

1 *Introduction: category distinctions as a window on the theory of agreement*

1.1 A generalization to be explained

Even though agreement phenomena are some of the most familiar and well-studied aspects of grammar, there are certain basic questions that have rarely been asked, let alone answered. One such question concerns the fact that, in many languages, the three major lexical categories – noun, verb, and adjective – behave quite differently with respect to agreement. Words of all three categories can bear similar, even cognate, inflectional affixes. But verbs are consistently the most prolific agreeers, often agreeing with their subjects in person, number, and gender features, and sometimes agreeing with their objects in these features as well. Adjectives clearly participate in agreement, but they do so more modestly: they rarely or never agree with more than a single nominal, and they can agree in number and gender but they typically do not show first or second person agreement forms. In light of these differences, traditional grammar often says that adjectives participate in *concord*, a distinct phenomenon from the agreement that involves verbs. Nouns are more conservative still. Although they are often inflected, sometimes with the same affixes that adjectives take, nouns do not need to agree with another NP in their environment the way that an adjective in a similar structural configuration does. My thesis in this book is that the true theory of agreement should be able to explain these robust cross-categorical differences, and that much can be learned about agreement by seeking a theory that meets this condition.

To illustrate the fundamental contrasts in agreement behavior that I have in mind, consider (1) from Swahili.

- (1) a. Ni-li-kuwa ni-ki-som-a. (Ashton 1949)
 1sS-PAST-be 1sS-CONT-read-FV
 ‘I was reading.’
 b. Ni-Ø m-refu.
 1sS-be CL1-tall
 ‘I am tall.’

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- c. Ni-li-po-kuwa ki-jana . . . sasa ni-li-po m-tu m-zima, . . .
 1sS-PAST-when-be CL7-child now 1sS-be-when CL1-man CL1-whole
 ‘When I was a child . . . Now that I am a man . . .’

The copular verbs in all three examples manifest agreement with an understood subject that is first person, singular, and animate; let us put that aside.¹ The interesting differences are found on the postcopular lexical category. The main verb in (1a) also shows agreement that is first person, singular, and animate; its prefix is thus identical to the one on the copula. (2) shows a transitive verb in Swahili, in which the verb agrees with its understood object in person, number, and gender as well as with its subject.

- (2) Juma a-li-ni-ambia kwamba . . . (Vitale 1981:62)
 Juma 1S-PAST-1sO-tell that
 ‘Juma told me that . . .’

In contrast to the main verb in (1a), the predicate adjective in (1b) cannot bear the first person singular prefix *ni*. Rather it must bear the class 1 prefix *m*. This morpheme expresses singular number and human/animate gender, in partial agreement with the subject, but it does not express first person. The same prefix is thus used on the adjective when the subject is third person, as in (3a). (3b) shows an adjective with a different prefix, manifesting a different combination of number and gender in agreement with its subject. This confirms there is partial agreement on adjectives in Swahili, but not complete agreement with first and second person subjects.

- (3) a. Hamisi yu-Ø m-refu (Ashton 1949)
 Hamisi CL1-be CL1-tall
 ‘Hamisi is tall.’
 b. Mi-zigo hii mi-zito.
 CL4-loads these CL4-heavy
 ‘These loads are heavy.’

Finally, the first predicate nominal *ki-jana* ‘child’ in (1c) is different from both the verb and the adjective in that it does not even agree with the subject in gender. It bears the class 7 agreement prefix *ki*, reflecting the diminutive meaning of the predicate noun, not the class 1 agreement prefix *m* that the

1 In contemporary Swahili, the stem of the verbal copula is normally omitted in the simple present, when it bears no morphology other than the subject agreement marker. (The stem *li* does show up in some archaic expressions, such as proverbs, suggesting that this is an innovation.) Swahili also has an uninflected copular particle *ni*. It is not clear whether the *ni* in (1b) is an agreement marker or this copular particle, but this is orthogonal to the point I want to make using this example.

first person singular subject triggers on the predicate adjective in (1b) (which also appears on the second predicate nominal *m-tu m-zima* ‘full-grown man’ in (1c)). A more striking example of a predicate nominal that does not agree with its subject is shown in (4), where the predicate noun ‘clouds’ fails to agree with the subject ‘sign of rain’ in gender or in number.

