

# 9 Morphology and Agreement

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## 1 Definitions

There have been several attempts to define agreement: for instance, Keenan 1978: 167; Lehmann 1982: 203; and Lapointe 1988; but as Anderson (1992: 103) says, 'this is a quite intuitive notion which is nonetheless surprisingly difficult to delimit with precision'. Steele (1978: 610) talks of 'systematic covariance between a semantic or formal property of one element and a formal property of another'. The essential notion is the covariance or matching of feature specifications between two separate elements, such as subject noun phrase and verb. There is then the question as to whether the determination of the form of anaphoric pronouns is a part of agreement. In fact, most mainstream work on agreement uses the term in this wider sense, to include pronouns. Barlow (1988: 134–52; 1991) reviews the literature and concludes that there are no good grounds for distinguishing between agreement and antecedent–anaphora relations. It is generally accepted that, diachronically, pronouns provide a major source of agreement morphology, progressing from full pronouns to clitics to inflections (see Givón 1976; Bynon 1990, 1992; Corbett 1995).<sup>1</sup>

In order to be able to generalize about different types of agreement, we need a set of terms. We call the element which determines the agreement (say the subject noun phrase) the 'controller'. The element whose form is determined by agreement is the 'target'. The syntactic environment in which agreement occurs is the 'domain' of agreement. And when we indicate in what respect there is agreement (agreement in number, e.g.), we are referring to 'agreement features'.<sup>2</sup> As these terms suggest, there is a clear intuition that agreement is directional. In *Mary laughs*, most accept that *laughs* is singular because *Mary* is singular. Some accounts of agreement capture this intuition directly by copying feature specifications from the controller to the target. There are several problems with this approach: the controller may be absent (as in pro-drop languages); or it may be present but underspecified; or the feature specifications on the controller and the target may simply not match.

More recent approaches, particularly that of Generalized Phrase Structure Grammar and its descendants, allow free instantiation of features on controllers and targets. To be grammatical, those structures must meet certain constraints, typically constraints requiring identity of particular feature specifications. The work is done by unification, which provides a matching of feature specifications without copying, but also without directionality of agreement. In Generalized Phrase Structure Grammar the intuitively important notion of directionality is reintroduced by the Control Agreement Principle, which specifies possible controllers and targets, and gives them different statuses (see Gazdar et al. 1985). Since, however, there is no movement of features in such models, it is more accurate to talk of 'asymmetry' of agreement rather than 'directionality'. In Head-Driven Phrase Structure Grammar the asymmetry is captured through 'anchoring'; gender, number and person features are anchored to real-world entities through noun-phrase indices, even though they may be expressed morphologically other than on the noun phrase (see Pollard and Sag 1994: 60–99; cf. Kathol, forthcoming). Unification does not require that feature sets should be fully specified; controllers may be absent or underspecified. Thus agreement can be seen as a matter of cumulating partial information from the controller and the target (see Barlow 1988, Pollard and Sag 1988, Wunderlich 1994).<sup>3</sup>

Traditional accounts treat agreement as a matter of syntax. However, there are well-known cases where the information available to the syntax is inadequate to allow a full account. For instance, plural agreement with *committee*-type nouns in some varieties of English suggests that semantic information is relevant. As a result, and particularly if one starts from English data, there is a temptation to suggest that agreement is instead all a matter of semantics. However, there are serious problems here too: *I'm parked on the hill* is acceptable for *My car is parked on the hill*, but semantic agreement is impossible here: *\*I is parked* (H. Clarke, cited in Barlow 1988: 227). An adequate theory requires reference both to syntactic and to semantic/pragmatic information (Pullum 1984, Corbett 1994).

What then is the role of morphology? Obviously to mark the agreement information (whether of syntactic or semantic/pragmatic origin) on targets. Given the asymmetric nature of agreement just discussed, this means that agreement morphology will mark on targets information which relates primarily to controllers. Note especially that the morphological part of agreement need not mirror syntax: dependants may agree with their heads, mirroring the syntactic dependency; but, conversely, the syntactic head may bear agreement morphology controlled by its syntactic dependent (Nichols 1985; Zwicky 1993: 298, 303–10). In other words, the agreement controller may be the syntactic dependent.

