim just ad hoc in order to account for the fact that this relation is in the domain of case agreement rather than in that of person agreement? More specifically, is it empirically justifiable to give such different theoretical treatment to the relation between the subject and the intransitive finite verbal predicate and that between the subject and the nominal predicate? We may approach this question by means of a theoretical consideration. A finite verb has a certain valence and rection, and the subject is in fact one of the arguments dependent on it through this valence and governed through this rection. A nominal expression used as a predicate, on the other hand, does not have valence or rection and consequently does not govern the subject. The semantic correlate of this syntactic state of affairs is that the subject of a (transitive or intransitive) verbal predicate controls or is controlled by the verbal state, process or action, whereas nothing of this sort is true for the subject of a nominal predicate.⁴⁰ While the verbal predicate makes the referent of the subject take part in an event, the nominal predicate enriches the concept of the subject.

On the basis of these theoretical considerations we expect there to be morphosyntactic differences in the expression of the two relations, the difference in agreement being only one of these. And there is in fact evidence that these two relations are expressed differently in some languages. In Classical Arabic, the basic order of the main constituents in a declarative sentence is VSO, and correspondingly VS if the verb is intransitive (ex. (43a)). However, in a nominal clause, i.e. if the predicate is nominal, the order is S Pred (ex. b)).

(43) a) tala^ca 'l-qamaru.
ARA rose:3.SG DEF-moon:NOM.SG.M
"The moon has risen."

b) al-qamaru kabīrun.
DEF-moon:NOM.SG.M big:NOM.SG.M:IND
"The moon is big."

³⁹ There is a terminological problem involved in my attempt to use 'modification' in a narrow sense, as opposed to 'government'. Some might object that if x governs y, y may, at the same time, modify x (e.g. x = verb, y = object). The problem might be avoided by substituting 'determination' for 'modification'. However, such a broad use of 'determination' (including even the relation of the nominal predicate to the subject) would be no more common than the narrow use of 'modification' which I adopt here.

⁴⁰ Omamor (1978:271-273, invoking the terminological precedence of Halliday 1968:190) postulates a case role 'attribuand' for the subject of 'quality verbs' in Isekiri (Kwa), which correspond to English adjectives like *bitter*, *beautiful*, *hot*. The attribuand would be distinguished from the objective by being neither controlled nor affected by the verbal state or process.

So far, this is only a differential syntactic treatment of the subject of the verbal and that of the nominal predicate. The additional interesting thing about this evidence, however, is the fact that the position of the nominal predicate with respect to the subject is the same as the position of the attribute relative to the head noun (ex. 44):

- (44) al-qamaru 'l-kabīru
 ARA DEF-moon-NOM.SG.M DEF-big:NOM.SG.M
 "the big moon"

Here we have strong evidence for the treatment of nominal predication as a kind of nominal modification.

Evidence of a different kind comes from Mohave (Yuman). Among the case suffixes present in this language, there is a nominative suffix *-č* normally appended to the subject of a verbal main clause (ex. (45a)). However, if the predicate is nominal, the subject has no suffix, and instead the predicate nominal has the nominative suffix (ex. b)).

- (45) a) Jim-č isva:r-k.
 MOH Jim-NOM sing-REAL
 "Jim sings." (Munro 1976:19)

- b) Linda ?in^vep ?-nawah-č .
 Linda me 1-friend-NOM
 "Linda is my friend." (Munro 1976:269)

The appearance of the nominative suffix on the subject of the verbal predicate and its absence on the subject of the nominal predicate is automatically explained by our hypothesis that the subject of the verbal predicate is case-governed, while the subject of the nominal predicate is not. Furthermore the appearance of the nominative suffix on the nominal predicate again likens nominal predication to nominal modification, because in Mohave attributes may follow their head noun, and the case suffix is appended not to the head noun, but to the NP as a whole, i.e. to its last constituent.

Further confirmatory evidence of the same type may briefly be mentioned here. The situation in Burmese is comparable to that in Mohave: the subject of a nominal sentence cannot have the nominative suffix which otherwise occurs freely on subjects of finite verbs (U. Kölver, personal communication). In some languages, the special status of subjects of nominal sentences is evident from pronominal affixes. Piro (Arawak; see Matteson 1965: 39, 94) and Yucatec Maya (Tozzer 1921:87f) have different paradigms for (roughly) the subject and the object. If the subject of a nominal sentence is pronominal, it is a suffix to the predicate nominal, and it is taken from the series of the object affixes and not the subject affixes.

This is empirical evidence for the dividing line between the verbal and the nominal predicate with regard to their relation to the subject. It is independent from the agreement evidence and therefore confirms it. I might finally add a further piece of evidence from agreement that is independent from the distribution of person and case agreement, which led to postulating that dividing line in the first place. In Swahili, there are two morphologically distinct sets of agreement prefixes, one marking, among other things, the subject agreement of the finite verb (ex. (46a)), the other marking, among other things, the agreement of the attributive adjective (46b). Case is involved in neither set.

- (46) a) ma-tende ya-me-oza.
 SWA CL6-date CL6-PRF-rot
 "The dates are rotten".

- b) ma-tende *ma-bovu*
 CL6-date CL6-rotten
 "the rotten dates" (Polomé 1967:140)

The crucial question is: Which set of agreement prefixes appears on the predicative adjective?

- (46) c) ma-tende ni *ma-bovu*.
 CL6-date COP CL6-rotten
 "The dates are rotten." (ib.)

The facts show that agreement treats the adjectival predicate like the adjectival attribute and unlike the verbal predicate.

The upshot of this discussion is that the relation of the nominal predicate to the subject may be likened to that of a nominal modifier to its head noun, and that this is the basis for its being included in the domain of case agreement, rather than in that of person agreement.

(End of digression)

We finally come to the question of what sort of construction is formed by A, the source of agreement, and B, the agreeing term, in case-domain agreement. We saw above that B is a member of A, so that the construction as a whole is represented by A; and this is an NP. The question is whether this can also be transferred to the situation in nominal predication. It would mean that the nominal clause (or sentence) as a whole is A, the expression triggering the agreement, and that it is an NP. Phrased in these syntactic terms, this proposition is clearly wrong. An independent clause, nominal or not, is not by itself an NP.⁴¹ However, if we phrase it semantically, we may say that a nominal predicate is included in the reference of its subject NP exactly as (other) nominal modifiers are included in the reference of their NP. It follows from this that case-domain agreement expresses **coreference** in the sense of joint reference: the constituents united by case-domain agreement are co-referential in the sense that they jointly participate in the reference to the same referent.⁴² Consequently, even if a nominal clause is not an NP, it behaves semantically like an NP (with the subject as its head). It is therefore possible to assume that the agreement mechanism described for case-domain agreement in fig. IV functions also in nominal predication, on a semantic rather than a syntactic base. It is, however, also possible – and more plausible – that agreement in this case does not spread from "above", so to speak, but goes from the subject over to the predicate. Although the direction of agreement would, under this latter hypothesis, be different in nominal predication from that in nominal modification proper, it would still be correct to say that all case-domain agreement is triggered by an NP.

4.4. Internal and external agreement

We may now summarize the discussion of the properties of person-domain and case-domain agreement in a comparison of these two types.

All agreement, both in the domain of person and in the domain of case, refers to an NP. Loosely speaking, one may say that the source of agreement is always an NP. One must bear in mind, however, that while this is a precise characterization of case-domain agreement, the situation is more

⁴¹ Munro (1976, ch. IV), who is faced with a similar problem in explaining the behavior of Mohave nominal clauses as illustrated above, argues that the subject and predicate nominals together do in fact constitute an NP, which forms a sentence together with the optional copula.

⁴² Cf. Fauconnier 1974:156: "si un adjectif ou participe A est dans la configuration $NP_x \text{ être } A \dots$, il est 'attiré' dans le réseau de coréférence de NP_x ".

complicated in person-domain agreement. Certain imperfections of agreement, particularly cases where the agreement markers express certain categories which the NP in question does not belong to, lead to the conclusion that the agreement markers in person-domain agreement enjoy a greater independence, have more meaning of their own, than those in case-domain agreement.

There is so far no common syntactic denominator of the expressions displaying agreement. In the domain of person agreement, they are relational expressions, i.e. ones which have a slot for an argument, namely the NP represented by the agreement markers. In the domain of case agreement, the agreeing expressions are of nominal nature. I will come back in § 5.3 to the question whether at least some of them can be called relational, in some sense. Here it suffices to state that at least some of them, namely the apposition and the nominal predicate, are clearly non-relational in a syntactic sense.

The syntagmatic relation signaled by the markers of person-domain agreement is completely different from that signaled by the markers of case-domain agreement. The former markers signal the relation of government: the NP represented by the agreement markers is governed by the agreeing relational expression. On the contrary, there is no relation of government between the constituents involved in case-domain agreement. Instead, agreement markers here signal the relation of coconstituency between head and modifiers. The morpho-syntactic relation of participation in a given case-domain agreement corresponds to the semantic relation of participation in the same reference, the referent being expressed by the NP which triggers the agreement.

It has also been said in § 4.2 that the agreement markers in the domain of person agreement have a referential function, that they represent the NP they agree with. Can the same be said of the case-domain agreement markers? Since they express membership in the same NP, they must obviously somehow refer to that NP. However, the way this NP is identified is different in the two types of agreement. Person-domain agreement markers use the categories of person and/or number and/or class. They represent a certain argument as identified primarily by its semantic or referential properties. Case-domain agreement markers use the categories of case and/or number and/or class. They refer to a certain NP as identified primarily by its grammatical properties.⁴³ This correlates with the fact that person-domain agreement markers are of basically pronominal nature, which is not true, or at least not true to the same degree, for case-domain agreement markers; and furthermore with the fact that person-domain agreement markers are categorially more independent from the NP they refer to than case-domain agreement markers.

While it is true that the constituent agreed with is always – both in case-domain and in person-domain agreement – an NP, there is a crucial difference in the fact that in the former type, the agreeing constituent is inside that same NP,⁴⁴ whereas in the latter type, it is outside that NP. This difference is of a syntactic nature. The terms we have so far used to designate the two agreement types are morphology-based. They are a bit clumsy, and therefore I will henceforth substitute for them the equivalent syntactic terms **internal** and **external agreement**, which is short for 'NP internal' and 'NP external agreement'.⁴⁵ The definitional equivalence is, obviously, as follows.

case-domain agreement = internal agreement
 person-domain agreement = external agreement

The extension of the renamed concepts, i.e. the constructions taking part in internal and external agreement, respectively, can be seen in table III.

⁴³ We shall see below (§ 6.5) that this difference appears even in the two categories which the two agreement types have in common, viz. class and number.

⁴⁴ and I will henceforth slur over the fact that this is valid for nominal predicate agreement only in a derived sense

⁴⁵ This terminology is already foreshadowed in Moravcsik 1971 (passim).

The capability of agreement markers to express two different types of syntagmatic relations is in part guaranteed by syntax alone. Thus, if an agreement marker appears on a finite verb, this is perforce external agreement; and if an agreement marker appears on an adjective, this is perforce internal agreement. But this is not so in all cases. If an agreement marker appears on a noun, this may be internal or external agreement. However, the type of agreement is almost always unambiguously shown by morphology. The available facts permit the hypothesis that if a language has both internal and external agreement, it will also have at least two sets of morphologically distinct agreement markers. This is a natural consequence of the fact that the category of person is almost always involved in external, but never in internal agreement, and that the category of case is often involved in internal, but never in external agreement. Only to the extent that one of these categories is not involved in its potential domain of agreement, is a morphological identity of agreement markers in internal and external agreement possible. A case in point is the subject agreement of the Russian preterite verb.⁴⁶ Therefore the distribution of the distinct sets of agreement markers does not always coincide with the domains of internal and external agreement. For some additional reason yet to be identified, it nevertheless appears to be true that every language with both internal and external agreement also has two different sets of agreement markers.

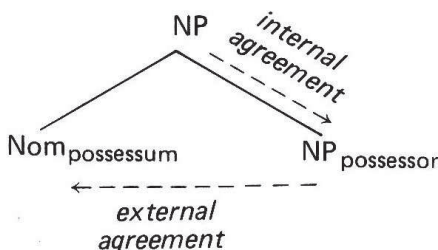
It may be seriously doubted whether there is a language which has a distinct set of agreement markers for each of the syntactically different constructions within each of the domains of internal and external agreement. Insofar as there is no such language, it is correct to say that in agreement, "the morphemes express not a given relation but the fact of relation to a given other unit alone" (Bazell 1949(n):214). But it is wrong insofar as at least two different types of relations are expressed.

5. The direction of agreement

5.1. The nominal source of agreement

The agreeing grammatical categories are all of nominal or pronominal nature, and agreement always originates in an NP (cf. Moravcsik 1978:363). The direction of agreement, which, as will be recalled, is an asymmetric relation, is, in any given construction, from an NP to either a governing or modifying expression. There is one construction in which these two relations cooccur, viz. genitive attribution. The possessor NP may be conceived either as being governed by the possessum or as modifying the possessum. This ambiguity is possible because both the construction as a whole and its governed constituent are NPs. The constellation is shown in fig. V.

V. Two types of possessive agreement



If the higher NP is selected as the source of agreement, we have internal agreement of the possessor NP; if the possessor NP is selected as the source of agreement, we have external agreement of the possessum NP.

⁴⁶ Even this exception is not particularly convincing, since the case agreement present in Russian internal agreement is, of course, absent in the preterite verb.

The fact that the constituent agreed with, namely A in definition I, is always an NP was not implicit in that definition and constitutes therefore an empirical finding in need of explanation. Since we assume that this behavior of agreement has a certain function, the explanation will be functional in nature. If we consider that agreement signals a syntagmatic relation of the agreeing constituent to an NP, the question arises as to why the NP cannot agree with the constituent related to it. Why, for instance, can a verb not trigger agreement of the constituents related to it, so as to express their relationship to the verb?⁴⁷ As we have just seen, agreement can, in a given construction, in principle proceed in either direction; thus it would not be a priori excluded that an NP agrees, say in tense, with its predicate.⁴⁸ The absence of such phenomena is apparently explained by the fact that there is only one predicate per clause, so that normally there is no necessity of expressing which verb a given NP is related to. On the other hand, there can be several NPs in a clause, and so the necessity can arise of expressing which of them a given constituent is related to (in a certain way).

5.2. Keenan's account

It may be seen that agreement shows up in virtually all of the syntagmatic relations in which an NP is involved (and these seem to be the most numerous and most important of all the syntagmatic relations). Hardly accessible to agreement are only such weakly grammaticalized, and thus rather semantic than syntactic, relations as that of the instrument, the cause, the direction etc. of an action. This fact may lead one to seek a different account of the direction of agreement, based on the nature of the constructions in which NPs are involved. We have found above that there is no common denominator for the agreement constructions; nevertheless, such an account has been proposed by E. Keenan (1974:298-303, 1978:94-98, extended at a conference held in Trier, 10.3.1980). In a logico-syntactic analysis along the lines of categorial grammar, constructions are conceived as being composed of a **function** and an **argument**.⁴⁹ Table VI shows the assignment of function and argument in the constructions in which agreement is involved.

VI. Function and argument in agreement constructions

function	argument	construction formed
VP _{itr}	NP _{subject}	clause
VP _{tr}	NP _{object}	VP _{itr}
VP _{bitr}	NP _{ind.obj.}	VP _{tr}
adposition	NP _{complement}	AdpP
Nom _{possessum} ⁵⁰	NP _{possessor}	possessive NP

⁴⁷ The relationship of an NP to the verb may, of course, be marked on the NP, namely as its case; but this is not agreement: see § 2. One may, however, say that case markers and external agreement express converse relations, or converse perspectives of the same relation. See also § 8.2.3.

⁴⁸ Tense in nouns does occur in some languages. In Hixkaryana, there is a noun suffix which, roughly, means 'previous' (Derbyshire 1979:99). In Resigaró the verb suffix with the meaning 'recent past' may appear on the subject (Allin 1976, *passim*). And in Sirionó, the noun may have suffixes for tense and aspect (Firestone 1965:24). In no case does agreement seem to be involved.