- (4) Dalili y-a mvua ni ma-wingu. (Ashton 1949)
 CL9.sign CL9-ASSOC CL9.rain PRED CL8-clouds
 ‘Clouds are a sign of rain.’

So verbs in Swahili show full agreement, adjectives show partial agreement, and nouns are inflected but do not agree. This is also true for many other, unrelated languages, as we shall see in chapter 2.

1.2 The incompleteness of previous discussions

Although this pattern of facts is reasonably well known, at least for Indo-European languages and Semitic languages, linguists have rarely attempted to explain it. Consider, for example, Stassen’s (1997) extensive typological study. Stassen clearly recognizes the empirical connection between being a verb and bearing person agreement, stating it as follows (p. 38):

- (5) *The Agreement Universal*
 If a language has person agreement in intransitive main clauses, this agreement will at least be used in sentences with event predicates [i.e. with prototypical verbs – MCB].

In connection with this universal, he writes:

As far as I am aware, no known principle of linguistic theory prevents us from imagining a possible natural language with some form of person agreement where this agreement can be used only with predicate adjectives or only with predicate nouns, but not with predicate verbs. However, in my sample [of 410 languages – MCB] I have not found a single instance of a language in which such a situation can be observed. In this book, no attempt at an explanation for the Agreement Universal will be made.

In contrast, this book *will* make an attempt at explaining the Agreement Universal and related facts, using the tools of formal generative linguistics.²

2 Stassen sees this as only a one-way implication, from verbiness to person agreement, not a bidirectional implication as I argue. For a discussion of languages in which adjectives and/or nouns bear person agreement as well as verbs, see section 2.5.1 below.

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Within the Chomskian tradition, the (often tacit) state of the art has been simply to stipulate which feature slots are present but unvalued on a particular lexical item, thereby specifying explicitly its agreement potential (Chomsky 2000, Chomsky 2001). Fleshing out this background assumption, the Swahili pattern in (1) could be described by saying that verbs in Swahili have one or two empty slots for person, number, and gender features, depending on their transitivity. Values for these slots are then filled in by a process of agreement. In contrast, adjectives in Swahili would have only a single set of feature slots, and they happen to lack a slot for a person feature. Nouns in Swahili would have no empty feature slots: either they have no slots at all, or (better) they have slots for gender and number, but those features are already valued and hence are not open for agreement. On this baseline view, the Swahili words used in (1) could have representations like the following:

(6)	<i>soma</i>	<i>refu</i>	<i>jana</i>
	'read'	'tall'	'child'
	verb	adjective	noun
	Person: _____	Number: _____	(Person: 3rd)
	Number: _____	Gender: _____	(Number: sg)
	Gender: _____		(Gender: 7)
	(Person: _____)		
	(Number: _____)		
	(Gender: _____)		

A variant of this view would put the feature slots, valued or unvalued, not on the lexical category itself, but rather on some functional category associated with it. For example, the subject agreement features might be attributed not to the verb itself, but to the Tense/Infl node that selects VP. Similarly, object features might be attributed to a *v* projection distinct from verb, the valued number feature might be on a Number head rather than on the noun itself, and so on.

Although it may be descriptively accurate, this baseline generative view is not very satisfying theoretically. If the lexical categories varied randomly in their behavior with respect to agreement within and across languages, then this sort of theory is the best one could hope for. But they do not. The pattern shown in (1) and described in (6) is in fact the norm for languages that use the relevant features as part of their grammatical system. Given this, some deeper theoretical relationship should be found between saying what lexical category a word belongs to and saying what its behavior with respect to agreement is.