In the next section we consider the agreement features. Then we look at the forms used to express them (section 3). In section 4 we consider the effect that the target has on agreement in terms of the forms available, while in section 5 we examine its effect on the form to be selected.

## 2 Agreement features

There are three indisputable agreement features, gender, number and person, which we shall examine in turn.

### 2.1 Gender

Agreement in gender is widespread; for instance, adjectives may agree with their head noun in gender, as in these Russian examples:

- (1) nov-yj avtomobil'  
*new-SG.MASC car*  
 'a new car'
- (2) nov-aja mašina  
*new-SG.FEM car*  
 'a new car'
- (3) nov-oe taksi  
*new-SG.NEUT taxi*  
 'a new taxi'

The adjective selects its form according to (= it agrees with) the noun: in (1) it takes *-yj* because the noun *avtomobil'* 'car' is of masculine gender (we would find a similar agreement form with nouns denoting males); in (2) it takes *-aja* because the alternative word for 'car', *mašina*, is feminine; and (3) shows the neuter ending. Such three-gender patterns are quite common, as are two-gender systems; but languages with four or five genders are not unusual, and larger numbers are found (as in Fula, which has around twenty genders, depending on the dialect). Gender systems may have sex as a component, as in languages with masculine and feminine genders; but equally, sex may be irrelevant – the distinction may be between animate and inanimate, for example (see Corbett 1991 for illustrations).

### 2.2 Number

The Russian examples above also show agreement in number; in each, the adjective is singular, to agree with the singular noun. If we change the noun in (1) to a plural, the form of the adjective must change to match:

- (4) nov-ye avtomobil-i  
*new-PL car-PL*  
 'new cars'

The contrast here is just between singular and plural. Many languages have a third member of the number system, the dual, for two items. More complex systems may also be found: for example, with special forms for three items (the 'trial', as in Larike; see Laidig and Laidig 1990) or for a small but unspecified number of items (the 'paucal', as in Bayso; see Hayward 1979). We return to the question of the interaction between the categories in section 3 below.

### 2.3 Person

The third agreement feature is person. Systems with three persons, like Russian *ja беру* 'I take', *ty берёшь* 'you take' and *он/она берет* 'he/she takes', are common. Larger inventories occur in languages which subdivide one or more of these three persons in some way. For example, languages like Quechua subdivide the first-person plural into the first-person inclusive (including the hearer) and exclusive (excluding the hearer). Another type of extended system occurs when the third person is divided into proximate and obviative (for less central participants in the situation), as in Algonquian languages like Cree (Wolfart and Carroll 1981: 25–39). For illustration of person systems see Forchheimer 1953 and Ingram 1978, and for further exemplification of all three features see Moravcsik (1978a: 336–62).

The three features which we called indisputable agreement features are somewhat different in nature. Gender is an inherent feature of the noun. It is found on the target, say the adjective, as a consequence of its presence in the noun (overt or covert). In example (1), the masculine ending on *novyj* has nothing to do with the lexical meaning of the adjective, but results from the fact that the adjective is modifying a masculine noun. A somewhat similar situation obtains for person; in Russian *ja беру* 'I take', person is an inherent feature of the pronoun, but not of the verb. Number is more difficult. It is an inherent feature of some nouns: those which are only singular (like English *watchfulness*) or only plural (like *trousers*) impose this feature value on their modifiers. Typically, however, a considerable proportion of the nouns of a given language can be associated with both (or all) numbers. In straightforward examples involving such nouns, like (4), the number feature appears to relate primarily to the noun; the property denoted by the adjective is not affected by the change in number. The three agreement features are all nominal; they are what Zwicky (1992: 378) calls the 'direct features' of nouns and noun phrases. As Nichols (1992: 160–2) shows, they have an interesting hierarchical relationship: gender is the one which is most prone to be marked only by agreement; number is quite likely to be marked only in this way, but this never occurs with person. Further discussion of the relations between the three features can be found in Bybee 1985: 22–4, 28–33, and Wunderlich 1993.