⁴⁹ The term 'function' as denoting a certain class of expressions in a logical model of grammar has little or nothing to do with the term 'function' used in a teleonomic analysis of the functioning of natural language (in which latter sense it was used above).

⁵⁰ My (and others') 'nominal' is equal to Keenan's (and Montague grammarians') 'common noun phrase'.

Det	Nom	NP
adjective	Nom	Nom
relative clause	Nom	Nom

Disregarding for the moment the incompleteness of this list, we may, for the sake of argument, join Keenan in the observation that in all these constructions agreement proceeds from the argument to the function. Keenan therefore concludes that in any construction, it is always the function which agrees with the argument, and offers his 'functional principle' as an explanation. It reads (Keenan 1978:97):

"The Functional Principle-II

Let the logical form of a syntactic expression E be a functional expression $f(a)$. (That is, the meaning, or semantic interpretation of E is a function, f , of a .) Then the form of the expression of f may vary with the choice of a ."

Agreement would be covered by this more general principle as being a specific type of variation of a function with its argument.

There are both empirical and theoretical problems with this explanation. The main empirical problems are constituted by a) the categorization of the constituent agreed with, b) the logico-syntactic analysis of the possessive construction and the observable agreement in possessive constructions and c) the agreement of anaphoric pronouns. I will take up each of these issues in turn.

a) Keenan does not say which agreement categories he considers. In § 4.3 we have seen that in gender agreement it appears to be possible to have the nominal modifiers agree with the head noun (or nominal), so that the categorization of the constituent agreed with as shown in the last three rows of table VI (Nom) might seem unobjectionable. But we have also seen that with all the other agreement categories, namely number, case and definiteness, this conception is impossible, and one must regard the higher NP as the constituent agreed with. Since this account is also possible in gender agreement, it was concluded that it is generally correct. Then if the function-argument assignments in the last three constructions of table VI are correct – as I assume they are within that framework –, this means that the function-argument relations in these constructions do not determine agreement.

b) The function-argument analysis constructs a diametric opposition between genitive and adjective attribution. However, there is a wealth of data showing that in a great many languages genitive and adjective attributes are treated alike.⁵¹ In particular, the possessive pronoun is treated mostly as a determiner or adjective. Thus, the assignment of function and argument in possessive constructions may be either way round. What is most important in our context, this januslike nature of possessive attribution is responsible for the two opposite directions agreement may take in possessive constructions, as illustrated in fig. V. I take this to be an empirical issue, and it seems to be of minor importance whether the logical character of Keenan's model would allow alternative function-argument assignments in possessive constructions to remedy the deficiency.

⁵¹ The evidence can only be hinted at here. In Persian, Chinese and Lahu the same attributor is used for genitive and adjective attributes. In Latin, there is a regular paradigmatic ("transformational") relationship between genitives such as *patris* and adjectives such as *patrius*. Material attributes (e.g. "wooden") are treated as adjective attributes in some languages and as genitive attributes in others, etc. etc. It is not true, as Keenan (1974:307) seems to suggest, that this opposite assignment of function and argument in genitive attribution occurs only in alienable possession. What seems to be true, instead, is that his assignment of function and argument in genitive attribution has its primary locus in inalienable constructions.

c) The third point where the function-argument account breaks down is in personal pronoun agreement. Whatever the linguistic basis of the function-argument distinction, it seems to be impossible to conceive of the personal pronoun (or the construction of which it is a constituent) as a function to which the representatum would be the argument. This would therefore be a form of agreement outside the scope of the functional principle. And as we shall see in § 6.2, it is just the anaphoric relation which is at the basis of agreement.

The theoretical problem with Keenan's explanation lies in an equivocal use of the term 'function'. The functional principle is surely itself in need of justification; i.e. we would like to know why natural languages should conform to such a principle. Now a formula such as ' $x = f(a)$ ' is sometimes read as ' x is a function f of a '; and since x varies with the choice of a , one might say that the function varies with its argument, adducing this as a general logical justification of the functional principle. This is an equivocal terminology which uses the term 'function' both for what is properly the function, namely f in the above formula, and for what is properly the value of the function, namely x in the formula. If we distinguish the function from its value, what changes with the choice of the argument is, of course, not the function itself, but only its value. Once this is put straight, the initial plausibility of the functional principle disappears. Should empirical research prove it to be correct outside the realm of agreement,⁵² we would still lack theoretical justification for it.

5.3. A semantic solution

I have devoted such extensive discussion to an unsuccessful account for two reasons. Firstly, this is the only unified account of agreement in the literature that I am aware of. Secondly, the conception of the agreeing constituent as a function is, admittedly, attractive. It implies that this constituent has an open slot, and we might then say that the agreed-with constituent is represented in that slot by the agreement marker. We have indeed found this to be the case in external agreement. In internal agreement, however, we have found some agreeing constituents, namely appositions and nominal predicates, which are clearly not relational in a syntactic sense. We may leave these aside for the moment, and consider the determiners, numerals, adjective attributes, genitive attributes (i.e. those which display internal agreement) and relative clauses. All of these are constitutionally modifiers, which means that they presuppose a head nominal to combine with (if they are not substantivized). We may therefore say that they have an argument slot for a nominal and that they are also relational.⁵³ This would be a different sort of relationality though, because it would not involve government, as it does in the case of the verb, adposition, and relational possessum. However, this difference between modification and government would correlate with the fact that the argument is a nominal in the first, and an NP in the second case; and we might say that only NPs can be governed, and only nominals can be modified. We might call the relationality associated with government 'strong relationality', and that associated with modification, 'weak relationality'.⁵⁴

⁵² Keenan (*locis citatis*) adduces ample evidence for it.

⁵³ This is also assumed in Lehmann 1979, ch. IV. 1.2., and it is, with respect to the relative clause, argued for in ch. IV. 3. of that work.

⁵⁴ A conceptually similar distinction is made in Langacker 1981. Here we encounter the notion that an element x may have selection restrictions (an 'elaboration site' in Langacker's terms) with respect to an element y ; but x may or may not be relational. An example of the former situation is x = finite verb and y = subject; an example of the latter is x = classifier phrase and y = classified noun. In both cases Langacker says that x has valence (with respect to y) (p. 20).

While this idea seems to be basically sound to me, the terminology is quite mismatched. If an element contains an elaboration site and thus presupposes an argument, then such an element must be at least weakly relational in the above terms. The term 'valence', on the other hand, has traditionally been used for the syn-

Now we would still have to deal with the apposition and the nominal predicate. They are not constitutionally modifiers, and there is no way of saying that they have an argument slot for a nominal head. Observe, however, that these are just those two constructions in the domain of internal agreement which never seem to have obligatory class or number agreement (see table III18 in § 4.1). This seems to correlate with the fact that they are syntactically parallel to the head rather than subordinate to it. The case agreement that they show might be compared to that shown by coordinated NPs – an agreement phenomenon not dealt with here. We might therefore be tempted to simply exempt them from our general account of agreement.

The question is: what would we gain by this? We have more or less accepted Keenan's function-argument analysis of the constructions involved in internal agreement, but we already know that the function does not agree with its argument here. The agreement markers in internal agreement refer to the higher NP. Could we not say that it is this higher NP which is represented in the argument slots of the agreeing terms? This sounds somewhat awkward because the terms in which the NP is supposedly represented are actually constituents of that same NP. However, what is meant is really that the common referent of all the terms showing internal agreement is represented in them. This relation between the agreeing word and its referent is clearly not a syntactic function-argument relation in the above sense of categorial grammar (it would not fit into table VI); it is a semantic relation, namely the same that exists in predicate calculus between a **predicate** and its **argument** (an individual constant or variable).⁵⁵

If the argument is of semantic nature, the argument slot on the agreeing element need also only be of semantic nature; i.e. the agreeing element may, but need not, be relational in a syntactic sense. On this account we need consequently not worry about the non-relationality of the apposition and the nominal predicate. The agreement signs which appear on them signal an argument slot only in the sense of expressing that the agreeing term refers to a certain argument.

We have been able to proceed a great deal in the description of agreement by using the syntactic concept of the NP. However, we have met with certain unresolvable difficulties, and have not been able to recognize anything which the agreeing elements in internal and external agreement have in common. The difficulties have been overcome, I think, and a unified account of agreement has been arrived at, thanks to the switch from the syntactic notion of NP to the semantic notion of the argument. The relation between an argument and an NP is one of designation: an NP designates an argument. Other constituents may be in some construction with an NP, and make reference to the argument. To signal the reference to an argument is to open an argument slot. With these explanations in mind, we may propose the following:

VII. Agreement principle

If an expression B contains a slot for an argument, and if that argument is designated by an NP A, then B may agree with A.

The consequent of this implication is to be interpreted as: "then if there is agreement involved in this relation, B agrees with A, and not vice versa".

I have tried above to answer the question: why is it NPs that trigger agreement, and not other constituent classes? On the basis of the present discussion, we may now answer two further questions: Why is it in argument slots that agreement appears? The answer is: because argument slots are the places where the arguments designated by the NPs triggering agreement have to be inserted.

tactic relations which a verb has to its complements, and should not be used for semantic relations, let alone the semantic relation of a nominal modifier to its head noun.

⁵⁵ This is also what the formalization of adjective agreement presented in Lapointe 1980, ch. IV and based on the relation of modification, boils down to.

And why is it agreement that appears in argument slots; i.e. what makes agreement, as opposed to other expressive means, appropriate to mark the argument slot? The answer is: because agreement signs show the categories of the NPs triggering agreement, and can therefore represent them.

Here we arrive at a functional explanation of agreement which takes recourse to Seiler's conception (1979, § 5.6.2.2) that part of the **apprehension of a linguistic object** is to keep it **constant**. This presupposes that the same object (i.e. nominal concept or referent, something that can serve as an argument in the above sense) can make its appearance at various places in the sentence or text. The fact that each time the same object is involved is expressed in formal languages by means of differential referential indices. In natural languages it is expressed by means of agreement in grammatical categories, i.e. by categorizing, mentioning the categories of, the apprehended object. What is constitutive of the whole dimension of apprehension is true also of agreement: Reference to the individual cannot be separated, in natural languages, from its subsumption under a class; these two operations are intimately tied up with each other, are converses of one and the same thing. This is what is meant by the **generalizing** and **individualizing principles** of the dimension of apprehension (see Seiler 1979).

The apprehension of the linguistic object and its reappearance cannot be neatly separated. It is not the case that there is one place in a sentence where the object is apprehended – say in a noun or an NP –, and its further occurrences – in agreement markers – are only reappearances of the same already fully apprehended object. For one thing, we have seen that the grammatical categories involved need not be expressed on the noun itself, nor even on the NP which triggers the external agreement. What is more, the NP may not even belong to a category which the agreement marker shows. This means that the categorization is in part achieved only through agreement, through the recurrence of the object. We shall see in § 6.4 that there are certain phenomena, called classificatory concord, which border on agreement and where the independence of the classificatory element is even more pronounced. Here it is even clearer that the apprehension of the linguistic object is dispersed over the sentence. Therefore, keeping the object constant is not a function independent of the apprehension of the object, but a constitutive subfunction of it.

6. Grammaticalization of agreement

6.1. Grammaticalization

I shall deal with grammaticalization in a separate paper, so that I can be brief here. The basic idea for the present purpose is that there is a set of descriptive parameters according to which functionally equivalent constructions may be ordered, and that these parameters correlate, i.e. tend to effect the same order among the constructions, and that they are all aspects of a more general phenomenon called **grammaticalization**. In the work done on agreement, both in and outside of UNITYP, some of these parameters have already been used to establish an order among different techniques of agreement.⁵⁶ Below we shall see what the concept of grammaticalization can contribute to our understanding of agreement.

We shall consider six parameters of grammaticalization, which may be arranged, according to the selective and combinatory aspect of every linguistic operation (cf. Jakobson 1956), in a paradigmatic and a syntagmatic group:

VIII. Parameters of grammaticalization

I. With increasing grammaticalization, the paradigm is consolidated:

1. The **semanticity** of the structural means decreases, the paradigm becomes smaller.

⁵⁶ Cf. e.g. Givón 1976, Lehmann 1979, ch. IV. 3.2 and Serzisko 1981.

2. The **obligatoriness** of the structural means increases.
3. The **paradigmatic variability** of the structural means decreases.

II. With increasing grammaticalization the syntagm is consolidated:

- The **constituent structure level** of the construction becomes lower.
- The **bondedness** of the construction increases (i.e. its cohesion becomes tighter).⁵⁷
- The **syntagmatic variability** of the construction decreases.

These factors and their correlation are observable in all areas of the language system. We shall now see what they look like in external and internal agreement.

6.2. Grammaticalization of external agreement

I shall first illustrate the **grammaticalization scale** for object-verb agreement. The element referring to the object – mostly an object agreement marker – has been italicized in the examples.

(47) Der Professor fragte nach seiner Haushälterin. Niemand hatte *die Frau* gesehen.

GER "The professor asked for his housekeeper. Nobody had seen the woman."

(48) Der Professor fragte nach dem Mädchen, aber *das/die* hatte niemand gesehen.

GER

(49) Der Professor fragte nach dem Mädchen, aber niemand hatte *es/sie* gesehen.

GER "The professor asked for the girl, but nobody had seen her." (=48)

(50) Giovanni, *l'ho visto* ieri.

ITA "John, I saw him yesterday."

(51) Ayer *lo vi* a mi amigo.

SPA "Yesterday I saw my friend."

(52) māl-am ilū-ša izzib-ū-ši.

ACC land-ACC god:PL-POSS 3.F leave-SBJ.3.PL.M-OBJ.3.F (Soden 1952:184)

"The land, its gods will leave (it)."

(53) Bet-u ayyə-hū-t.

AMH house-DEF saw-OBJ.3.SG.M-SBJ.1.SD

"I saw the house."

(54) a-xàc'a də-z-bè-yt'.

ABK ART-man ABS.3.SG.HUM-ERG.1.SG-see-FIN

"I saw the man." (Hewitt 1979:68)⁵⁸

(55) a) Na em i-no laik ask-*im* tufela.

TOK now he SBJ.3-NEG like ask-TR 3.DU

"Now he did not want to ask the two of them."

⁵⁷ For the concept of bondedness (German: Fügungsenge), see Seiler 1975, § 2.4 and Foley 1980.

⁵⁸ Example (53) might be substituted by (23), and (54), by (22).

- b) Man i-mek-im singsing longMbabmu.
 man SBJ.3-make-TR spell to Mbabmu
 "Men utter a spell over Mbabmu." (Sankoff 1977:67f)

Let us now see how the constructions exemplified by (47) through to (55) are ordered according to each of the six parameters in VIII.

I.1. **Semanticity:** The element representing the object argument of the main verb in (47) is a full NP whose head has a lexical meaning. Semanticity is at its highest; there is no grammaticalization involved here. However, the head noun of the anaphoric NP might be lexically emptier, like the classificatory nouns *hito* "person" and *koto* "thing" in Japanese, which are already well on the way of grammaticalization. If semanticity decreases further, the lexical element of the anaphoric NP disappears altogether, and only the determiner showing the various grammatical categories of the referent remains. This is the situation in (48). Further desemanticization leads to the loss of the deictic feature in the anaphoric pronoun, and the result is a personal pronoun as in (49). The semanticity of this remains almost constant across the next examples: besides definiteness, it shows number and gender of the NP it refers to. At the stage represented by (54), definiteness of the object is no longer expressed. Finally, no properties of the object are coded in the affix of (55); this is the pole of lowest semanticity.

I.2. **Obligatoriness:** The presence of the anaphoric NP in (47) is conditioned by the transitivity of the main verb. Beyond this nothing is obligatory about this NP. This is still so in (48) and (49). In (50) too, the personal pronoun is only obligatory because the verb needs an object. If we transform the construction, e.g. into *leri ho visto Giovanni*, it can be dispensed with. However, the case is different from the former ones in that in the given construction, a member of the class of proclitic pronouns is required. In (51) and (52), the clitic pronoun and the suffix are optional. This only apparently interrupts the gradience, because obligatoriness must be understood relative to the constituent structure level; see II.1. The object agreement suffix in (53) is conditioned by the definiteness of the object. It must be present if the object is definite, otherwise it cannot stand. The personal prefix in (54) is completely indispensable, and so is the suffix in (55). Here we have the greatest degree of obligatoriness.