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It might seem tempting to take the agreement potential of a word as being basic, and define its lexical category in terms of that. For instance, one could define an adjective in Swahili as a word that can agree in number and gender, but not person, whereas verbs are defined as words that can show person agreement and nouns as words that do not undergo agreement at all. (Ouhalla (2005b) makes a proposal along these lines, defining verbs as categories that have person features and nouns as categories that have a class (gender) feature.) To the extent that there are other morphological and syntactic differences between nouns, verbs, and adjectives in Swahili, one might attempt to derive them from this inflectional difference. For example, one might derive the fact that adjectives can function as attributive modifiers but nouns generally cannot from these definitions plus the stipulation that attributive modifiers must agree with the noun that they modify. This approach has some intuitive appeal, because the inflectional differences among the lexical categories are often very salient in richly inflected languages. Indeed, awareness of the noun/verb distinction in Western grammar comes historically from the observation of Ancient Greek and Latin grammarians that some words inflect for number, gender, and case whereas others inflect for tense and subject agreement (Robins 1989). This is often how the noun/verb/adjective distinctions are presented in modern descriptive grammars as well.

If, however, one's linguistic theory aspires to give a general account of the human language capacity, and if it seeks to have explanatory depth, it becomes clear that this temptation should be resisted. One reason is that some languages clearly distinguish nouns, verbs, and adjectives even though they have little or no agreement. Modern English is very nearly a language of this type: agreement has been lost entirely on adjectives, and only survives on third singular verbs in the present tense. Japanese and Edo are even better examples (see Baker 2003a for discussion, e.g. pp. 240–5 on Japanese). A definition of the lexical categories that is rooted in their differing agreement potentials seems artificial and unenlightening for these languages. A second reason is that, even in languages that have a substantial amount of agreement, it is difficult to see how some of the purely syntactic differences between nouns, verbs, and adjectives can plausibly be derived from the inflectional differences. For example, only adjective phrases can be the complements of dedicated degree heads like *so*, *as*, *too*, and *how* in English (*Chris is too hungry* versus **Chris too likes wine*, **Chris is too (a) fool*). It is hard to see any plausible direct connection between a fact like this and the agreement asymmetry in (1), such that the former could be explained in terms of the latter.

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1.3 What a better theory could look like

A more promising approach is to work the other way around. Suppose that we had a syntactically oriented theory of the lexical categories that was designed to explain why nouns, verbs, and adjectives occur in systematically different structures. That theory could be combined with a structural theory of agreement that did not explicitly mention the lexical categories at all. If everything worked properly, the agreement differences among the lexical categories might follow from the independently established syntactic differences together with general principles of agreement that are blind to category labels. Such a theory could explain why the noun/verb/adjective distinction does not depend on a language having agreement, but shows up in systematic ways in languages that do have agreement. The goal of this book is to develop this sort of approach, and to learn what can be learned about the general theory of agreement by doing so.

In fact, the needed subtheories already exist, for the most part. In Baker 2003a, I developed a theory of the noun/verb/adjective distinctions designed to account for their syntactic differences across languages. That work did not consider agreement at all, however. Meanwhile, Chomsky (2000, 2001) and other minimalist theorists have developed a sophisticated syntactic theory of agreement, looking primarily at the agreement properties of verbs. This book considers how these theories can be combined – with a few adjustments – to achieve a unified theory of agreement that applies to all three lexical categories and explains their differences in agreement behavior in terms of their more basic syntactic differences.

1.4 What is in this book

I pursue this goal as follows. Chapter 2 is concerned with documenting more fully the agreement asymmetries sketched in (1), and showing how the core cases of agreement on simple predicates and modifiers can be explained by the conjunction of my theory of lexical categories and the Chomskian theory of Agree. Two key additions to the theory of agreement are found to be necessary. The first is the idea that a head can search upward through the syntactic structure for something to agree with as well as downward. The second is the idea that agreement in first and second person features is subject to a more stringent locality condition than other sorts of agreement are (the Structural Condition on Person Agreement, or SCOPA).

Chapter 3 extends the account to other, less canonical constructions, including agreement on unaccusative and raising adjectives, agreement with *wh*-phrases,

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agreement in oblique subject constructions, agreement in double object constructions, and long distance agreement. In addition to proving that the ideas introduced in chapter 2 are general and robust, this chapter proves that adjectives and verbs should fall under the same theory of agreement, rather than having distinct theories of agreement (for verbs) and concord (for adjectives). For example, I show that agreement on raising adjectives is sensitive to all the same factors as agreement on raising verbs, and that verbs lose the ability to agree in first and second person when they happen to appear in syntactic configurations that are similar to those that adjectives always appear in.