## 2.4 Other possible features

Traditional accounts of languages like Russian also discuss agreement in case: all the examples given so far are in the nominative case, as would be appropriate for subject position. If instead we take one in a prepositional phrase, then noun and modifier both take a different form:

- (5) *v* nov-om avtomobil-e  
*in new-SG.LOC.MASC car-SG.LOC*  
 ‘in a new car’

The preposition *v* ‘in’ governs the locative case, and the adjective, like the noun, stands in this case. While both do indeed stand in the same form, this covariance differs from that found with gender, number or person. Case is not a feature of the noun: it is imposed on the noun phrase by government by some other syntactic element (the preposition in (5)). Thus the noun and adjective in (5) are in the same case because it is imposed equally on both. This is not agreement, if we take seriously the question of asymmetry. On that view, we should not recognize case as an agreement feature, though we should recognize that it interacts strongly with agreement features. Besides the straightforward instances of case being shared within the noun phrase, there are more complex instances of covariance in case between predicate complements and their controllers (for which see Timberlake 1988; Anderson 1992: 115–18; and references in both to earlier work; for other complex patterns of case see Plank (ed.) 1995).

Finally, some consider definiteness to be an agreement feature, since there are languages like Arabic in which definiteness is marked more than once within the noun phrase. But this too is an instance where there is no asymmetry within the noun phrase. Rather, a feature value is imposed on the noun phrase as a whole, and may be indicated at more than one point in the phrase.

## 3 Forms

In this section we look at the exponents of agreement (section 3.1) and the constraints on the expression of agreement features (section 3.2).

### 3.1 The exponents of agreement

The examples of agreement so far have involved inflectional affixes; these occur after the stem in our Russian examples, but before the stem in many other languages – in various Bantu languages, for instance. While some languages treat all agreement in the same way, this is not necessary. Thus in



marker (the *d-*), a suffixed form (the final *-r*) and two internal forms (the other occurrences of *r*). The four markers are all the same, in the sense that they mark the same person/number combination for agreement with the same controller. Agreements of this type may be problematic for analyses based on the notion of functional heads, as Spencer (1992: 323–9) shows. We take up the question of multiple formants again in section 4.

### 3.2 Constraints on the co-occurrence of agreement features

If we return to the Russian examples (1)–(3), which show agreement in gender, we find that the plural for each would be identical: the plural adjective is *novye* ‘new’. Thus gender is constrained by number in Russian: gender distinctions are found only in the singular number. This conforms to Greenberg’s universal number 37: ‘A language never has more gender categories in nonsingular numbers than in the singular’ (Greenberg 1966: 112). There are further universal constraints of this type (for which see Greenberg 1966) and some language-specific constraints; both may involve just the agreement features, or they may refer to other features too. For instance, Russian verbs show agreement in gender only when in the past tense.

A rather different type of interaction between the features is found if we look at the formal expression of combinations of features. In the Russian examples, the expression of different features was fusional: in example (2), the inflection *-aja* marks feminine gender and singular number (and nominative case). One such marker may represent different possible combinations of feature values (i.e. it may be an instance of syncretism); the most spectacular examples of this type are provided by polarity. This phenomenon can be found in the Cushitic language Somali (data from Serzisko 1982: 184–6; see also Bell 1953: 12–13 and Saeed 1987: 114–16):

- (11) *inan-kii*            *baa*                    *y-imid*  
*boy-the.SG.MASC FOCUS.MARKER SG.MASC-came*  
 ‘the boy (!) came’
- (12) *inán-tii*            *baa*                    *t-imid*  
*girl-the.SG.FEM FOCUS.MARKER SG.FEM-came*  
 ‘the girl (!) came’
- (13) *inammá-dii*        *baa*                    *y-imid*  
*boys-the.PL.MASC FOCUS.MARKER PL-came*  
 ‘the boys (!) came’
- (14) *ináma-hii*        *baa*                    *y-imid*  
*girls-the.PL.FEM FOCUS.MARKER PL-came*  
 ‘the girls (!) came’

**Table 9.1** The definite article in Somali (basic forms)

<i>gender</i>	<i>singular</i>	<i>plural</i>
masculine	kii	tii
feminine	tii	kii

The postposed definite article has various morphophonologically determined variants: after any vowel except *i*, *kii* becomes *hii*, and after any vowel *tii* becomes *dii*. Given this, in the examples above the article used for the masculine plural might be considered the same as that for the feminine singular, while that for the feminine plural is the same as that for the masculine singular. The basic forms are as in table 9.1.