I.3. **Paradigmatic variability:** The anaphoric NP in (47) may be substituted by any other semantically appropriate NP, so paradigmatic variability is greatest here. More or less the same is true of (48) and (49). Observe, moreover, that if a pronoun is chosen as the anaphoric device, then semantic agreement may overrule grammatical agreement, as shown in the examples (cf. § 6.5). This possibility is absent in the rest of the constructions: not only the presence, but also the form of the anaphoric or agreeing element is completely determined by the grammatical context. However, whereas the form of the agreeing elements in (50) through to (54) is still variable, the suffix in (55) is invariable.

II.1. **Constituent structure level:** In the first three examples of the series the relation between the *repraesentatum* and the anaphoric expression involves more than one clause. In (50) the *repraesentatum* is a sister to the clause containing the anaphoric pronoun. In (51) and (52) this NP is in the same clause, and in the other examples it is in the VP. The same decrease of the constituent structure level occurs in the construction containing the anaphoric or agreeing element, but not the *repraesentatum*.

II.2. **Bondedness:** In the first three examples, there is no grammatical relation whatsoever between the *repraesentatum* and the construction containing the anaphoric expression; they are not bound to

each other. In (50), there is still no grammatical relation between the initial NP and the anaphoric clause. But the former necessarily belongs to the same sentence as the latter, so that there is automatically a greater cohesion between them. In (51) and (52), the relation of the NP to the agreeing construction is somewhat ambiguous. One may call it the object; however, in descriptions of languages with heavy personal affixing on the verb, but without case marking of the arguments (mostly American Indian languages), the relation of the NP to the personal verb affix has often been called appositive (e.g. in Milewski 1950:174 and Seiler 1977:227). In the subsequent examples, the NP is definitely the direct object of the main verb.

Again, the same increase in bondedness can be noted between the agreeing element and the constituent whose open slot it occupies. In the first four examples, the anaphoric expression is the object of the main verb. In (49), it is an unaccented pronoun preferring the position after the finite verb (auxiliary in this case). Again, in (50) and (51) the pronoun is proclitic to the finite verb. In (52) the agreeing element is a suffix to the verb. In the latter two examples, it seems doubtful whether this element still has pronominal properties or is the object of the verb, since the NP seems rather to be the object. The stage of a mere agreement affix is definitely reached in (53), and this continues through (54). Finally, the suffix in (55) has become part of the verb stem, it is no longer an inflectional suffix. Here the greatest degree of bondedness is realized.

III.3. Syntagmatic variability: The anaphoric NP in (47) may be shifted around the sentence as freely as the syntax allows for object NPs. The positional alternatives for the pronouns in (48) and (49) are much more restricted. From (50) on, no variation in the position of the agreeing element is possible.

It should, by now, be clear what is meant by ordering a set of functionally equivalent constructions according to the parameters of grammaticalization. We have also seen that each of the six parameters effects more or less the same order, namely that in which the illustrative examples are arranged. There are, however, some mismatches. Whereas bondedness distinguishes between clitics and affixes, and therefore requires the order (51) (52), constituent structure level would seem to require the opposite order, because the nominal object belongs to the VP in (51) but not in (52). It may well be that a more thorough analysis would dispel this incongruence. However, the theory of grammaticalization is not yet developed enough that it would enable us to say exactly to which degree the six parameters should be expected to correlate. As long as we do not know this (the problem of the theoretical foundation of the grammaticalization parameters will not concern us here), we may be content with a correlation of less than 100%. This still suffices for us to say that what the parameters jointly constitute is grammaticalization.

The marked elements in the examples (47) through (55) are of quite a different grammatical nature. At first we have a full NP which fulfills an anaphoric function, then free demonstrative and personal pronouns in anaphoric function, then pronominal clitics, personal verb affixes and finally, in (55), a transitivity suffix. Yet we have seen them to differ only gradually from each other: within each successive pair there are certain common properties, and this fact puts the constructions in a chain.

Our definition I allows a clear decision on where agreement is involved and where not: agreement appears in the marked elements of all the examples except for the first and the last. What is much less clear is where the anaphora ceases and mere agreement remains. In the absence of an object NP in the same clause, all the agreement markers in (51) through (54) may have a pronominal function and play the role of the direct object. But once such an NP is present, as it is in the examples, they are reduced to the function of mere agreement. The borderline cases seem to be (51) and (52). On the one hand, the personal clitics of Spanish and the personal object suffixes of the Accadic verb occur mostly in the function of anaphoric pronouns; they are not regular agreement

markers. On the other hand, the object NP in both languages is sufficiently identified by its case marker (though its presence in Spanish is subject to certain constraints); it normally does not trigger agreement on the verb. Constructions such as (52) are exceptional in Accadic; they occur only when the object NP is in front of the clause. Observe, however, that left-dislocation is not involved here, as it is in (50), because the initial NP is in the accusative. The object NP and the proclitic or suffixal object pronoun in (51) and (52) are in a sort of appositive relationship to each other. What is a left-dislocated NP in (50) has assumed the syntactic function of the direct object in (53), and what is a personal pronoun in (50) has become an agreement marker in (53). The transition between anaphoric and syntactic agreement evidently takes place in constructions such as (51) and (52).

When object agreement ceases, transitivity marking remains, as in (55). However, there is still an important stage between those exemplified by (54) and (55) which I cannot illustrate for object agreement. I have said that all the agreement markers up to that in (54) may have pronominal function. This may be the case for most of the markers of external agreement; but there are ones without pronominal potential. This is for instance the situation in French, German, and essentially also in Russian, subject-verb agreement. In these languages the finite verb requires an overt subject because its subject agreement suffixes ("personal endings") cannot have pronominal function. We must therefore insert a stage 'agreement affix without pronominal function' in the chain. This represents a degree of grammaticalization still more advanced than that illustrated by (54). The loss of pronominal potential means further desemanticization. A greater cohesion between the verb and the agreement marker tends to correlate with this; they fuse, the inflection becomes irregular, and we end up with suppletion as in German *bin – bist – ist* ("am – are – is").

Again, more subtle stages may be discerned in the passage between the constructions exemplified by (52) and (54). We may assume (with Givón 1979, ch. II and Comrie 1981, ch. 9) that objects which are proper names, human (or animate), definite or specific are more salient than objects without these properties, and that these latter are the unmarked objects. The features mentioned constitute what Comrie calls the animacy hierarchy. The higher an object in the **animacy hierarchy**, the more likely the verb will agree with it (cf. ex. (23) above). An additional property of the object which favors verbal agreement but which is outside the animacy hierarchy is preverbal position. Object-verb agreement is weakly grammaticalized if it is restricted to objects possessing all or most of these features. Obligatoriness of agreement increases gradually as these restrictions are loosened, so that agreement markers appear on the verb even when the object possesses few or none of the favorable properties.⁵⁹

Before we pass on to the other forms of external agreement, a word must be said on a theoretical issue. The comparison of two constructions with respect to their degree of grammaticalization evidently presupposes a certain functional similarity between them. If constructions are ordered on a grammaticalization scale, it will naturally turn out that the similarity of two constructions decreases with their distance on the scale, so that two constructions near the opposite poles may have little in common. Thus, in likening external agreement to anaphora, I do not succumb to the *X is really Y* syndrome,⁶⁰ i.e. I am not saying that agreement markers are "really", "underlyingly", anaphoric (personal) pronouns.⁶¹ What I am saying is that they are only gradually distinct from one

⁵⁹ This has been shown in some detail for Bantu languages in Givón 1976, § 5. Several of the properties enumerated above are also considered in Moravcsik 1978:365. In Kusaiean, proper names, both as subjects and objects, appear to be the strongest agreement-triggerers; see Lee 1975:246-250.

⁶⁰ This was first diagnosed by Chafe (1970:86-88).

⁶¹ Authors have not withstood the temptation of explaining the object-verb agreement as displayed in (53) by reducing it to the anaphoric resumption of a left-dislocated NP, as displayed in (50); cf. e.g. Anshen/Schreiber 1968. This has been rightly criticized by Moravcsik (1974:122f), though her crucial exam-

another; and this will be confirmed by the fact that the former can develop diachronically out of the latter (see below § 7.1).

What has been shown for object-verb agreement could be repeated for the other forms of external agreement. In quite a parallel fashion it could be shown that the agreement of the verb with the subject is connected with an anaphoric personal pronoun in subject function, on the less grammaticalized side, and with an invariable verb marker,⁶² on the more grammaticalized side; and likewise for the rest of verbal agreement. Again, the agreement of the possessum with the possessor, and that of the adposition with the complement, are connected, on the less grammaticalized side, with the constructions 'possessum + free possessive pronoun' and 'adposition + free oblique pronoun', respectively, where the pronoun refers to an NP outside of this construction; and on the more grammaticalized side, they are connected with nouns and adpositions bearing an invariable relational affix, which signals their relation to the possessor and complement, respectively.⁶³ (56) is a particularly revealing example of a less grammaticalized stage of agreement of the adposition.

(56) ii-waan iškič tlaaka-tl ya in maaseewal-li.
 NAH him-with all man-ABS go ART vassal-ABS
 "Every man went with (his) vassal." (Langacker 1977:28)

Here we have exactly the same transitory stage between anaphoric and syntactic agreement that we saw above (ex. (51) and (52)) in object verb agreement. It is evidence of this kind that leads to our setting up the scale of external agreement; see fig. IX.⁶⁴

IX. Scale of external agreement

process		anaphora						mere relationality
		anaphoric agreement			syntactic agreement			
anaphoric/ agreeing relational element	can function anaphorically	+	+	+	+	+	-	-
	can cooccur with NP	-	-	-	+	+	+	+
	grammatical status	full NP	free pronoun	clitic pronoun		variable affix		invariable affix
grammaticalization		none	minimal	← ————— →				maximal
		1	2	3	4	5	6	7

I recall the examples which illustrate the columns in the scale:

- 1: (47) 3: (50) 5: (52)-(54) 7: (55)
- 2: (48) 4: (51) 6: German verb agreement

I would suggest that scale IX allows us to identify two typical forms of external agreement, namely the typical forms of anaphoric and of syntactic agreement. The crystallization point of anaphoric agreement seems to be in column 2, where a free personal pronoun is used. The crystallization point

ple unfortunately does not prove her point.

⁶² The verbal *i*-prefix of Tok Pisin is a case in point; see Sankoff 1977:67-71.

⁶³ Such relational affixes occur, for instance, in Austronesian languages. See Jensen 1977:187-190 for Yapese, Lee 1975 for Kusaiean and Sohn 1975:272-278 for Woleaian.

⁶⁴ Cf. Lehmann 1979:271, Lapointe 1980; ch. 6.2 and Walter 1982, § 1.

of syntactic agreement seems to be in column 5, which involves an affix capable of anaphoric function. Columns 3 and 4, where a clitic appears, represent the transitory stages between anaphoric and syntactic agreement.⁶⁵

It will be recalled that at various points in § 4.2 considerable effort was called for in the attempt to provide general answers to the four questions concerning the nature of external (or person-domain) agreement. It was sometimes impossible to give a general syntactic characterization of all the different processes represented by columns 1 through 7 of the scale. Remember that in order to give a unified characterization of the agreeing constituent, we had to say that in anaphoric agreement, this is not the personal pronoun but the construction whose open slot is filled by the pronoun. And whereas the constructions referred to in columns 4 and 5 were seen to be endocentric in a straightforward sense, certain interpretative aids were necessary in order to maintain this for the other constructions, too. Scale IX now makes us see that these are not accidental problems or exceptions to the regularities of external agreement, but that they are a logical consequence of the scalar nature of the range of phenomena taken into account and of the law governing this scale, namely grammaticalization.

The scale also clarifies the position of pronominal agreement among the various forms of external agreement. Whereas the rather theory-free data presentation of § 3 gave the impression that agreement of the personal pronoun was a phenomenon parallel to and on the same level as the agreement of the verb, the possessum, and the adposition, it now has become clear that this is not so. Whereas the latter three processes are indeed parallel and on the same level, since they are the three forms of syntactic (external) agreement, agreement of the personal pronoun is anaphoric agreement and has the same relationship to each of the other three forms, namely that of representing a less grammaticalized stage of agreement than these.

This explains certain implicational generalizations that emerge from the data presented in the appendix of Moravcsik 1971, for instance the fact that if there is gender or number in the verb, then there is gender or number, resp., in the personal pronoun. I suspect the same to be true for the other categories and constructions of syntactic agreement.

Scale IX also expresses the relation between **anaphora** and **agreement**. Whenever anaphora uses grammatical means, i.e. pronouns, it necessarily involves agreement (namely at least person agreement). At the very moment that syntactic agreement takes place, the phenomenon is no longer called anaphora. The current conception of anaphora denies that an anaphoric relation exists between the agreement affixes of a finite verb and its subject or object, for instance. However, it is doubtful whether there is really a qualitative leap here. On the one hand, we have seen that such affixes do, in certain cases, function anaphorically; namely whenever there is no overt subject or object in the construction. And on the other hand, it is not really a question of presence vs. absence of the NP agreed with, but of the constituent structure level on which this NP may be copresent. In this sense we may say that syntactic agreement is, as it were, a mini-anaphora.⁶⁶

The connection of anaphora and agreement explains why the signs of syntactic agreement, especially in their less grammaticalized forms, often signify the **definiteness** of the NP agreed with. Thus, verb-object agreement takes place in Swahili and Amharic only if the object is definite. The so-called objective conjugation of Hungarian implies that the object is definite. When the subject

⁶⁵ Ingram (1971, ch. 3) establishes a dichotomy between "person pronouns" and "person markers". The former are free substitutes for NPs, whereas the latter are derived by means of a copying rule. The above data show that linguistic reality is more complex than that; neat dichotomies occur seldom in it.

⁶⁶ Lapointe's (1980, ch. V and VI) formalization of the difference between pronouns clitic to the verb and subject agreement of the verb in Romance languages also pertains to the difference between anaphoric and syntactic agreement.

agreement signs on the verb dispense with an overt subject, i.e. when they embody a pronominal subject, this tends to be definite ("he") rather than indefinite ("someone"); see Moravcsik 1971:27f and Plank 1977(M):35. The premises of the explanation are: firstly that the pronouns of referential anaphora are definite, and secondly that the markers of syntactic agreement are a grammaticalized form of referential anaphoric pronouns. Grammaticalization involves desemanticization; see VIII. But the semantic features are lost gradually and not all at once. The definiteness component maintains itself over a certain stretch of the scale, before it gets lost, e.g. in German and French subject-verb agreement.

There is one more phenomenon explainable by the connection of agreement and anaphora, viz. the fact mentioned above that if the verb agrees with postverbal arguments of a given syntactic function, it also agrees with arguments of the same syntactic function when these have preverbal position (cf. Greenberg 1963, universal 33, Fauconnier 1974: 191-94, Moravcsik 1971:15f, Moravcsik 1978:340-342 and 365, no. 7). Here again we have a regular difference in the behavior of agreement and anaphora. It is entirely normal for syntactic agreement to be implemented both when the triggering NP precedes and when it follows the governing term; but if it follows the term, agreement can be suspended. In anaphora, however, the sequence 'repraesentatum – anaphoric element' is the normal case, and reverse anaphora is heavily constrained. This is an instance of the increasing obligatoriness which is part of increasing grammaticalization: looking at the scale from left to right, we may say that agreement becomes possible in the position preceding the repraesentatum, where anaphora is difficult, and after becoming optional it finally even becomes obligatory in this position (as well as in the reverse one).

This situation has an analogue in the realm of internal agreement, namely in the agreement of the adjective attribute. Here the rule applies that if the pronominal adjective agrees in a language, then so does the postnominal.⁶⁷ The fact that internal agreement behaves here in the same way as external agreement provides a first clue to the possibility that the former is also connected with anaphora. This will be taken up in § 7.2.