Chapter 4 turns to a closer examination of the SCOPA, considering in a deeper way why agreement in first and second person should be subject to a tighter locality condition than other sorts of agreement. I claim that this is the projection onto agreement of a general condition that applies also to first and second person pronouns as opposed to third person pronouns: first and second person pronouns must be bound by the closest relevant operator, whereas third person pronouns need not be. Thus, the SCOPA is not an ad hoc stipulation, but rather something rooted in the fundamentals of what it is for any linguistic expression to be first or second person.

Chapter 5 then turns from the universal aspects of the theory of agreement to those aspects that vary parametrically. I claim that there are two such aspects. First, in some languages agreement depends on there being a unidirectional c-command relationship, whereas in other languages it does not. Second, in some languages agreement is dependent on the case features of the two expressions being co-valued whereas in other languages it is not. These parameters are motivated by a close comparison of agreement in Niger-Congo languages with agreement in Indo-European languages. Their validity is then tested against a sample of 108 languages taken from around the world. I conclude that agreement is a domain of grammar in which there are both substantive universal constraints and a degree of highly patterned and systematic crosslinguistic variation.

1.5 What is not in this book

Almost as important as saying what this book is about is being explicit at the beginning about what this book is not about. This book is almost entirely about the syntax of agreement – not about the morphology of agreement or about the semantics of agreement. This is not to say that agreement is a purely syntactic phenomenon; it certainly is not. Nor is it always easy to tease apart the syntactic aspects of agreement from its morphological or semantic aspects. But I believe that there is a syntactic aspect to this topic, which can and should be

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distinguished from the purely morphological and the primarily semantic. Here is a brief sketch of why.

Consider first the distinction between morphology and syntax. It is a fact about Spanish and other Western European languages that verbal agreement shows number and person but not gender. There is, then, no difference in the verbal agreements in (7a) and (7b), although there is in the adjectival agreements in (7c) and (7d).

- (7) a. Nosotros com-emos las manzanas.
 we.M.PL eat-1pS the apples
- b. Nosotras com-emos las manzanas.
 we.F.PL eat-1pS the apples
- c. Nosotros estamos list-o-s.
 we.M.PL are.1pS ready-M-PL
- d. Nosotras estamos list-a-s.
 we.F.PL are.1pS ready-F-PL

If one looked only at a single language or language family, one might consider this fact about verb agreement to be on a par with the fact that adjectives inflect for number and gender but not person. But crosslinguistic comparison reveals a clear difference. The inability of verbs to manifest agreement in gender is a property of certain IE languages, but it is clearly not universal. Many languages do have verbs that agree with their subjects in gender as well as in number and person; examples include Swahili, Arabic, Yimas, and Mohawk. In contrast, the failure of adjectives to agree in person is much more general, arguably universal. Furthermore, as we shall see, the ability of verbs to agree in person is contingent on the kind of syntactic configuration that holds between the verb and the agreed-with argument (see chapter 3). In contrast, whether gender agreement is present on verbs does not (as far as I know) interact with syntactic configurations in any interesting way. Taken together, these facts show that whether or not person agreement is possible is often a syntactic fact, whereas the presence versus absence of gender agreement on verbs is not syntactic in the same way. I therefore take the latter fact to be purely morphological in nature: the gender features are present on the verb in Spanish, but the morphemes that happen to spell out a [1st person plural feminine] feature bundle are no different from the morphemes that spell out a [1st person plural masculine] feature bundle in this language.

This is not meant to deny that the absence of gender in verb agreement in some languages is an interesting and grammatically significant feature of the

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language. For example, there could be a general rule of impoverishment of the sort studied by Bonet (1991) and other Distributed Morphologists, which systematically removes the gender feature from the feature bundles created by agreement prior to the insertion of actual morphemes. Such rules of impoverishment may obey laws of their own and have a major impact on what agreement looks like in particular languages. But whatever principles govern these phenomena, they are very likely to be different from those that underlie the contrasts in (1).³ More generally, I assume that the apparatus of Distributed Morphology is present to interpret in nontrivial ways the feature bundles that are placed on syntactic heads by the principles of agreement that I discuss, but I do not consider that aspect of agreement here in any depth.