The two markers are exponents of two features (gender and number), and when the value of one feature is changed, the marker changes, but if both values are changed, the form stays the same.<sup>5</sup> The polar opposites are identical, hence the term ‘polarity’.

Not surprisingly, we never find complete polarity. For Somali, this is shown by two facts. First, it has polarity only in noun-phrase internal agreement. Examples (11)–(14) show that the verbal agreement forms are different: there the plural for both genders is the same as the masculine singular, which is another type of syncretism. The second restriction in Somali is that not all nouns fall into the pattern shown in (11)–(14). Some masculine nouns form their plural by reduplication, and take the same article in the singular and the plural: for example, *nin-kii* ‘the man’, *niman-kii* ‘the men’. Thus not all targets show polarity; nor are all nouns included in the polarity system. (Conversely, a small number of nouns are exceptional in taking polarity-type agreements for predicate agreement too: see Hetzron 1972; Zwicky and Pullum 1983b.)

## 4 Effect of the target – the forms available

A simple but not unreasonable view of agreement would have the syntax establish the domains of agreement, the agreement features and their values, and leave the morphology with the apparently simple task of ‘spelling out’ those feature values. Things are somewhat more complicated, however, since the agreement forms available depend on the agreement target and on its type. In part, the availability of agreement may be syntactically determined: thus, in German, adjectives in pre-nominal attributive position show agreement, while others, particularly those in predicative position, do not. But the restriction frequently depends just on the word class of the target; often we find that, say, adjectives agree in number in a given language, irrespective of their syntactic role.<sup>6</sup>

The question then arises as to the outcome when the demands of the syntax in terms of agreement cannot be met by the morphology. The issue was raised by Huddleston (1975) with respect to verbal agreement in English. Assume that on the basis of present-tense verbs we set up a syntactic rule of agreement. How then do we ensure that the verb *be* will agree when in the past tense, but no other verb will? The usual move is to configure the morphology to match distinct forms (when available) to feature specifications, and to allow for a default form when no distinct forms are available. But this is not the only possible outcome. It is possible for the lack of appropriate agreement morphology to render a syntactic construction ungrammatical; for instance, Addis (1993: 446–52), in a discussion of Basque, claims that ditransitive sentences which would require verbal agreement with a first- or second-person direct object and with an indirect object are ungrammatical and must be reformulated, since the agreement morphology is not available (she indicates similar problems in Georgian (for which see Anderson 1992: 128–32), Southern Tiwa and Spanish). Thus the relation to syntax is more complex than a simple spelling out of feature specifications. We shall therefore consider briefly the inventory of agreeing items, the agreement slots they have available, the agreement features involved, and finally in this section variation within word classes.

The word class of the target has a major effect on agreement. Of course, verbs regularly show agreement, as do adjectives. We also find articles, demonstratives, numerals, possessives (including associative morphemes) and various types of pronoun showing agreement (for examples see Lehmann 1982: 207–15; Corbett 1991: 106–12). We might expect that to be the complete list, but in fact there are several other items which can show agreement. Thus, in West Flemish, and elsewhere in West Germanic, we find agreement of the complementizer (Bennis and Haegeman 1984: 41; cf. Hoeksema 1986 and Zwart 1993a for other examples); adpositions may agree with their noun phrase, as in the North-west Caucasian language Abkhaz (B. G. Hewitt 1979: 113–14, 125–37) and in most of the modern Indic languages (Payne 1995); various languages have agreeing adverbs: for instance, Lak (Daghestanian), Kala Lagaw Ya (the language of the western Torres Straits Islands), Italian to a limited degree (for sources see Corbett 1991: 113) and Gujarati (Hook and Joshi 1991). And in Somali the focus marker can show agreement (Gebert 1988). Several of the Daghestanian languages allow a case-marked noun to take an agreement marker (Kibrik, p.c.). Thus in Lak, the allative marker, which is added to the lative marker, brings with it an agreement slot: *q̄at-lu-wu-n-m-aj* (*house-OBLIQUE-IN-LATIVE-III-ALLATIVE*) ‘into the house’. In this example, the *-m-* is a gender III singular marker for agreement (for the possible controllers see Kibrik 1979a: 76). In Dargwa (Lak’s closest relative), the essive similarly adds an agreement slot, but has no distinct marker itself; thus the presence of the agreement signals essive case: *bidra-li-čē-b* (*bucket-OBLIQUE-SUPER-III*); ‘on the bucket’; the *-b* (gender III singular marker in this instance) signals the essive case. Pronouns too may behave in a comparable way. Consider these Archi examples (Kibrik 1972: 124):