6.3. Grammaticalization of internal agreement

Because of the fundamental differences between internal and external agreement, the disposition of this section cannot be parallel to that of the preceding one. It is chiefly due to the difference, within external agreement, between anaphoric and syntactic agreement, and to its gradient nature, that the forms of external agreement can be arranged on a grammaticalization scale. There is, however, no analogue to this difference in internal agreement: for that matter, all internal agreement is syntactic. This is a logical consequence of the fact that external agreement originates from an NP, and extends outward to a construction which may be, to a varying extent, distant, while internal agreement does not extend outward from the NP from which it originates, but involves only constituents of that same NP. The consequence of this is that grammaticalization varies only very little within internal agreement. When we cross the narrow boundaries of this variation, we soon come to phenomena other than agreement.

I shall subdivide the discussion into class agreement and other internal agreement, and shall first deal briefly with what little can be said about the degrees of grammaticalization in number and case agreement.

⁶⁷ Cf. Moravcsik 1971:24 = 1978:349f, Plank 1977(M):49f for Old Irish, and Ostrowski 1981, § 4.6 for Armenian and Georgian. German seems to be an exception in this respect; see Plank 1977(D), § 2.

6.3.1. Number and case agreement

Even within the group of languages which have a morphological category of nominal **number**, internal number agreement does not seem to be particularly common. There seem to be many among them which are like Turkish in signaling the number of an NP only once, normally on the head noun. Internal number agreement appears to be dependent on a rather high degree of grammaticalization of nominal number:

(57) a umana davai
 TOL ARTPL tree
 "the trees" (Mosel in Seiler/Stachowiak 1982, § 2.1.1)

(58) le k'as pek'-oob-e?
 YUC DEF bad dog-PL-D3
 "those bad dogs"

(59) esos perros malos
 SPA "those bad dogs"

(60) those bad dogs

In (57), plural is expressed by a clitic lexical item, a so-called noun of multitude (see Kölver 1982(I), § 2.1). The plural marker in (58) is affixal, morphologically highly regular and appears normally only once in an NP. Plural in Spanish shows agreement, appearing both on the noun and most of its modifiers. It exhibits a low degree of irregularity and fusion. Finally in English, the number of an NP is marked almost exclusively on the noun, with agreement of the demonstrative pronoun being completely symbolic. From such examples we may generalize as follows: If number is expressed by free or clitic forms, it is a morphosyntactic feature of the NP as whole and does not show agreement. This may appear sporadically if number is expressed by agglutinative affixes. As the expression becomes increasingly fusional, it spreads over the constituents of the NP, including the noun itself. At the final stage, when number agreement becomes highly irregular, it is reduced again, number becoming a morphosyntactic feature of the noun.

A brief look at **case** marking reveals a parallel situation:

(61) a quelli cani cattivi
 ITA "to those bad dogs"

(62) ev-in büyük kapı-sı-dan
 TUR house-GEN big door-POSS.3.SG-ABL
 "from the big door of the house"

(63) maliki wiři-ŋki Ø-tji yałku-ŋu ŋatju.
 WAL dog big-ERG ASP-OBJ.1.SG bite-PRT me(ABS)

(63') wiři-ŋki Ø-tji yałku-ŋu maliki-łi.
 big-ERG ASP-OBJ.1.SG bite-PRT dog-ERG
 "The big dog bit me." (Hale 1976:88, 93)

(64) Angum-mik angisuu-mik tikip-p-oq.

GRE man-INSTR big:PART-INSTR come-IND-3.SG
 "He came with a big man." (Sadock 1980:304)

(65) Venit cum homine magno. id. LAT

The syntactic relation of the NP in (61) is expressed by a preposition. In (62), we have a suffix agglutinated to the NP as a whole and exhibiting only phonologically regular alternation. The case suffixes of Walbiri are also agglutinative, though they have morphologically conditioned allomorphs, as (63') shows. They are appended at the end of an NP, but may be repeated on its subconstituents if these are separated. (I will take up this latter aspect in § 8.2.4). In (64), we see a case suffix which shows up on postnominal modifiers by regular agreement. Finally in (65), expression of the case is completely fusional, and case agreement is obligatory for most nominal modifiers, regardless of their position. To the extent that such evidence may be generalized, a hypothesis analogous to the one advanced above for number agreement seems plausible: Case agreement is absent if the case marker is a free form, and extremely rare if the case marker is an agglutinating and morphologically regular affix. With increasing grammaticalization of nominal case, agreement becomes more possible and spreads proportionally to it.

These hypotheses are still rather vague, and they certainly do not account for all the factors which condition the possibility and extent of internal agreement in case and number. Nevertheless, grammaticalization does seem to play an essential role here.

6.3.2. Class agreement

Recall that the two techniques of class agreement are **noun class** agreement and **gender** agreement. They are illustrated by (66) and (67), respectively.

(66) n-guo z-a-ke n-yekundu m-bili
 SWA CL10-dress CL10-AT-POSS.3.SG CL10-red CL10-two
 "her two red dresses" (Polomé 1967:143)

(67) duae rubrae vestes suae, id. LAT

These examples are typical for the two techniques. They indicate that there is a difference between them in grammaticalization.⁶⁸ Applying the parameters of VIII, we find that on the average, the following is generally true: I.1. Semanticity: The number of noun classes may vary between two and twenty-one, whereas there can be no more than three genders (cf. Welmers 1973:159-165 and Heine 1982, § 2.1). The genders are, apart from nouns denoting animate beings, generally semantically empty, whereas allocation of a noun to a noun class is often semantically motivated (cf. Heine 1982, § 2.8; furthermore Seiler 1979, § 5.6 and 5.7 on the increasingly metalinguistic character of class allocation in the agreement techniques). I.2. Obligatoriness: The noun class markers can be obligatory in almost all of the constructions of internal agreement (e.g. in Swahili); however, when in connection with definiteness and specificity, they can also be optional in some languages (cf. Walter 1982). Gender, on the other hand, is always obligatory in those positions in which it occurs; there is no genderless form of a noun. I.3. Paradigmatic variability: A noun may, within certain limits, change its class affix, which is a derivative process and makes it a different lexical item (see Mufwene 1980, Heine 1982 § 2.7, Walter 1982, and Drossard in Seiler/Stachowiak 1982, § 5, on the

⁶⁸ This has been brought out in earlier work done within UNITYP, e.g. Seiler 1979, Walter 1982, and Serzisko 1981.

derivative potential of noun classes). The gender of a noun, however, is generally fixed and can be changed, by motion, only in some languages and only in nouns denoting animate beings. Again, internal agreement 'ad sensum' is more possible with noun classes than with gender (cf. § 6.5 below on semantic vs. mechanical agreement).

II.1. Constituent structure level: Noun class markers may be derivative affixes and may thus form derived stems of a noun. Gender is inherent to lexical stems and generally even to derivational affixes. Therefore the constituent structure levels are roughly the stem vs. the morpheme. II.2. Bondedness: A noun class marker is usually an agglutinative affix, but may also be identical with a clitic pronoun (e.g. in KiHungana). It also shows up mostly on the classified noun itself. Gender appears mostly in fusional affixes, cumulated with other categories; it may inhere to the classified noun even without a segmental expression (see Heine 1982, § 2.2 on overt vs. covert gender). II.3. Syntagmatic variability: On this parameter there is no difference between noun class and gender.

Thus gender is generally more grammaticalized than noun class. Gradual transitions between noun class and gender systems are possible, provided sex is among the features on which noun classes are based. But since many noun class systems do not involve sex (esp. the Bantu ones), whereas gender necessarily involves sex, grammaticalization is not the only parameter on which the two techniques of class agreement differ from one another.

6.3.3. Non-agreeing techniques of nominal classification

I will use **nominal classification** as a cover term to comprise any classification of nominal concepts or nouns, whether effectuated by noun classes or genders (in class agreement), by the various sorts of nominal classifiers to be described below, by declension classes, or even by verbs (cf. § 6.4 and the glossary in Seiler/Lehmann (eds.) 1982 s.v. Nominalklassifikation).

We have seen that internal agreement may involve the categories of case and number only on a very advanced level of grammaticalization, namely the level of inflectional morphology. The two techniques of class agreement differ in grammaticalization, but they are still fairly near to one another in this respect and operate on the same level of inflectional morphology. We may therefore ask whether there is anything that corresponds to class agreement on levels of less or more grammaticalization.

Let us begin by asking: what comes to the right of the agreeing techniques of nominal classification on a grammaticalization scale? Although this requires further investigation, a plausible answer would seem to be: **declension class**. Declension classes, like the two afore-treated techniques, effect a classification of the nouns of a language. But in comparison with gender, their semantic base is still weaker, their paradigmatic variability lower and their bondedness tighter. Whereas the gender of a noun is of some syntactic significance, namely in agreement, its declension class is practically irrelevant for syntax. Note, however, that declension classes may, under certain circumstances, still have some semantic base and some syntactic relevance. Namely, when there is case declension and case affixes vary according to declension class, then there may be a tendency for nouns to join those declension classes which provide the case distinctions appropriate to their syntactic potential, this in turn being determined by their meaning class.⁶⁹ Thus declension classes may have syntactic import. However, they do not seem to enter into the formulation of a single syntactic rule. They are at a stage of grammaticalization that might be called **lexicalization**.⁷⁰

⁶⁹ "Nouns tend to join a declension class that provides for those relational distinctions that are desirable in view of their semantically determined potentiality of occurrence." Plank 1979:636.

⁷⁰ One may ask whether Lobi, adduced by Heine (1982, § 1, fn. 2) as a language with noun classes, but without agreement, is at this stage.

The remaining question to be asked is: what comes to the left of the agreeing techniques of nominal classification on a grammaticalization scale? We may approach this question with a general consideration. In preceding sections we saw that internal agreement is the spreading of grammatical features of an NP among its constituents. Now the present discussion has shown that with increasing grammaticalization, such features may disappear from the modifiers and concentrate lexically in the noun. A reverse prolongation of this process makes it seem to be a fair guess that on a pre-agreement stage of grammaticalization such features are expressed only on one or another nominal modifier, from which they spread, with increasing grammaticalization, to other modifiers of the same NP. This leads us to the **nominal classifiers** which are associated with, or even bound to, a specific type of nominal modifier.

We know of three types of such nominal classifiers: article classifiers, possessive classifiers and numeral classifiers. I shall illustrate them in turn.

Article classifiers. In several languages of the Americas (Sioux, Toba) and Australia (Dyirbal), nominal determiners constitute a paradigm based on semantic components which serve to classify the determined nouns. Examples are:

(68) a) cínudā tã
 PON dog DEF.SG.STANDING
 "the dog"

b) qiɕa ɕĩ
 eagle DEF.SG.MOVING
 "the eagle" (Barron/Serzisko in Seiler/Stachowiak 1982, § 1.1)

(69) a) ba-ŋgu-l yaɾa-ŋgu
 DYI D2-ERG-CL1 man-ERG
 "that man (visible)"

b) ba-ŋgu-n ɖugumbi-ru
 D2-ERG-CL2 woman-ERG
 "that woman (visible)" (Dixon 1972:42-45)

The classifier systems in the two languages exemplified, Ponca and Dyirbal, are semantically rather different. The Ponca system, more differentiated, involves a main classification according to animateness, and within the two classes thus formed, distinctions according to number, form and position of the object in question (for details see Barron/Serzisko in Seiler/Stachowiak 1982). The Dyirbal system has only four classes which are lexically based and distinguish sex in human beings and some sorts of animals and plants. It is semantically quite akin to a small noun class system (cf. Seiler 1979, § 5.6.3). Whereas there is considerable paradigmatic variation in the choice of the classifier in Ponca, noun classes are rather fixed in Dyirbal, and change of the class is comparable to motion in Indo-European languages. The nominal classification effectuated by classificatory articles is not expressed elsewhere in the NP. They can constitute an NP by themselves.

Possessive classifiers. The difference between alienable and inalienable possession is expressed in several languages of North America and Oceania by the use of possessive classifiers. In alienable possession, nouns cannot be directly possessed and must be accompanied by a classifier which functions as a dummy possessum. Examples are:

- (70) a) nite nɪk uus-suaas uk
 LEN taro POSS.EAT man-small this
 "this boy's taro (for eating)"
- b) nuw miin nɪk-k
 yam PL POSS.EAT-1.SG
 "my yams (to eat)"
- c) nu nɪmw kuri
 water POSS.DRINK dog
 "the dog's water (to drink)"
- d) nɪkava ituga nɪmw-m
 kava foreign POSS.DRINK-2.SG
 "your liquor" (Lynch 1978:80f)⁷¹
- (71) a) méñikiš ne-kíʔiw-ʔa
 CAH mesquite.beans 1.SG-PLANT-ASCR⁷²
 "my mesquite beans" (Seiler 1977:301)
- b) méñikiš ne-ʔáy-ʔa
 mesquite.beans 1.SG-FRESH FRUIT-ASCR
 "my (fresh) mesquite beans (on the tree or from the tree)" (Seiler 1977:302)
- c) né-ʔas ʔáwal
 1.SG-PET dog
 "my dog" (Seiler 1977:305)

One structural difference between the possessive classifiers of the two languages exemplified here is that they are free forms in Lenakel, whereas they are relational in Cahuilla. The latter seems to be the more common case in the languages of the world. The Cahuilla examples show furthermore, what appears to be true of possessive classifiers wherever they occur, namely paradigmatic variability among them: the choice of different classifiers implies slight and largely predictable changes in meaning.

Numeral classifiers. Many languages have classifiers associated with numerals in counting (for the phenomenon in general see Serzisko 1980; on details Kölver 1982(K)). Examples are:

- (72) a) yi kwài shǒujin
 CHI one piece hand:cloth
 "a handkerchief"
- b) yi tyàu shǒujin
 one stripe hand:cloth
 "a towel" (cf. Serzisko 1980:19)

⁷¹ The examples are given in a morphophonemic notation.

⁷² Most of the possessive classifiers in Cahuilla are derived from verb stems by an ascriptive nominalization; see Seiler 1977:299.

(73) a) te-im ɛl sensi
 PAL HUM-five CONN teacher
 "five teachers"

b) klɛ-im ɛl kluk
 NHUM-five CONN dollar
 "five dollars" (Josephs 1975:472f)

The examples show that numeral classifiers may be free forms (though presumably clitic to the numeral) or affixes of the numeral. As can be seen from (72), there may be a certain paradigmatic variability between them with largely predictable semantic effects (on this particular problem see Serzisko 1982).

This sketchy presentation of the three nominal classifier techniques should be sufficient to serve its purpose, namely to show that they are comparable both in their classificatory function⁷³ and in their degree of grammaticalization. They are similar to the techniques of class agreement discussed in the preceding section, viz. noun class and gender agreement, in that they establish nominal classes. They differ from the latter in that they are not regularly involved in agreement, though an exception will be noted below.

6.3.4. Scales of internal agreement

As for case and number agreement, I have hypothesized in § 6.3.1 that it is associated with an increased degree of grammaticalization of case and number marking which is reached, roughly, on the level of inflectional morphology. I will dispense here with a systematic examination of the six parameters which lead to the establishment of a grammaticalization scale of case and number marking – some of them have been mentioned in § 6.3.1 –, and I will only say a word on the parameter 'constituent structure level'. Case and number marking at a pre-agreement stage of grammaticalization is a morphosyntactic feature of the NP. At the agreement stage, it is a feature of the constituents of an NP. At a post-agreement stage, case and number marking seems to be rare. One may perhaps adduce the following examples: Case marking in Old French appears irregularly on nouns, but hardly involves any agreement. Inflectional case marking in English, which is limited to the genitive, appears almost only on nouns. Again in English, number is little involved in internal agreement; apart from the nouns, on which it is generally marked, it appears only on the demonstrative pronoun. This makes the assumption plausible that if case and number marking is grammaticalized beyond the stage of agreement, it appears only on the noun. Thus we do have a lowering of the constituent structure level from NP to noun in this grammaticalization scale, but with the peculiarity that at the intermediate stage, the grammatical marking is spread over the constituents of the NP. Recall also the discussion of p. 25, where we found that cases such as the above do fall outside the traditional concept of agreement, but that they are subsumed under it in the slightly broader conception represented by definition I.