Bobaljik (to appear) has constructed an argument that *all* of agreement takes place after the syntax, in the morphological part of the PF component (see also Marantz 1991, Halle and Marantz 1993). Whereas I follow a fairly standard Minimalist division of labor between morphology and syntax, Bobaljik claims that even the matter of which NP a given word agrees with is determined in the postsyntactic morphological component. I do not follow Bobaljik in this for a variety of reasons: (a) I am not convinced that agreement relationships never feed other syntactic and semantic processes, (b) I think they are sensitive to more details of syntactic structure than other PF processes are, and (c) I am too conservative.⁴ But the difference between the two conceptions is not as large or important as it might seem. Bobaljik acknowledges that agreement is sensitive to syntactic relations, including a notion of which of two NPs is the higher one (c-command) and some notion of local domains (clausal constituents, phrases). He simply claims that this information is still available at PF, inherited from the syntax. As a result, the difference in framework does not matter much in practice: people who are attracted to Bobaljik's Distributed Morphology architecture can interpret my title *The Syntax of Agreement and Concord* as meaning "those

3 There is probably nothing special about gender such that it alone can undergo impoverishment within the verbal inflectional system. There are a number of New World languages (e.g., Diegeño, Zoque, Hixkaryana) in which verbs inflect for person but not for number, suggesting that the number feature is deleted from the PF representation in those languages. Tsez is a language in which verbs agree with subjects or objects in number and gender but not in person (Polinsky and Potsdam 2001); a possible analysis could be that the person feature is deleted by a rule of impoverishment in this language. I assume then that any feature can in principle be involved in postsyntactic adjustments of this kind.

4 It is also not clear to me how to generalize Bobaljik's approach from the one type of agreement he considers in detail (single agreement on the finite verb), to agreement on the full range of functional heads I am concerned with here. It would undoubtedly be interesting to try to do this and then compare the results with my theory, but I leave at least the first step of this process to others.

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aspects of the syntactic representation that agreement and concord make use of,” rather than “what happens in the syntactic component with regard to agreement and concord.”

Consider now the distinction between syntax and semantics. There are instances of “agreement” that are rather clearly semantic in nature. The most famous is the possibility of collective nouns to trigger plural agreement on verbs (but not demonstratives) in many British varieties of English. An example is:

- (8) a. (*) This band are brilliant live. (Wechsler and Zlatić 2003:76–9)
 b. This band is brilliant live.
 c. *These band are brilliant live.

This sort of agreement is semantic in that it depends on semantic properties of the subject – in particular, the ability of a singular noun to denote a group consisting of several members. British speakers are also reported to detect a semantic distinction between using the plural form *are* and the singular form *is* in a sentence like (8): *is* goes with a collective reading of the predicate and *are* with a distributive reading. Somehow, then, a semantically licensed form can replace a morphosyntactically licensed form under certain conditions in British English. Nothing in this book will tell you why.⁵

More directly relevant to the range of data I have been focusing on, there is a kind of semantic agreement that can be seen in (9c–d).

- (9) a. Those women are a committee.
 b. The committee on diversity is three women and two men.
 c. Those women are theoretical linguists.
 d. *Those women are a theoretical linguist.

(9a–b) are like the Swahili examples (1c) and (4), which I have been using to show that there is no agreement between a predicate nominal and its subject; one is singular and the other plural. Nevertheless, a kind of agreement is enforced in (9c–d), such that (9d) is unacceptable. How do we resolve the paradox? What seems to be going on here is that nouns like *committee* and *woman* individuate things in very different ways. What counts as a single committee also counts as several distinct women. In contrast, nouns like *woman* and *linguist* individuate things in a similar way. If all the women are linguists and all the linguists are women, then there could never be a different number of linguists and women.

5 The issue of semantic agreement can arise for gender features as well as for number. Thus in Swahili (but not in Chichewa) nouns that denote humans but belong to some gender class other than class 1 nevertheless trigger class 1 agreement on verbs and other heads (Ashton 1949). This case also has the earmarks of semantic agreement. (I thank an audience at Georgetown University, especially Michael Diercks, for discussion.)