- (15) d-ez        buwa    Ƙ'anši d-i  
*II-me.DAT mother like    II-is*  
 'I like mother'
- (16) b-ez    dogi    Ƙ'anši b-i  
*III-me donkey like    III-is*  
 'I like the donkey'

Since Archi is an ergative language, the part of the verb which shows agreement agrees with the object of a transitive verb; the different forms in (15) and (16) correspond to two of the four genders of Archi. With verbs of emotion and perception, the subject stands in the dative case; in (15) and (16) the subject is a personal pronoun with an agreement slot, and this also agrees with the object. Evidently, then, languages have different inventories of agreeing items, and the possible distributions have yet to be fully investigated.

Given that we have an item which can show agreement, we may then ask how many times it can mark agreement and with how many controllers. The Russian adjectives we analysed earlier are simple, in that they agree just once (there is a suffixal position for agreement which is always with a single type of controller). As we shall see, targets vary both in the number of times they can mark agreement and in the type of their controller(s). A single target may have more than one agreement position: in the Archi example (10) we saw four agreement slots. In this instance they were all for agreement with the *same controller*, in respect of the *same features*. Four appears to be the maximum number of same-controller agreement slots. As a variant of the same-controller type, the different slots of the target may show agreement with the same controller, but with different morphological patterning (different syncretisms); this is found in the Daghestanian language Khinalug (Corbett 1991: 119–23). Then we may find targets with more than one agreement slot, which agree with a single controller in respect of *different features*. Thus Maltese verbs when imperfective agree with their subject prefixally in terms of person (and to a limited extent in gender) and suffixally in terms of number (Fabri 1993: 94). We also find targets with more than one agreement slot, for agreement with *different controllers*. A common example is verbs which agree with both subject and object; for discussion of the handling of such cases by the use of 'layered features' see Anderson 1992: 93–100; an alternative, 'tagged features', is presented by Zwicky (1986a). Just as the maximum number of slots for same-controller agreement is four, so, it seems, the same may hold for different-controller agreement; Anderson (1985a: 196) claims that verbs in the Penutian language Chinook and North-west Caucasian languages like Adyge can agree with up to four different noun phrases.<sup>7</sup>

While different slots may correspond one-to-one to different controllers, this need not be the case. A given slot may take agreement with different controllers under different conditions; for instance, in Dargwa (Chirag dialect), the verb has a suffixal person marker for the subject if first or second person and

**Table 9.2** Agreement of Latin adjectives (nominative singular)

<i>masculine</i>	<i>feminine</i>	<i>neuter</i>	<i>gloss</i>
acer	acris	acre	sharp
facilis	facilis	facile	easy
felix	felix	felix	happy

for the object if third person (see Kibrik 1979b: 28–9).<sup>8</sup> Note that while targets may offer more than one slot for one and the same controller (as in Archi) or for more than one controller in different syntactic positions (as in Georgian), we never find slots for two or more controllers in the same syntactic position.<sup>9</sup> We never find, for instance, a verb with slots available to agree with conjoined subject noun phrases individually, such that if the noun phrases were, say, feminine singular and neuter singular, the verb would have feminine singular and neuter singular agreement. In such circumstances agreement is with just one controller, or with all conjuncts, but the agreement feature values are determined by a resolution rule (Corbett 1991: 261–9).