As for the various techniques of nominal classification, §§ 6.3.2f have anticipated that these may be arranged in a grammaticalization scale, too. The six grammaticalization parameters have been gone through for the two techniques of class agreement in § 6.3.2; and their position relative to the three nominal classifier techniques, on the one hand, and to declension classes, on the other, has been hinted at the beginning of § 6.3.3. I will briefly summarize how these three blocks are to be ordered according to the six parameters.

⁷³ though they differ in the semantic bases of the classification and therefore in their relationship to the dimension of apprehension

ment, and second because the morphosyntactic status of the grammatical markers involved is strictly parallel in both of them. This implies that if points which are on a vertical line are selected on the two scales, they represent stages of comparable grammaticalization. Therefore, the last row of the figure need only be shown once for both scales.

6.4. Agreement and concord

As in fig. IX, the two scales in X unite internal agreement – which gives them their name – with phenomena other than agreement. While case, number, and the various nominal classes are similar as far as their functioning in internal agreement is concerned, they are rather different in the other aspects, i.e. in the processes which are outside internal agreement on the scale. This is a consequence of the fact, mentioned already in § 3.1, that case and number are syntactic categories, while the various nominal classes are lexical categories. Accordingly, a nominal class is inherent, to a varying degree, in every noun, while a specific case or number is not inherent. If a noun does have an affinity to a certain case or number, this is determined precisely by its nominal class.

However, inherence of nominal class is a matter of degree. This becomes measurable in paradigmatic variability, which has been seen to be largest in nominal classifiers and to be most narrow in declension classes. It is therefore not a priori clear at which point of scale X.2 we should say that the choice of the class marker depends exclusively on the noun, instead of the nominal class being determined, in part at least, precisely by the choice of the class marker. This means that it is not a priori clear when condition 3 of definition I should be considered fulfilled, which requires that the assignment of the agreement-triggering term to the agreement category (to the nominal class, in this case) be independent of the agreeing term. To the extent to which it is the choice of the classifier which determines the meaning of the noun (rather than vice versa), condition 3 is not fulfilled for the three nominal classifier techniques, and they have therefore been excluded from agreement.

The syntagmatic semantic relationship obtaining between a noun and its classifier may be described by saying that their meanings must be compatible; i.e. the nominal classes implied by them must not exclude each other. This relationship is called **solidarity** by Seiler (1979, § 5).⁷⁴ We may then stipulate that if there is solidarity between two terms A and B, any grammatical process which involves them and fulfills conditions 1, 2 and 4 of definition I should be called not agreement but **concord**. Recall the terminological discussion on this matter (p. 7). Again, as there is a gradual transition between solidarity and a situation where condition 3 holds, there is a gradual transition between concord and agreement.

Class concord occurs not only internally, but also externally. In several North American Indian languages there is a paradigm of classificatory elements bound to a number of verb stems of the basic vocabulary. The latter are called **classificatory verbs** (see Barron 1980 and 1982). Here are some examples:

(74) a) béésò sì-ʔá
 NAV money PRF-CLI.3.1ie [CL I = single round solid object]
 "A single coin lies (there)."

b) béésò sì-nìl
 money PRF-CLIV.3.1ie [CL IV = aggregate of small objects]
 "(A handful of) coins lie (there)."

⁷⁴ The term had already been introduced in a somewhat narrower meaning in Seiler 1967:41.

- c) béésò sì-t-tsòòz
 money PRF-CLVI.3.1ie [CL VI = fabriclike object]
 "A bill lies (there)." (Davidson et al. 1963:30)

The classificatory elements of the Navaho verb are mostly fused with the verb stem (i.e. they form a paradigm of suppletive stems), while in other languages they are agglutinative. They have pronominal properties, so that a finite classificatory verb constitutes a full sentence which contains some lexical information on its subject or object (as the case may be). The choice of the classificatory element is partly determined by the lexical nature of the NP constituting the argument, partly it is free and may thus add information on the argument, as the examples show. This seems to be comparable to the situation in article, possessive and numeral classification. It must be admitted, however, that verbal classification as a whole cannot clearly be located on the scale of external agreement (fig. IX), for two reasons. Firstly, the systems of verbal classification occurring in the various languages may be ordered on a scale of their own (see Barron 1980, § 3.1), because they differ in various of the grammaticalization parameters, e.g. paradigmatic variability of the classificatory element and its bondedness to the verb stem. Secondly, the correlation between the parameters differs from that observable on scale IX; for instance, a highly fusional system like that of Navaho still displays some paradigmatic variability, a situation which has no analogue in verbal agreement. While we may, consequently, compare verbal classification to article, possessive and numeral classification as regards the existence of concord rather than agreement (cf. also Barron 1982, § 1), we will not put it on scale IX, as we have put the latter on scale X.2.

There is yet another area within the external domain where concord rather than agreement obtains, and this is in verbal person and number concord. It will be recalled that at the beginning of § 4.2 we labored at examples like (41), where agreement signs showed a category different from the one in which the NP referred to belonged. The examples made the assumption plausible that the two categories had to be somehow compatible and that the final categorial information on person and number was a combination of what was expressed by the supposed agreement-triggerer and by the agreement sign. This seems to be comparable to what has been said on class concord. With the proviso that the situation in verbal classification is not strictly parallel, with respect to grammaticalization, to the other phenomena dealt with above, we may consequently generalize the notion of concord and say that on the side of weak grammaticalization, agreement turns into concord.

6.5. Mechanical vs. semantic agreement

A dichotomy related to, but distinct from, 'agreement vs. concord' is '**mechanical** (or grammatical) vs. **semantic agreement**' (see Heine 1982, § 2.3). The genders or noun classes of a language usually have some (perhaps rudimentary) semantic import. Sometimes a noun belongs to a gender or noun class whose semantic base conflicts with the lexical meaning of the noun; e.g. German *das Weib* (n) 'the woman'. The same may occur with number; e.g. *scissors*. Now regular agreement is governed by the grammatical category to which the head noun belongs. If this obtains regardless of the semantic conflict, we have mechanical agreement (*das Weib ... es; the scissors ... they*). If the agreeing term exhibits, instead, that category which the agreement-triggerer ought to belong to, we have semantic agreement (*das Weib ... sie; the scissors ... it*).

Now it is universally the case (cf. already Lyons 1968:287; Moravcsik 1971:14f = 1978:340, Heine 1982, § 4, Corbett 1979) that the possibility for semantic agreement to obtain increases with the syntactic distance of the agreeing term from the agreement-triggerer. Thus we have *the committee decide, ... they* and *das Weib ... sie*; but we do not have *these committee* or *die Weib*. It may be

said that semantic agreement emerges much more easily in the external than in the internal domain. This is doubtless due to the fact that an NP must belong to exactly one subcategory of gender and of number, so that internal agreement conforms to what is dictated by the noun with stricter necessity than external agreement, which exceeds the scope of the NP.

The difference between semantic agreement and concord is that while concord may contain information lacking in its referent, semantic agreement is determined by the semantic properties of the agreement-triggerer exactly as mechanical agreement is determined by its lexico-grammatical properties. But the two phenomena do have in common an increased paradigmatic variability: there is a choice between mechanical and semantic agreement much as there is a choice between various elements in concord.

From this it may be concluded that the parameter of paradigmatic variability indicates an overall lesser degree of grammaticalization for external than for internal agreement. This would also fit with the constituent structure level, which is higher for the former than for the latter, and with the pronominal properties displayed by the greatest part of the external agreement markers, which have hardly any parallel in internal agreement. I will leave this open as a possibility here. Since the grammaticalization scales in IX and X are independent of each other, it is not easy to compare segments of each of them and to settle on their relative degree of grammaticalization.

7. The evolution of agreement

Grammaticalization, viewed in a diachronic perspective, is a movement from left to right through a grammaticalization scale. Thus, any grammatical phenomenon in a language can originate by grammaticalization of the phenomenon positioned at its left on a grammaticalization scale. This is, of course, not the only way that new grammatical features may emerge in a language. Another very important origin is by analogy. These general rules are also valid for agreement. In what follows, I will concentrate on the origin and development of agreement through grammaticalization, following the precedence of Greenberg 1978 on internal class agreement and Hale 1973 and Givón 1976 on verbal agreement. It must, however, not be forgotten that agreement may come about in different ways. Third person verb agreement in Iroquoian, for instance, has developed, according to Chafe 1977, largely through analogy.

7.1. External agreement

To the left of external agreement on the grammaticalization scale IX, we find anaphora. When I said at the end of § 4.2 that agreement markers in person-domain, i.e. external, agreement, are of a basically pronominal nature, this may now be interpreted diachronically: If agreement develops by grammaticalization, it will first appear as anaphoric, then as syntactic agreement. Thereby, all grammatical categories which play a role in pronominal reference, viz. person, number and nominal class,⁷⁵ enter into the agreement mechanism. The way is predetermined by the stages of scale IX: demonstrative pronouns become free personal pronouns, the latter becoming in turn clitic and affixal pronouns, finally agreement affixes and markers of finite verb inflection. Beyond that, subject agreement affixes may become markers of the verb (as a part of speech), object agreement affixes may become transitivity markers, and possessive agreement affixes, relationality markers.

There is much historical evidence for this diachronic development. The demonstrative pronoun *ille* of Classical Latin becomes a free personal pronoun in Late and Vulgar Latin and develops into the clitic pronouns *le*, *lo*, *la* etc. of the Romance languages, which already begin to enter into syntactic agreement (cf. examples (50) and (51)). The verbal object affix of Classical Arabic, of

⁷⁵ On the role of the latter in anaphoric reference, see Givón 1976, § 8.5.

exclusively anaphoric use, becomes an optional agreement marker in modern Lebanese and Syrian Arabic (cf. Koutsoudas 1967). Originally free personal pronouns become, in Walbiri, clitic to the auxiliary and are used in syntactic agreement (Hale 1973, § 8). The English free object pronoun *him* develops, in Tok Pisin, first into an agreement suffix of the verb and then into an invariable marker of all transitive verbs (ex. (55)). The subject pronoun *he* suffers a similar fate (see Givón 1976, § 8.2 and Sankoff 1977).⁷⁶

Special attention has been devoted in § 6.2 to the transition between anaphoric and syntactic agreement. **Left-dislocation**, as illustrated by (50), and **right-dislocation** ('afterthought' construction), as illustrated by (56), are the diachronic basis in anaphoric agreement on which syntactic agreement develops (cf. especially Givón 1976). (75) is a further example in the less often illustrated realm of adpositional agreement.

(75) š-šərke mā fi-ha barake
 SYR DEF-partnership NEG in-F.SG blessing
 "There's no advantage in partnership." (Cowell 1964:542)

As mentioned above, Syrian Arabic does have object-verb agreement, but it lacks (as yet) prepositional agreement. In (75), the referent of the pronominal complement of the preposition is clearly left-dislocated. If the clause boundary between the preposition and the referent disappears, the referent becomes integrated into the clause, and a certain appositive relationship between it and the agreeing pronoun comes into being. This stage is, for adpositional agreement, exemplified by (56). For object-verb agreement, cf. again (51), which represents the stage subsequent to right-dislocation, and (52), which results from left-dislocation.

The final step in the genesis of syntactic agreement is the interpretation of the referent of the agreeing pronoun as the direct complement of the relational expression which supports the agreeing pronoun. At the same moment, the latter loses its anaphoric and pronominal function, becoming a mere agreement marker. This stage is, for prepositional agreement, illustrated by (33) and (34), and for object-verb agreement, by (53). Similar considerations apply to the other forms of external agreement.⁷⁷

Once the level of syntactic agreement has been reached, agreement then tends to become increasingly obligatory, i.e. to occur in the presence of kinds of nominal complements where it was formerly unnecessary or impossible. In the case of object-verb agreement, this expansion moves down the animacy hierarchy; see p. 39. This has to do with the specific semant syntactic role of the direct object and is not likely to be replicated in the development of the other kinds of external agreement.

The expansion of verbal agreement supposedly follows the **hierarchy of syntactic functions** (first set up in Keenan/Comrie 1977 for different purposes): subject > direct object > indirect object > other oblique complements. This may be assumed on the basis of existing implicative generalizations of the form: if a language has verbal agreement on a given position of this hierarchy, it also has agreement on the higher positions (cf. Ingram 1971:23, Moravcsik 1978:364f and 1974, § 1.1,

⁷⁶ This evolution has apparently suffered a curious accident in the history of Coahuilteco. Once there must have been the sequence '(NP_{sbj}) NP_{obl} personal pronoun_{sbj} verb' which may have arisen, as usual, by left-dislocation of the subject NP, connected with its resumption by a clitic pronoun in the clause. But then this pronoun, instead of proclitically attaching to the verb, as happens in virtually all the pertinent languages, became enclitic to the preceding NP, and the language ended up with oblique NPs showing subject agreement (see Troike 1981). A similar situation seems to obtain with respect to the Somali agreeing focus marker (F. Serzisko, oral comm.).

⁷⁷ On possessive agreement, see Givón 1979:216f.

furthermore, with a slight change in the hierarchy, Givón 1976, §§2 and 6). Moreover, known historical facts such as the acquisition of object agreement signs by modern Romance languages and Arabic vernaculars long after subject agreement existed, attest to the accuracy of this assumption.

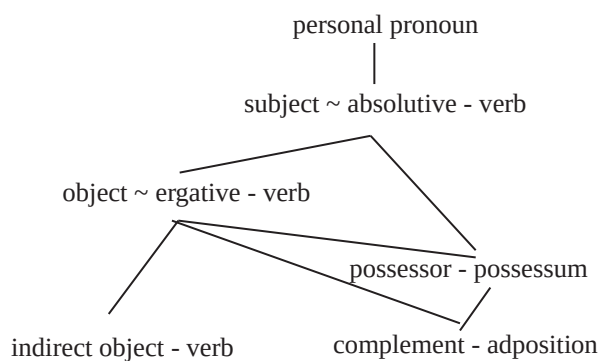
The hierarchy must be modified somewhat in order to accommodate verb-argument relations not only in accusative languages, where the subject is indeed the primary argument, but also in ergative languages, where the absolutive is the primary argument. There are languages such as Avar (Caucasian),⁷⁸ where the verb agrees only with the absolutive, not the ergative argument. Therefore, the absolutive function must be put in the hierarchy on the same level as the subject, and the ergative, on the same level as the direct object (cf. already Lehmann 1979, ch. IV. 3.1.1).

If a language has agreement beyond that of the personal pronoun, it has verbal agreement (cf. already Bazell 1979(S):15; Moravcsik 1978:340). This means that the agreement of the verb with its complements is more fundamental than the agreement of the possessum and the adposition with their complements. Keenan (1974:303) proposes the following "implicative universal: If heads of possessive constructions agree with their possessors in a given language then verbs agree with subjects in that language". Here we see again the hierarchy of syntactic functions at work. The central role of the verb in the clause brings it about that adverbial syntactic functions rank higher in the hierarchy than adnominal functions. Specifically, the subject function ranks higher than the possessor function. It seems that the latter is likened, in the languages of the world, either to the subject or to the object function. Thus we may explain the fact that possessive agreement affixes tend to be formally similar or even identical to either the subject agreement affixes (Turkish, Cahuilla, Mohave, Yucatec Maya, Quechua, Piro)⁷⁹ or the object agreement affixes (Hungarian, Arabic, Hixkaryana). All this suggests that in the diachronic expansion of external agreement, possessive agreement will follow subject-verb and possibly also object-verb agreement.

The last step in the expansion of external agreement is the acquisition of adpositional agreement. It is framed after the model of either object-verb or possessive agreement, more often the latter.⁸⁰ Examples of both types may be found in Arosi (Capell 1971:74-79). One may with confidence propose the implicative generalization: if a language has agreement of the adposition with its complement, it also has agreement of either the verb with its object or the possessum with its possessor.

The combination of these implicative relationship between the steps of evolution of external agreement yields the following hierarchy:

XI. External agreement hierarchy



⁷⁸ Cf. also Payne 1982 for the Kurmanji preterite system.

⁷⁹ See also the rich data in Allen 1964. On Cahuilla, cf. Seiler 1980:9.

⁸⁰ On the dependence of the adposition-complement relation on the possessum-possessor relation, cf. Greenberg 1963:99.

Although this is not a unilinear hierarchy, its interpretation is straightforward: If a language has a given form of agreement, it also has the forms of agreement connected with the latter by at least one upward path in the hierarchy. And conversely in diachrony, a language may acquire forms of external agreement only along downward paths in the hierarchy, starting from the top, and may lose them only in the opposite direction.

7.2. Internal agreement

In a sense, external agreement takes precedence over internal agreement, because of the high position of personal pronoun and verbal agreement in the general implicational hierarchy of agreement relations. One possibility for internal agreement to develop would therefore seem to be that it is framed in analogy to the model of external agreement. In fact, however, this possibility is extremely limited. For adpositional agreement is out of the question as a model, because of its rarity. The agreement of the possessum with the possessor cannot serve as a model because the direction of agreement here is opposed to that existing in internal agreement. What is left is verbal agreement. However, if this were the model, we should find, in analogy to the finite verb, first agreement of the predicative adjective and only then agreement of the attributive adjective and the other determiners with the head noun. Then, however, there would have to be an implicative law that if the attributive adjective agrees, so does the predicative;⁸¹ and such a law does not exist because of languages such as Russian and German. On the contrary, there is a generalization (Greenberg 1963, universal 31) that the verb agrees in gender only if the – attributive or predicative – adjective does.⁸²

We may conclude that the possibility for internal agreement to arise through analogy to external agreement is severely restricted. We therefore turn to the genesis by grammaticalization. Scale X.1 would predict the following evolution of case and number agreement: An original adposition or lexical item signifying case or number, respectively, turns from a free form into a clitic and an agglutinative affix of an NP. This then spreads over the constituents of the NP and becomes, at the same time, increasingly fusional. Finally, case and number agreement markers again disappear from the nominal modifiers, remaining only on the noun. Then the cycle starts afresh.

Empirical evidence for this hypothesis is somewhat unevenly distributed. The Indo-European languages furnish enough data from the point where fusional agreement markers are spread all over the NP, so that the right side of the scale is historically well documented. There is also historical evidence for the development of adpositions into case markers, e.g. in Hungarian, and of nouns of multitude into plural markers, e.g. in Bengali. What seems to be lacking is evidence for the crucial stage of the dispersion of such markers over the NP, i.e. for the rise of agreement. We will return to that below.

Scale X.2 predicts that the following evolutions of class agreement should be possible: Classificatory lexemes – mostly nouns – become grammaticalized as a more or less closed system of nominal classifiers. These are combined with either the determiners or the possessive pronouns or the numerals, so that we get article, possessive or numeral classifiers. As grammaticalization increases, the classifiers become clitic, and their paradigm becomes more rigid. At this stage, we have articles, possessive pronouns or numerals that agree with their head noun in nominal class. This agreement then spreads to the other nominal modifiers, so that we get internal agreement in noun class. This may be reduced to gender agreement and finally to declension classes.

⁸¹ A synchronic law to this effect would seem to be implied in Fauconnier's (1974, ch. 4 and 5) account of the agreement of the nominal predicate.

⁸² I thus interpret Greenberg's (1963:93) somewhat awkward formulation.

Let us take a closer look at some of the steps of this set of evolutions. The first question is: how do classificatory lexemes come to be used with those three classes of nominal modifiers? Classificatory lexemes represent "*the top of the hierarchy* of semantic features that underlie the noun-universe. That is, they are the *more general features*" (Givón 1976:171). They are mainly needed in anaphora, because it is impossible to reidentify the referent exhaustively by a definite description, which would have to include all the attributes that the referent has gained during the discourse. I remind the reader of the interdependence of identification and classification which is typical for natural languages and which was already discussed at the end of § 5.3.

There is a typical situation in anaphora where a concept or referent is taken up again and at the same time provided with a new modifier. This may be illustrated by the following set of examples:

- (76) a) Which small wooden balls do you mean? – I mean these [class_i].
 b) Whose are those bananas? – They are my [class_j].
 c) Peter shot two hares and Paul, three [class_k].⁸³

In such contexts, languages like German allow zero anaphora, i.e. they need to have nothing in the place of the class_x elements. Other languages cannot use words which are essentially modifiers, namely determiners, possessive pronouns and numerals, without a head. The classifiers which they use as heads in combination with such words serve at the same time as anaphoric substitutes of the resumed concept or referent. The classificatory nature of these elements is thus diachronically explained by their original function in anaphora.⁸⁴

The use of the classifier within the same NP which contains the classified noun is diachronically secondary. The classifier phrase enters into a sort of appositive relationship with the classified noun, the former functioning as the syntactic head of the construction.⁸⁵ In the course of proceeding grammaticalization, the classifier phrase becomes a modifier of the classified noun. At the same time, the classifier spreads to other nominal modifiers. Numeral classifiers, e.g., may be combined with demonstratives in many languages, thus penetrating into the distributional sphere of article classifiers. In Thai, they may even combine with adjectives (see Kölver 1982(K), § 2.2.2).

An origin similar to that of possessive classifiers may be posited for the agreement of the nominal possessor with the possessum. In Hungarian, a special pronominal suffix exists which resumes a concept in lexical anaphora, making it a possessum, and is appended to a genitive attribute (possibly a possessive pronoun). The suffix has two components: one is of an anaphoric-pronominal nature and represents the categories of the possessum (there is no sort of nominal classification in Hungarian, which is unfortunate for this exemplification); the other is an attributor which makes the word relational. Its meaning is, thus, "that of X". This possessum-anaphoricum, as we might call it, is exemplified in (77).

- (77) a) Pali Kati almá-ja-t ette meg, Mária pedig János-é-t.
 HUN Paul Kathy apple-SG.POSS.3.SG-ACC ate up Mary and John-POSS.AN-ACC
 "Paul ate Kathy's apple, and Mary John's."
 b) Pali Kati almá-i-t ette meg, Mária pedig ti-é-i-d-et.
 Paul Kathy apple-PL.POSS.3.SG-ACC ate up Mary and you-POSS.AN-PL-POSS.2.SG-ACC
 "Paul ate Kathy's apples, and Mary yours."

⁸³ We may imagine class_i = SOLID ROUND OBJECT, class_j = RIGID LONG OBJECT or FRUIT, and class_k = NON-DOMESTIC ANIMAL.

⁸⁴ For numeral classifiers, cf. Greenberg 1972:33.

⁸⁵ For numeral classifiers, cf. Lyons 1977:465, Serzisko 1980:15.

If such a possessive phrase with an anaphoric head comes to be used in apposition to its nominal referent, we have gone already half of the way to the agreement of the possessor. The next step of this evolution would be illustrated by the Swahili examples in (16) which are repeated here for convenience:

- (78) a) ki-su ch-a Hamisi
 SWA CL7-knife CL7-AT Hamisi
 "Hamisi's knife"
- b) ny-umba y-a m-tu yu-le
 CL9-house CL-9-AT CL1-man CL1-that
 "that person's house"

The two components of the agreeing attributor, the first representing the categories of the possessum, the second linking it to a possessor, are clearly displayed here.⁸⁶ The spirit of the construction might be brought out by such English paraphrases as "the knife, that of Hamisi", though this contains an appositive construction, while in (78) we deal with normal possessive attribution. The erstwhile possessum-anaphoricum has ceased to be (obligatorily) anaphoric.

The final step in this evolution is the agglutination of the agreeing attributor to the possessor. This step has been carried out by languages related to Swahili, e.g. Tswana, and also by the other languages exemplified in (12) through (15). Thereby, the categories of the possessum appear on the possessor, so that we have agreement of the possessor with the possessum.

We now come to the agreement of adjectives. As mentioned above, they may acquire it by analogical transfer from other classes of modifiers in which it originated in the first place. Adjectives may also be used in such anaphoric contexts as in (76). It appears, however, that zero anaphora is much more common with them, for we do not find adjective classifiers arising in the same way as article, possessive and numeral classifiers. Instead, adjectives in lexical anaphora are often accompanied by a determiner. Such an adjective-determiner phrase may come to be used as an apposition to a noun. If the determiner now becomes affixed to the adjective, its classificatory categories develop into agreement categories of the adjective (cf. Greenberg 1978, § 4). In keeping with the facts mentioned at the end of § 6.2, agreement then seizes the postnominal and finally the prenominal adjective attribute.

Whether or not in construction with an adjective, determiners are grammaticalized into definite (and specific) articles, then into (merely) specific articles, and finally they become pure markers of the noun (as a part of speech), losing any referential properties. At the same time they gradually forfeit their morphosyntactic independence and become affixes of the noun. At this stage, noun classification is reached.⁸⁷

This genesis of internal agreement out of anaphora, esp. as regards numeral classifiers and noun classes, contributes to an understanding of the fact that in many languages nouns so modified or classified tend to be specific with regard to determination. This has been maintained for nouns accompanied by numeral classifiers in Thai and Vietnamese by Kölver (1982(K), § 3), and for clas-

⁸⁶ The agreeing attributor is thus strictly comparable to a possessive classifier; compare, e.g. (78b) with (70a). It is, just as the possessive classifiers, (originally) an element of the larger class of relational nouns, which typically take possessive affixes, as the possessum-anaphoricum in Hungarian and the agreeing attributor in Swahili in fact do, and which therefore have a propensity to external possessive agreement. These elements provide, therefore, the link between the external agreement of the possessum with the possessor and the internal agreement of the possessor with the possessum.

⁸⁷ This genesis of noun classification was conceived by Greenberg (1978). Cf. also the referentiality 'wheel' in Givón 1978 and the grammaticalization stages discerned in object-verb agreement above on p. 39.

sified nouns in African languages by Heine (1982, § 2.2) and Walter (1982). It is a natural diachronic consequence of the originally anaphoric nature of the classificatory elements.

Reduction of noun class systems to gender systems occurs in African languages (see Heine (1982)). Gender systems may boil down, diachronically, to either a sex opposition, as in English, or to an animacy opposition, as in Scandinavian languages (cf. Ostrowski 1982, § 4.5 for Swedish). The last bastion held by these categories is always the personal pronoun (cf. Greenberg 1963, universal 43, Kuryłowicz 1965:47 and Heine 1982, § 4). If they lose that, too, class agreement ceases to exist in the language.

7.3. Conclusion

Although the evolutions of external and internal agreement proceed along different lines, there are essential points in common. In both types, what is to become an agreement marker starts as an anaphoric element. In this phase, its referent is still outside the construction which the anaphoric element belongs to. With increasing grammaticalization, the anaphoric element and its referent come nearer to each other. At the moment at which they belong to the same construction, the referent functions as an apposition to the anaphoric element. Then the construction is reinterpreted, the referent ousts the anaphoric element from its syntactic function, reducing it to a mere agreement marker.

It has been observed above in § 6.5 that if semantic agreement may prevail over mechanical agreement, this is the more favored the greater the syntactic distance between the agreement trigger and the agreeing term is, and it has been suggested that this is possibly also a grammaticalization phenomenon. Putting it in diachronic perspective, we may say: Agreement in its genesis, namely at the stage of anaphora, is still purely semantic agreement. With increasing grammaticalization – and this includes decreasing constituent structure level – the agreement relation becomes increasingly subject to grammatical rules, and agreement becomes mechanical.

8. Universal and typological connections of agreement

8.1. Universal connections

The two grammaticalization scales of external and internal agreement in fig. IX and X render it clear that agreement is not a neatly demarcated phenomenon, as the static definition I suggests, but that instead it constitutes a segment of a continuum whose borders with the neighboring phenomena are blurred. In several cases we have had to admit that fulfillment of the conditions in definition I is not a question of either-or but rather of more or less.

Thus we can observe in the classificatory techniques of internal agreement how agreement develops gradually with increasing grammaticalization of the techniques. In article, possessive and numeral classification, one may recognize concord, but not yet agreement, since the choice of the classifier is not yet sufficiently mechanized. The techniques of noun classification and gender, which then follow, belong fully to agreement. The main concern here is not to divide nouns into classes but to signal the affiliation of modifiers to an NP and thus to express their referring to a common referent. This is particularly clear from the fact that a noun class or gender system works in several languages without the categories being expressed on the noun (see Heine 1982, § 2.2 on overt vs. covert gender). If grammaticalization proceeds beyond the stage of gender, manipulation of the agreement categories at the level of inflectional morphology becomes impossible, they become lexicalized, and we get declension classes which no longer trigger agreement.

Similarly in external agreement, we see syntactic agreement developing gradually through the grammaticalization of anaphoric agreement. The mere agreement function is most purely repre-

sented when the agreement markers lose their pronominal properties, which is at the stage of German or Russian verbal agreement. If grammaticalization exceeds this stage, agreement disappears, and mere relationality (e.g. transitivity) marking remains.

Agreement is thus a focal segment on a continuum. It results from the interaction of several linguistic operations which takes this specific form just if the operations act at a certain level of grammaticalization. This is, *grosso modo*, the level of inflectional morphology. This stage of grammaticalization may be termed **morphologization**; it is located between syntacticization and lexicalization; at the level of syntacticization, we do not yet have agreement (but concord), at the level of lexicalization, we do not have agreement anymore.

While the formal characterization of agreement thus achieved seems to be at the same time as detailed and as general as desirable, a functional characterization meets with difficulties, both because this problem has been insufficiently investigated and because the function of agreement is complex or manifold, as a result of the fact that many semantically different operations interact to give rise to agreement (Givón 1976, § 8 enumerates five functions of agreement). I can only indicate programmatically operations of which kind might be involved. They will be classified into two groups, according to whether they are responsible for the grammatical categories involved in agreement or for the semantotactically different constructions in which agreement occurs.

A central role in the formation of agreement and the grammatical categories involved in it is played by the dimension of the linguistic apprehension of objects. Of particular importance here are the two converse main principles, generalization and individualization. They constitute the various sorts of nominal classes and the category of number. Outside the dimension of apprehension, operations of deixis and determination determine the occurrence of person and definiteness in agreement. Yet another set of operations relates objects to an event and brings case into play.

As for the various constructions in which agreement appears, operations of determination and attribution, of counting and quantification are responsible for those in the domain of internal agreement. Some of them are already comprised in the dimension of determination (cf. Seiler 1978). In the domain of external agreement, operations of predication, conformation of valency and spatial orientation must be assumed, which are responsible for the constructions 'verb – arguments' and '(verb –) adposition – complement'. At the point of contact between internal and external agreement, viz. in possessive constructions, which may belong to either domain, possession and the operations related to it come into play.

All the agreement constructions have in common that something is to be related to an NP, or semantically speaking, that something refers to a certain object. This is achieved by an elementary operation whose function it is to keep the linguistic object constant and which is part of the dimension of apprehension. This appears to be the central, constitutive operation of agreement, and we may equate it with anaphora and its more grammaticalized forms which I dubbed 'mini-anaphora'. This is fundamental to all the specific operations of the various agreement constructions just enumerated, and allows agreement to appear in all of them.

8.2. Typological connections

8.2.1. Implicative generalizations and morphological type

Viewed formally, typological connections between linguistic phenomena are **implicative generalizations**. Equivalences and contravalences, on the one hand, and less than one hundred percent correlations, which merely display a tendency, on the other, are merely special cases of the implicative relationship. Such relationship can be ascertained at levels of grammatical structure which differ in comprehension or complexity: they may concern elements, categories, constructions, procedures and finally complete techniques. At the present state of research, precision in the

formulation of the relationships decreases with increasing complexity of the structural level. In the field of agreement, too, rather clear and partly exceptionless implicative generalizations have been possible at the levels of the categories and the constructions (Greenberg 1963, universals 30ff, Moravcsik 1978, esp. 364-366, and Corbett 1979); whereas for the higher levels only conjectures are available.