When we turn to agreement features, we find that these cannot be stated just at the level of the language. We cannot simply say that a particular language has gender agreement. There is likely to be variation among the elements identified as agreement targets, as this example from the West Slavonic language Upper Sorbian shows:

- (17) wón je pisał  
*he is.3SG written.SG.MASC*  
 ‘he wrote’

Here the finite verb agrees in number and person, while the participle agrees in number and gender.<sup>10</sup>

While observing differences *between* word classes in respect of the agreements they may show, we have nevertheless treated word classes as internally uniform in respect of their agreement potential. This too is an oversimplification, since there are instances of systematic differences *within* word classes. Thus, as mentioned previously, Russian verbs agree with their subject in person and number, except in the past tense (formerly a participle), which agrees in gender and number. This generalization holds for all verbs. But there are also instances of idiosyncratically different agreement possibilities within word classes. Latin adjectives show this clearly (see table 9.2).

In the nominative singular, *acer* ‘sharp’ and similar adjectives distinguish three genders; those like *facilis* ‘easy’ mark neuter as opposed to masculine and feminine; while *felix* ‘happy’ and adjectives like it do not distinguish gender for this case/number combination.

## 5 Effect of the target – the form selected

In the last section we saw that, even if we assume a reasonable morphosyntactic representation with the relevant agreement information, the task remaining for the morphology may be quite complex. Nevertheless, these problems could in principle be handled for each agreement target separately, given a full array of morphosyntactic and lexical information. We now turn to examples which appear to pose problems for such a view, since the agreement form selected appears to depend on more complex interactions – typically interactions between agreement targets. In each case, determining the appropriate form to mark agreement requires more information than a ‘common sense’ view of agreement would lead us to expect.

The first type of example involves agreement of one target requiring information about another. For instance, in the Semitic language Tigre, three types of noun phrase (direct objects, indirect objects and causees) can trigger object agreement. Furthermore, a definite direct object can optionally give rise to an agreeing object clitic. But this is possible, according to Jake (1980: 75–8), only provided another noun phrase triggers object agreement; thus one type of agreement depends on the occurrence of the other. A second example can be found in Somali. Here the focus marker agrees with or does not agree with the subject, according to a set of factors which need not detain us. The relevant point is that when the focus marker does agree, the verb has a reduced agreement paradigm; that is, it makes fewer distinctions (Gebert 1988: 599–600; cf. Saeed 1987: 62–4; 1993: 86–7). In other words, the form of agreement of the verb depends on whether or not the focus marker shows agreement. A third, more familiar example concerns adjectival agreement in German. Adjectives within the noun phrase show agreement in gender and number, but the form of this agreement depends on the agreement information supplied by various types of determiners within the same noun phrase (see Zwicky 1986c for analysis).

The last type of problem involves syncretism. It is common to find different morphosyntactic representations which have a single realization: we saw examples in section 3.2. Occasionally the existence of syncretism, which would appear to be a matter of morphology (the morphology of targets in the cases which interest us here), makes possible a type of agreement which would otherwise be unacceptable. To illustrate this we will consider briefly the problem of gender resolution in the Bantu language Chichewa (for details see Corbett and Mtenje 1987 and Corbett 1991: 276–8). Chichewa has ten genders, which we refer to by the agreements they take in the singular and plural. Thus 7/8 is a gender which includes a wide variety of inanimate nouns. When noun phrases which do not refer to humans are conjoined, the general rule requires that the agreeing verbal predicate will be in the plural of gender 7/8, shown by the prefixed marker *zi-* (irrespective of whether the head nouns

belong to that gender or not). However, there is an interesting class of apparent exceptions:

- (18) ma-lalanje ndi ma-samba a-kubvunda  
 6-orange and 6-leaf 6-be.rotting  
 'the oranges and leaves are rotting'

Here we find noun phrases headed by nouns of the same gender, both plural, and the verb takes the same plural form. This was found fully acceptable, though it is not the form which would be predicted by the rule given. Now consider phrases headed by non-human plural nouns which are of different genders, but whose subject agreement forms happen to coincide.

- (19) a-mphaka ndi ma-lalanje a-li uko  
 2-cat and 6-orange GN-be there  
 'the cats and the oranges are there'

The gender/number marker (GN) on the verb (*a-*) is that corresponding to the plural both of gender 1/2 and of gender 5/6 (the form *zi-*, which would be predicted by the usual rules, may be an alternative). The regularity here is that if noun phrases headed by plural nouns which would take the same target gender form are conjoined, then that target gender form will be the preferred form. There are different ways in which these examples might be analysed. The crucial point, however, is that the agreement form is determined, at least in part, by the fact that particular markers are syncretic. If the forms did not happen to be syncretic, then the regular rule would apply. For further discussion of syncretism in agreement morphology see Zwicky 1991; Gvozdanović 1991; and Carstairs-McCarthy 1992: 202–6.