The implicative generalizations found in the area of agreement are all of the form: if part of speech (or constituent) A agrees in category X, then B also agrees in X, or then A also agrees in Y. These discoveries have been worked, to a large extent, into the preceding sections, esp. § 7. They concern, for instance, the hierarchy of syntactic functions, the fundamental character of the agreement of the pronoun, the priority scale of the agreement of the anaphoric, the appositive, the postnominal and the prenominal adjective attribute and, to a limited extent, the relationship between internal and external agreement. Furthermore, the observations on the hierarchical distribution of grammatical vs. semantic agreement (Corbett 1979) have been integrated. What is left over is a series of suggestive observations which indicate, for instance, that class agreement is more fundamental in the internal domain, while number agreement is more fundamental in the external domain (Greenberg 1963, universals 31 (cf. above p. 55) and 32). This may have something to do with an affinity of nominal classes to case (cf. the beginning of § 6.3.3), which latter is restricted to the internal domain, and an affinity of number to person, which latter is restricted to the external domain; but it is not strictly explainable in the present framework.

Such regularities guide the formation of a language system at the lowest levels. They cannot, properly speaking, be characterized as constitutive of language types. For that we would have to know corresponding relationships at the levels of the procedures and techniques. I cannot here formulate laws, but only hint at possible connections. These hints are based, naturally, on the universal connections which relate agreement to various operational dimensions and which have been described in the previous section.

We have seen that agreement is bound up with a certain degree of grammaticalization which may be called morphologization. The most general typological presupposition for the possibility of agreement is, consequently, the existence of **morphology** in the language. In isolating languages such as Chinese or Vietnamese, there can only be preforms or lexicalized forms of agreement, and in languages approaching this type, such as English, there is little agreement. The degree of fusion makes no difference for the possibility of agreement as long as it keeps within certain limits. There is agreement both in agglutinative (e.g. Dyirbal) and fusional (e.g. Latin) morphology, the difference being only that in the agglutinating type each agreement category is expressed by an affix of its own, whereas in the fusional (or flexive) type the agreement categories amalgamate, in the expression, either with each other or with other categories (cf. Ostrowski 1982, § 4.5). There appears to be a requirement, however, that the degree of fusion not be too high. Such is at least indicated by the fate of the agreement system in several Indo-European languages, which was highly fusional and irregular at ancient stages and has been substituted by a simpler and less fusional system e.g. in the Romance languages.

8.2.2. Mutual distribution of internal and external agreement

Before we can be more specific about morphosyntactic types, let us briefly consider the distribution of internal and external agreement with respect to each other. According to the implicational hierarchy established in § 7.1, if a language has agreement, this appears in the personal pronoun, and if it has more agreement, it has verbal agreement. This entails that no language has exclusively internal agreement. On the other hand, it leaves open the possibility that a language may have exclusively external agreement. This is actually the case in many languages, e.g. Hungarian, Turkish, Navaho,

Nahuatl, Yucatec Maya, to name but a few. There is thus a typological inequality between external and internal agreement: if a language has internal agreement, it also has external agreement, but not necessarily vice versa.

However, it is possible for a language to develop internal agreement to its theoretical limits without caring very much for external agreement. The implicative requirements for external agreement are satisfied if a language has pronominal and subject-verb agreement. Various languages abide by that and then dedicate themselves effusively to internal agreement. This is the case, for instance, in the ancient and most of the modern Indo-European languages.

Finally there is a group of languages which develop both internal and external agreement. Swahili and Greenlandic belong among these. The degree to which either internal or external agreement is expanded varies, as do the grammatical categories involved. Thus Swahili has extensive internal agreement in noun classes, while Eskimo has limited internal agreement in case.

Summing up, we find three groups of languages which differ as to their agreement types: the first group concentrates on external agreement, the second, on internal agreement, and the third develops both to a certain degree. (There is, of course, a fourth group, already mentioned, which has no agreement at all.) What is interesting about the third group is that no language seems to expand both internal and external agreement to their theoretical limits. There seems to be nothing in linguistic theory which would prevent the complete presence of both of the agreement types in one language; they do not disturb each other, since one is concerned with relations inside the NP, the other with relations contracted by an NP.⁸⁸ While there is thus no complementary distribution of internal and external agreement among languages, languages do tend to cluster, as far as possible, around one or the other type.

8.2.3. Concentric vs. excentric technique

Can anything be said about the typological properties of a language which cause it to implement either internal or external agreement, or which are at least harmonic with either type of agreement? A partial answer may be found if we look at the expression of government relations. In this paper, we have worked with three types of such relations: 1) those between the verb and its argument NPs, 2) that between the possessum and its possessor NP, 3) that between an adposition and its complement NP. There are various syntactic means by which such relationships may be expressed; they will not be considered here. We will concentrate instead on two opposite morphological techniques to signal government relations: the marker which expresses the relation may be affixed either to the NP or to the governing term. In the former case, the language has case affixes, and all the constituents of the clause are equally autonomous. This is the excentric type, illustrated by Dyirbal or Japanese. In the latter case, the language has person, number and possibly class affixes on the governing term, and this determines the syntactic functions of the governed NPs. This is the **concentric** type, illustrated by Navaho or Arosi.⁸⁹

Few languages are either purely concentric or purely excentric, as are the four languages named above. Most languages mix the two techniques, so that we get a scale between the concentric and the excentric types. It appears, however, that very few languages are like Basque or Sumerian in developing both techniques to a high degree; generally languages concentrate on either technique. Since case marking is associated with the excentric construction, and person marking with the concentric construction, these two grammatical categories are in an unequal – if not complementary – distribution among languages. The complementary distribution between case and person marking in

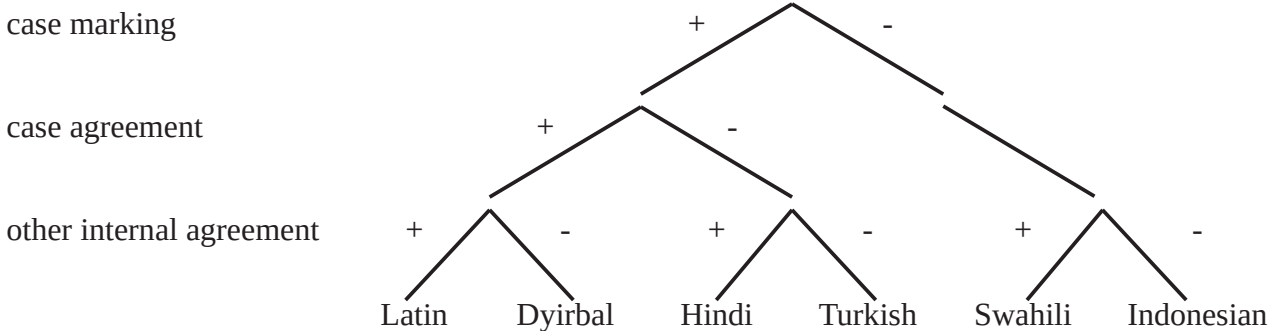
⁸⁸ Recall the cooccurrence of both agreement types in the genitive attribution of certain Maa languages (above, fn.16).

⁸⁹ This typology was conceived, with a limitation to the verb-argument relations, by T. Milewski (1950). Milewski also reckoned with four degrees of concentricity.

agreement which we encountered in § 4.2 returns here in a less rigid form and in a slightly different perspective.

We may now ask what the relationship is between internal vs. external agreement, on the one hand, and the excentric and concentric techniques in government, on the other. It is evident that the person, number or class marking on the governing term in the concentric technique is external agreement. We may therefore formulate that a language belongs to the concentric type precisely to the degree that it has external agreement. The relationship between internal agreement and the excentric technique, on the other hand, is less straight-forward. What constitutes the excentric type is case marking. And internal agreement may be either case agreement or agreement in number or nominal class. The logical possibilities for the combination of the three features case marking, case agreement and internal number or class agreement within one language are the following: a language may or may not have case marking. If it has, it may or may not have case agreement (cf. § 6.3.1). And in any of these situations, a language may or may not have other internal agreement. All of these logical possibilities are in fact represented in the languages of the world; see fig. XII.

XII. Combination of case marking, case agreement and other internal agreement



This means that there is almost no connection between the excentric technique and internal agreement: a language which employs the excentric technique may or may not have internal agreement; and a language with internal agreement may or may not employ the excentric technique. (And there are, of course, languages such as Chinese or Indonesian which employ neither the concentric nor the excentric technique and have neither internal nor external agreement.) The only thing that can be said is that a language may have case agreement only if it belongs to the excentric type; but this is logically implied by the terms. This unrelatedness is the expected consequence of the fact that the concentric and excentric techniques are defined with respect to government constructions while internal agreement obtains in modifier constructions.

Returning now to external agreement and the concentric technique, there are two characteristic extensions of the latter: verbal classification and incorporation. As will be recalled (cf. § 6.4), **verbal classification** is a form of external class concord where the verb indicates the nominal class of its argument. Though it does not seem to serve primarily the expression of syntactic functions, it does have in common with the concentric technique the fact that information on the argument NP is given in the governing term.

Again, **incorporation** of the governed into the governing term can be considered as an extreme form of the concentric technique (cf. already Humboldt 1836:537, Chafe 1970:245, Biermann 1980:1f, 7-9). It befalls primarily the complement NP of a verb (cf. Biermann 1980, § 1.2), but also the possessor and the complement of an adposition. It is true that when we have incorporation of A into B, we do not have agreement of B with A. Nevertheless there is a continuum here: the argument slots which a relational expression opens and which are filled, in external agreement, with pronominal affixes, are filled with lexical material in incorporation. Incorporation can therefore be

regarded as an extreme extension of the principle underlying external agreement. The proposed continuum may be illustrated by fig. XIII.

XIII. Incorporation scale

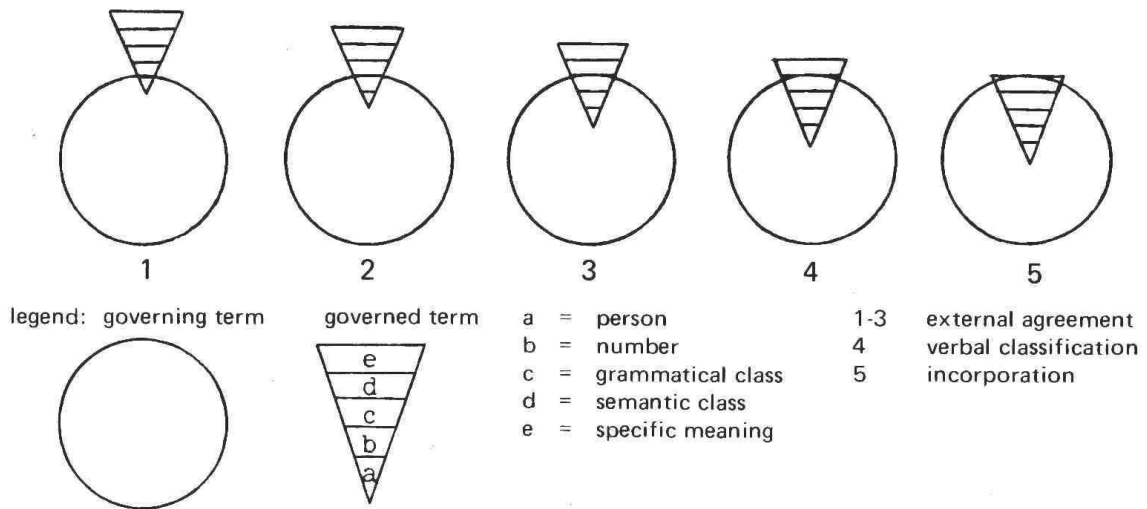


Fig. XIII is not a grammaticalization scale. It is not parallel to fig. IX, the scale of external agreement, but cuts it at a right angle, with part 1 – 3 of fig. XIII being superimposed on column 5 of fig. IX. Since verbal classification and incorporation are extensions or more extreme forms of external agreement, we may expect to find them only in languages with well-developed external agreement.

8.2.4. Word order

In passing from morphological to syntactic typology, we may briefly consider the relationship between agreement and **word order**. Of prime interest here is the fact, mentioned at the end of § 6.2, that agreement of B with A in the sequence BA implies the same agreement in the sequence AB. This is one of the many examples which show that anteposition and postposition of elements as against others are not equivalent, symmetrical alternatives.⁹⁰ It is, to use an image, almost as though there were some kind of force that leans the elements to the right, i.e. towards following and away from preceding elements.⁹¹

Consequently, if constituent B is subordinated to A, the postposition of B imparts greater independence to it from A than does its anteposition.⁹² Conversely, if such a relationship between A and B obtains, the necessity of expressing it is greater when B follows than when it precedes A.

Just as any morphological marking of syntactic relations, agreement imparts syntactic autonomy to the agreeing term,⁹³ it frees this term from the necessity of standing next to the word which

⁹⁰ This is the main point of Schwartz 1971. Cf. Yngve 1960:465 on the left-right-asymmetry of linguistic structures.

⁹¹ L. Tesnière must have imagined such a force when he called the order 'central term – dependent term' centrifugal, and the reverse order centripetal (1959:22, 32f).

⁹² This has been brought out by J. Marouzeau in his word order studies (see the lengthy quotation ap. Lehmann 1979:487). Marouzeau adduces this as a general explanatory principle to account, for instance, for the position of the adjective attribute in Latin and French: if qualificative, it is prenominal; if discriminative, it is postnominal. The principle would predict that in no language could this situation be reversed.

⁹³ The association of morphology, esp. agreement, with free word order is, of course, a traditional commonplace. Cf., for instance, Tesnière 1959:21, Langacker 1977:28, Ostrowski 1982, § 3.2.

it is related to, and for the possibility to serve, by variable position, the functional sentence perspective. The situation in Walbiri is suggestive here (see Hale 1976: 93). There is external, but in general no internal agreement. The unmarked position of determiners and attributes is postnominal. A case suffix is attached to a complex NP as a whole, as is characteristic for agglutinative languages; see example (79).

- (79) maliki wiři-ŋki Ø-tji yałku-ŋu ŋatju.
 WAL dog big-ERG ASP-OBJ.1.SG bite-PRT me(ABS)
 "The big dog bit me."
 (79') maliki-łi Ø-tji yałku-ŋu wiři-ŋki.
 (79'') wiři-ŋki Ø-tji yałku-ŋu maliki-łi (Hale 1976:88, 93)

If, however, the constituents of the NP are separated from each other and freely permuted around the sentence – which is entirely normal for Walbiri –, then each of them receives the case suffix (or an allomorph thereof), as is to be seen in (79') and (79''). The dependency of free word order on agreement, which in crosslinguistic comparison is readily suspected, but difficult to prove, is here clearly realized within one language.