## 6 Conclusion

It used to be considered that agreement was primarily a matter of syntax. But several investigations have shown that semantics and pragmatics also have a large role. It now seems that morphology too has a more substantial role in the working of agreement than has generally been assigned to it. Indeed, the morphology of agreement is one of the most interesting parts of inflectional morphology.<sup>11</sup> We should be looking to predict which types of language will have agreement, the conditions under which particular agreement features will be expressed, the types of formal expression which will be employed, and the ways in which the target itself may help to determine the form of agreement.

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## NOTES

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- 1 For the synchronic connection see C. Lyons 1990. It is also important, though sometimes quite difficult, to distinguish pronominal affixes from straightforward verbal agreement. Pronominal affixes are obligatory arguments of the verb; a verb with its pronominal affixes constitutes a full sentence, and additional noun phrases are optional (as e.g. in Barbareño Chumash; see Mithun 1991: 85–6). If pronominal affixes are the primary arguments, then they may be said to agree only in the sense that anaphoric pronouns agree, provided that one accepts that broader definition of agreement (see also Siewierska and Bakker 1996: 116–19 for discussion of the difficulties).
- 2 We shall treat, say, number as a ‘feature’ and singular, dual, plural as ‘values’ of that feature. The features and their values carried by a controller or target are its ‘feature specification’. An alternative terminology has number as a ‘category’ and singular as a ‘property’ or ‘feature’ (Matthews 1991: 39–40).
- 3 For a different approach to the compatibility of feature specifications in agreement see Steele (1990: 90–3). For a critique of the treatment of agreement in unification-based grammars and an account of an approach using Lambek Categorical Grammar see Bayer and Johnson 1995.
- 4 Several languages of the East Cushitic group have some verbs which mark subject agreement by prefixation, while the majority of verbs use suffixation (Hayward and Orwin 1991).
- 5 Of course, the case would be more convincing if these basic forms were not subject to variation.
- 6 A closer tie between syntax and morphology is postulated by Baker (1985), and agreement data form a crucial part of his argument. There are problems, however, for which see Grimshaw 1986 and Anderson 1992: 127–8.
- 7 Davies (1986: 1) states that ‘a Choctaw predicate can agree with up to five arguments in a single clause’, but he seems to be referring to potential controllers; it is not clear how many agreement markers can occur on a single target.
- 8 A complex example is found in verb agreement in Tabassaran, described by Kibrik and Seleznev (1982); see also A. C. Harris 1994; another is Georgian (A. C. Harris 1978; Anderson 1992: 141–56).

- 9 Foley (1986: 185–6) reports data (originally from Scott 1978) on the Gorokan language Fore. Dependent verbs whose subject differs from that of the independent verb take separate markers showing the person and number of their own subject and the person and number of the subject of the independent verb. Thus a verb can be said to agree with two subjects; but note that they are not in the same syntactic position: one is the subject of a dependent verb, the other is the subject of a different (independent) verb.
- 10 The target type also influences the form of agreement when there is an agreement option (as e.g. in British English, where *committee* may take a singular or a plural predicate). The distribution of these options is constrained by the Agreement Hierarchy (Corbett 1979, 1991: 225–60; Barlow 1991) and the Predicate Hierarchy (Comrie 1975; Corbett 1983: 42–59, 87–8). Typically, these constraints operate at the level of the corpus – the target type makes one agreement form more or less likely. But these constraints may also operate as a sentence-level constraint (Corbett 1983: 60–9), in which case the choice of form of one target is determined in part by the choice of form for another. Similar considerations apply to stacked constructions (Corbett 1983: 69–74).
- 11 It is also proving of considerable interest to psycholinguists; see e.g. Kehayia et al. 1990, Bock and Miller 1991, Clahsen and Hansen 1993, Vigliocco et al. 1995.