References

- Allen, W. Sidney 1964, "Transitivity and possession". *Lg.* 40:337-343
 Allin, Trevor R. 1976, *A grammar of Resígaro*. Horsleys Green, High Wycombe: Summer Institute of Linguistics
 Anshen, Frank/Schreiber, Peter A. 1968, "A focus transformation of Modern Standard Arabic". *Lg.* 44:792-797
 Barron, Roger 1980, "Das Phänomen klassifikatorischer Verben in nordamerikanischen Indianersprachen. Ein typologischer Versuch". *akup* 38
 Barron, Roger 1982, "Das Phänomen klassifikatorischer Verben". Seiler/Lehmann (eds.) 1982:133-146
 Bazell, Charles E. 1949, "On the neutralisation of syntactic oppositions". *TCLC* 5:77-86
 Bazell, Charles E. 1949, "Syntactic relations and linguistic typology". *CFS* 8:5-20
 Biermann, Anna 1980, "Nominalinkorporation". *Arbeitspapier* 38. Köln: Institut für Sprachwissenschaft der Universität
 Biermann, Anna 1982, "Die grammatische Kategorie Numerus". Seiler/Lehmann (eds.) 1982:229-243
 Bokamba, Eyamba G. 1980, "Verbal agreement as a noncyclic rule in Bantu". *CLS* 16:10-29
 Capell, A. 1971, *Arosi grammar*. Canberra: Australian National University (Pacific Linguistics, Series B, No. 20)
 Chafe, Wallace L. 1970, *Meaning and the structure of language*. Chicago/London: Univ. of Chicago Press
 Chafe, Wallace L. 1977, "The evolution of third person verb agreement in the Iroquoian languages". Li, Charles N. (ed.), *Mechanisms of syntactic change*. Austin/London: Univ. of Texas Press; pp. 493-524
 Comrie, Bernard 1980, "Agreement, animacy, and voice". Brettschneider, G./Lehmann, Ch. (eds.), *Wege zur Universalienforschung. Sprachwissenschaftliche Beiträge zum 60. Geburtstag von Hansjakob Seiler*. Tübingen: Narr; pp. 229-234
 Comrie, Bernard 1981, *Language universals and linguistic typology. Syntax and morphology*. Oxford: Blackwell
 Corbett, G.G. 1979, "The agreement hierarchy". *J. of Ling.* 15:203-224
 Cowell, Mark W. 1964, *A reference grammar of Syrian Arabic* (based on the dialect of Damascus). Washington: Georgetown Univ. Press (Arabic Series, 7)
 Davidson, William/Elford, L.W./Hoiijer, Harry 1962, "Athapaskan classificatory verbs". Hoiijer, Harry et al., *Studies in the Athapaskan languages*. Berkeley/Los Angeles: Univ. of California Press (UCPL, 29); pp. 30-41

- Derbyshire, Desmond C. 1979, *Hixkaryana*. Amsterdam: North Holland (LDS, 1)
- Dixon, Robert M.W. 1969, "Relative clauses and possessive phrases in two Australian languages". *Lg.* 45:35-44
- Dixon, Robert M.W. 1972, *The Dyirbal language of North Queensland*. Cambridge/London: Cambridge Univ. Press (Cambridge Studies in Linguistics, 9)
- Dressler, Wolfgang 1968, *Studien zur verbalen Pluralität*. Iterativum, Distributivum, Durativum, Intensivum in der allgemeinen Grammatik, im Lateinischen und Hethitischen. Wien: Hermann Böhlau Nachf. (Österreich. Ak. d. Wiss., Philos.-Hist. Kl., Sitzungsber., 259. Bd., 1. Abhdlg.)
- Fauconnier, Gilles 1974, *La coréférence: syntaxe ou sémantique*. Paris: du Seuil (Travaux Linguistiques)
- Firestone, Homer L. 1965, *Description and classification of Sirionó*. London etc.: Mouton
- Foley, William A. 1980, "Toward a universal typology of the noun phrase". *St. in Lg.* 4:171-199
- Givón, Talmy 1976, "Topic, pronoun and grammatical agreement". Li, Charles N. (ed.), *Subject and topic*. New York: Academic Press: pp. 149-188
- Givón, Talmy 1978, "Definiteness and referentiality". Greenberg (ed.) 1978, 4:291-330
- Givón, Talmy 1979, *On understanding grammar*. New York etc.: Academic Press
- Greenberg, Joseph H. 1963, "Some universals of grammar with particular reference to the order of meaningful elements". Greenberg, J.H. (ed.), *Universals of language*. Cambridge, Mass.: MIT Press; pp. 58-90. Paperback 1966:73-113
- Greenberg, Joseph H. 1972, "Numeral classifiers and substantival number: Problems in the genesis of a linguistic type". *WPLU* 9:1-39
- Greenberg, Joseph H. 1978, "How does a language acquire gender markers?" Greenberg (ed.) 1978, 3:47-82
- Greenberg, Joseph H. (ed.) 1978, *Universals of human language*. 4 vols. Stanford, Cal.: Stanford Univ. Press
- Hale, Kenneth 1973, "Person marking in Walbiri". Anderson, St.R./Kiparsky, P. (eds.), *A festschrift for Morris Halle*. New York etc.: Holt, Rinehard & Winston; pp. 308-354
- Hale, Kenneth L. 1976, "The adjoined relative clause in Australia". Dixon, R.M.W. (ed.), *Grammatical categories in Australian languages*. Canberra: Australian Institute of Aboriginal Studies (Linguistic Series, 22); pp. 78-105
- Halliday, M.A.K. 1968, "Notes on transitivity and theme in English. Part 3". *J. Ling.* 4:179-215
- Harweg, Roland 1968, *Pronomina und Textkonstitution*. München: Fink (Beihefte zu Poetica, 2)
- Heine, Bernd 1980, *The Non-Bantu languages of Kenya*. Berlin: D. Reimer (Language and Dialect Atlas of Kenya, Vol. 2)
- Heine, Bernd 1982, "African noun class systems". Seiler/Lehmann (eds.) 1982: 189-216.
- Hewitt, B.G. 1979, *Abkhaz*. Amsterdam: North Holland (LDS, 2)
- Humboldt, Wilhelm von 1836, "Über die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluß auf die geistige Entwicklung des Menschengeschlechtes". *Schriften zur Sprachphilosophie* (= Bd. III von *Werke in fünf Bänden*, hrsg. v. A. Flitner and K. Giel). Darmstadt: Wissenschaftliche Buchgesellschaft; pp. 368-756
- Ingram, David 1971, "Typology and universals of personal pronouns". *WPLU* 5:P1-P35. Again in Greenberg (ed.) 1978, III:213-247
- Iturrioz, José Luis 1982, "Abstraktion: Kategorie und Technik". Seiler/Lehmann (eds.) 1982:49-65
- Jake, Janice L. 1980, "Object verb agreement in Tigre". *St. Ling. Sc. (Urbana)* 10:71-84
- Jakobson, Roman 1956, "Two aspects of language and two types of aphasic disturbances". Jakobson, R./Halle, M., *Fundamentals of language*. 's-Gravenhage: Mouton; pp. 53-87
- Jensen, John Thayer 1977, *Yapese reference grammar*. Honolulu: University Press of Hawaii (PALI Language Texts: Micronesia)
- Josephs, Lewis S. 1975, *Palauan reference grammar*, Honolulu: Univ. Press of Hawaii (PALI Language Texts: Micronesia)
- Keenan, Edward L. 1974, "The Functional Principle: Generalizing the notion of 'Subject-of'". *CLS* 10: 298-310
- Keenan, Edward L. 1978, "Logical semantics and universal grammar". *ThL* 5:83-107
- Keenan, Edward L./Comrie, Bernard 1977, "Noun phrase accessibility and universal grammar". *LI* 8:63-99

- Kölver, Ulrike 1982, "Interaktion von nominalen Kategorien am Beispiel der Entwicklung des modernen Bengali". Seiler/Lehmann (eds.) 1982:244-251
- Kölver, Ulrike 1982, "Klassifikatorkonstruktionen in Thai, Vietnamesisch und Chinesisch. (Ein Beitrag zur Dimension der Apprehension)". Seiler/Lehmann (eds.) 1982:160-185
- Koutsoudas, Andreas 1967, "Doubled nominals in Lebanese". *Glossa* 1:33-48
- Krámský, Jiří 1968, "Some ways of expressing the category of determinedness". *TLP* 3:241-253
- Kuryłowicz, Jerzy 1965, "The evolution of grammatical categories". Kuryłowicz, J. 1975, *Essais linguistiques II*. München: Fink; pp. 38-54
- Langacker, Ronald W. 1977, *Studies in Uto-Aztecan grammar*. Vol. 1: An overview of Uto-Aztecan grammar. Dallas, Tx.: Summer Institute of Linguistics/Arlington, Tx.: Univ. of Texas (SIL Publ. in Ling., 56)
- Langacker, Ronald W. 1981, "The nature of grammatical valence". San Diego: Univ. of California, mimeo
- Lapointe, Steven Guy 1980, *A theory of grammatical agreement*. Amherst: Univ. of Massachusetts PhD diss. (Univ. Microfilms No. 80-12619)
- Lawler, John M. 1977, "A agrees with B in Achenese: A problem for relational grammar". Cole, P./ Sadock, J.M. (eds.), *Syntax and semantics*. Vol. 8: Grammatical relations. New York etc.: Academic Press; pp. 219-248
- Lee, Kee-dong 1975, *Kusaiean reference grammar*. Honolulu: Univ. of Hawaii Press (PALI Language Texts: Micronesia)
- Lehmann, Christian 1979, "Der Relativsatz. Typologie seiner Strukturen, Theorie seiner Funktionen, Kompendium seiner Grammatik". *akup* 36
- Lynch, John 1978, *A grammar of Lenakel*. Canberra: Australian National University (Pacific Linguistics, Series B, No. 55)
- Lyons, John 1968, *Introduction to theoretical linguistics*. Cambridge: Cambridge Univ. Press
- Lyons, John 1977, *Semantics*. 2 vols. Cambridge etc.: Cambridge Univ. Press
- Magomedbekova, E.M. 1967, "Čamalinskij jazyk". Bokarev, E.A. et al. (eds.), *Jazyki narodov SSSR*. Vol. IV: *Iberijsko-kavkazskie jazyki*. Moskva: Nauka; pp. 384-399
- Matteson, Esther 1965, *The Piro (Arawakan) language*. Berkeley/Los Angeles: Univ. of California Press (UCPL, 42)
- Milewski, Tadeusz 1950, "La structure de la phrase dans les langues indigènes de l'Amérique du Nord". *Ling. Posn.* 2:162-207
- Moravcsik, Edith A. 1971, "Agreement". *WPLU* 5:A1-A69
- Moravcsik, Edith A. 1974, "Object-verb agreement". *WPLU* 15:25-140
- Moravcsik, Edith A. 1978, "Agreement". Greenberg (ed.) 1978, 4:331-374
- Moshinsky, Julius 1974, *A grammar of Southeastern Pomo*. Berkeley etc.: Univ. of California Press (UCPL, 72)
- Mufwene, Salikoko S. 1980, "Bantu class prefixes: inflectional or derivational?" *CLS* 16:246-258
- Munro, Pamela 1976, *Mojave syntax*. New York/London: Garland (Garland Studies in American Indian Linguistics)
- Omamor, Augusta Phil 1978, "Case grammar and viability. [Case in Işekiri]". Abraham, Werner (ed.), *Valence, semantic case and grammatical relations*. Amsterdam: J. Benjamins (Studies in Language Companion Series, 1); pp. 261-291
- Ostrowski, Manfred 1981, "Zur Relationierung im Tabassaranischen". Köln: UNITYP (unpublished mimeo)
- Ostrowski, Manfred 1982, "Zum Konzept der Kongruenz". Seiler/Lehmann (eds.) 1982:252-269
- Payne, John 1982, "Ergativity and verb agreement in Indo-Iranian". Paper read at the Colloquium on "Akkusativischer, ergativischer und aktivischer Sprachbau", Hannover, 15.-17.1.1982
- Pierrehumbert, Janet 1980, "The Finnish possessive suffixes". *Lg.* 56:603-621
- Plank, Frans 1977, "Die Determinationsrichtung in der Adjektiv-Substantiv-Attribution". Berlin: Institut für Kommunikationswissenschaft der TU; unpublished ms.
- Plank, Frans 1977, "Markiertheitsumkehrung in der Syntax". *PzL* 17/18:6-66
- Plank, Frans 1979, "The functional basis of case systems and declension classes: from Latin to Old French". *Linguistics* n.s. 17:611-640

- Polomé, Edgar C. 1967, *Swahili language handbook*. Washington: Center for Applied Linguistics (Language Handbook Series)
- Ramat, Paolo 1981, "Ein Beispiel von 'Reanalysis': *habere* + PPP". Papier read at the Colloquium Linguisticum, Institut für Sprachwissenschaft der Universität zu Köln, 16.7.81.
- Rood, David S. 1976, *Wichita grammar*. New York/London: Garland (Garland Studies in American Indian Linguistics)
- Sadock, Jerrold M. 1980, "Noun incorporation in Greenlandic: a case of syntactic word formation". *Lg.* 56:300-319
- Sankoff, Gillian 1977, "Variability and explanation in language and culture: cliticization in New Guinea Tok Pisin". Saville-Troike, M. (ed.), *Linguistics and anthropology*. Washington: Georgetown Univ. Press; pp. 59-73
- Schwartz, Arthur 1971, "General aspects of relative clause formation". *WPLU* 6:139-169
- Seiler, Hansjakob 1967, "On paradigmatic and syntagmatic similarity". *Lingua* 18:35-79
- Seiler, Hansjakob 1975, "Die Prinzipien der deskriptiven und der etikettierenden Benennung". Seiler, H. (ed.), *Linguistic workshop III. Arbeiten des Kölner Universalienprojekts 1974*. München: Fink (Structure, 9); pp. 2-57
- Seiler, Hansjakob 1976, "Objectives and questions". Seiler, H. (ed.), *Materials for the DFG International Conference on Language Universals held at Gummersbach, October, 4-8, 1976*. (*akup* 25); pp. 1-29
- Seiler, Hansjakob 1977, *Cahuilla grammar*. Banning, Cal.: Malki Museum Press
- Seiler, Hansjakob 1978, "Determination: A functional dimension for inter-language comparison". Seiler, H. (ed.), *Language universals*. Papers from the Conference held at Gummersbach/Cologne, Germany, October 3-8, 1976. Tübingen: Narr (TBL, 111); pp. 301-328
- Seiler, Hansjakob 1979, "Das sprachliche Erfassen von Gegenständen. Zur Rekonstruktion eines universalen Sprachhandlungsplans". Köln: Institut für Sprachwissenschaft der Universität; unpublished ms.
- Seiler, Hansjakob 1980, "Two types of Cahuilla kinship expressions: inherent and establishing". *akup* 39
- Seiler, Hansjakob/Lehmann, Christian (eds.) 1982, *Apprehension. Das sprachliche Erfassen von Gegenständen*. Part I: *Bereich und Ordnung der Phänomene*. Tübingen: Narr (Lg. Univ. Series, 1, I)
- Seiler, Hansjakob/Stachowiak, Franz J. (eds.) 1982, *Apprehension. Das sprachliche Erfassen von Gegenständen*. Part II: *Die Techniken und ihr Zusammenhang in Einzelsprachen*. Tübingen: Narr (Lg. Univ. Series, 1, II)
- Serzisko, Fritz 1980, "Sprachen mit Zahlklassifikatoren: Analyse und Vergleich". *akup* 37
- Serzisko, Fritz 1981, "GENDER, NOUN CLASS and NUMERAL CLASSIFICATION: a scale of classificatory techniques". *akup* 40:93-126
- Serzisko, Fritz 1982, "Temporäre Klassifikation. Ihre Variationsbreite in Sprachen mit Zahlklassifikatoren". Seiler/Lehmann (eds.) 1982:147-159
- Soden, Wolfram von 1952, *Grundriß der akkadischen Grammatik*. Roma: Pontificium Institutum Biblicum (Analecta Orientalia, 33)
- Sohn, Ho-min 1975, *Woleaian reference grammar*. Honolulu: Univ. of Hawaii Press (PALI Language Texts: Micronesia)
- Speiser, E.A. 1941, *Introduction to Hurrian*. New Haven: American Schools of Oriental Research (The Annual of the American Schools of Oriental Research, 20)
- Tesnière, Lucien 1959, *Éléments de syntaxe générale*. Paris: Klincksieck
- Tozzer, A.M. 1921, *A Maya grammar with bibliography and appraisal of the works noted*. Cambridge, Mass.: Peabody Museum (Papers of the Peabody Museum of American Archeology and Ethnology, Harvard University, 9). Reprint 1967, New York: Kraus Reprint
- Troike, Rudolph C. 1981, "Subject-object concord in Coahuilteco". *Lg.* 57:658-673
- Tucker, A.N./Mpaayei, John Tompo ole 1955, *A Maasai grammar with vocabulary*. London etc.: Longmans, Green & Co. (Publ. of the African Institute, Leyden, 2)
- Walter, Heribert 1982, "Genus- und Nominalklassensysteme und die Dimension der Apprehension". Seiler/Lehmann (eds.) 1982:217-228
- Welmers, Wm.E. 1973, *African language structures*. Berkeley etc.: Univ. of California Press
- Wendt, Heinz F. 1972, *Langenscheidts praktisches Lehrbuch Türkisch*. Berlin etc.: Langenscheidt

Yngve, Victor H. 1960, "A model and an hypothesis for language structure". *Proc. Am. Phil. Soc.* 104:444-466