

PHONOLOGICAL RESOLUTION OF SYNTACTIC FEATURE CONFLICT

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Agreement and government can give rise to syntactic feature conflicts; e.g., a verb may have to agree in gender with a coördinate NP composed of NP's of differing genders. The resolution of such conflicts is to some extent determined by general semantic or syntactic principles ('principled resolution'). In addition, the existence of a governed or agreeing form that is neutral with respect to the features in question always permits a conflict to be resolved. There is idiolectal variation as to when principled resolution occurs, and also as to which neutral forms appear in the lexicon. But there are also cases (examples are provided from English, Xhosa, and German) in which resolution is permitted on the basis of a purely phonological resemblance; i.e., the fact that the conflicting morphosyntactic requirements lead accidentally to similar phonological consequences is sufficient to prevent the conflict from causing ungrammaticality.

Four major claims are made here about the phenomenon of phonological resolution. First, it does not imply that there can be language-particular phonological conditions on syntactic rules; a universal statement is involved. Second, phonological identity cannot compensate for syntactic feature distinctness in general, even in those languages that clearly exemplify phonological resolution; the conflicting items must also differ only in syntactically imposed features. Third, it is not the underlying phonological form of an item that determines whether it can count as phonologically identical to another item in cases of true phonological resolution; these items must be identical at a more superficial level (conjectured to be identical to the 'lexical stratum' of lexical phonology). Fourth, a small sampling of data (from Icelandic and Finnish, as well as the languages already listed) suggests variation with respect to the number of syntactic feature differences that can be surmounted in phonological resolution.*

As has long been known, it is not strictly true that conjuncts must be of the same syntactic category, though most theories of coördination have made this simplifying assumption. In certain instances, conjuncts can have different features; for example, coördinate NP's can be of different genders. Consequently, it is possible for conflicts to arise in agreement and government; a verb might have to agree in gender with a coördinate NP composed of NP's of differing genders.

The resolution of conflicts is to some extent governed by regular semantic or syntactic principles. However, cases exist in which resolution of a conflict is permitted on a purely phonological basis; we provide examples in §2. Such data, while sporadically noted, have hitherto been treated as unexplained anomalies; no theory accounts for them, and not even a general systematization of them has been attempted.

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We maintain that most of the characteristics of phonological resolution are only apparent. It is not the case that the phenomena are indicative of language-particular phonological conditions on syntactic rules; we argue, in §5, that a universal statement is involved. It is also not true that phonological identity can compensate for syntactic feature distinctness in general, even in those languages that clearly exemplify phonological resolution; as we show in §4, the conflicting items too must differ only in syntactically imposed features.

We will also offer evidence that, in cases of true phonological resolution, it is not the underlying phonological form of an item that determines whether it can count as phonologically identical to another item. The data of §3 indicate that these items must be identical at a level which we conjecture to be the same as the 'lexical stratum' of lexical phonology (Kiparsky 1982, as interpreted by Mohanan 1982).

We begin by sketching an account of the syntactic conditions on coördination—the background against which the data of phonological resolution appear so anomalous.

1. SYNTACTIC CONSTRAINTS ON COÖRDINATION. We will use the term 'Chomsky's Generalization' for the familiar (though not quite accurate) statement about coördination that has also been called 'the Law of Coördination of Likes': conjuncts must belong to the same syntactic category (see Chomsky 1957:36).¹ This generalization has a role in accounting for the ungrammaticality of ex. 1, in that the conjuncts *another beer* and *to have a good time* are not members of the same syntactic category:

- (1) **I want another beer and to have a good time.*

There are various exceptions to Chomsky's Generalization. Some coördinations with conjuncts of distinct categories seem fully grammatical—such as the following, with an [NP and AP] coördination:

- (2) *He's a Republican and proud of it.*

This may be compared with 3, where Chomsky's Generalization holds:

- (3) **A Republican and proud of it was elected President.*

A principle covering such examples was first suggested by T. Wasow, and was later developed in the context of a formal theory of coördination by Sag, Gazdar, Wasow & Weisler 1985 (henceforth SGWW). Wasow's Generalization, as we call it, explains the grammaticality of 2 on the basis of the grammaticality of both *He's a Republican* and *He's proud of it*. On this account, ex. 3 is ungrammatical because **Proud of it was elected President* is ungrammatical.

Wasow's Generalization says basically that an element in construction with a coördinate constituent must be syntactically construable with each conjunct. This can be put somewhat more precisely (though again, not fully accurately) as follows:

- (4) If a coördinate structure occurs in some position in a syntactic rep-

¹ There are also certain less well understood semantic generalizations (cf. Pullum 1974, Schachter 1977), about which we will have nothing to say here.

resentation, each of its conjuncts must have syntactic feature values that would allow it individually to occur in that position.

Wasow's Generalization is motivated by facts which concern subcategorization, and the claims it makes are crucially linked to specific claims about the subcategorization of particular lexical items. The examples above fall into place if it is assumed that the verb *be* is subcategorized to occur with an 'XP' (an NP, AP, PP, or VP); and that *want* 'wish to possess something' and *want* 'wish to do something' are distinct lexical items—the first subcategorized for occurrence with NP objects (the reference to possession being a special associated semantic property), and the second for occurrence with infinitival complements. Wasow's Generalization permits the coördination of an NP and an AP as the complement of *be* because each can occur separately as such a complement; but it prohibits the coördination of an NP and an infinitive as the complement of either verb *want* because only one of these categories can occur with each verb *want*.

Although the features for which 4 was originally conceived refer to syntactic categories, the formulation of our generalization extends also to morphosyntactic features—such as person, number, gender, case, and tense—which are involved in agreement and government; and the data of interest to us here lie in those spheres, rather than in the domain of subcategorization.

Wasow's Generalization as formulated in 4 has two important effects. On the one hand, it restricts the constituents that can be conjoined. On the other, it predicts that these restrictions are lifted in the presence of appropriate word forms. It is restrictive because it requires, for example, that if a language has accusative case-marking on objects, then each NP in a set of conjoined objects will have the value ACC as its case feature. It also requires that, if the verbs of a language must agree in definiteness with their direct objects, then a direct object that is composed of coördinated definite NP's will impose the feature of definiteness on its verb.

The restrictive effect of 4 is clearly illustrated in the following English examples (as we judge them):

(5) *Either they or I* {**are* / **am* / **is*} *going to have to go*.

According to Wasow's Generalization, each of the conjuncts *they* and *I* must have morphosyntactic feature values that would allow it to combine with the following VP; *they* has the values 3pl., *I* the values 1sg. The following VP begins with a present-tense form of the verb *be*, for which the language supplies three possibilities: 2nd person or pl. *are*; 1sg. *am*; and 3sg. *is*. Now consider *are*: a coördinate structure containing the conjunct *I* cannot occur as the subject of this verb, because *I* alone cannot. Next consider *am*: a coördinate structure containing the conjunct *they* cannot occur as the subject of this verb, because *they* alone cannot. Finally consider *is*: a coördinate structure containing either the conjunct *I* or the conjunct *they* cannot occur as the subject of this verb, because neither NP alone can so occur. No matter which verb form is selected, the requirements of Wasow's Generalization result in a conflict between the inherent morphosyntactic properties of the verb form and the properties of at

least one of the conjuncts. This conflict can be traced to one between the morphosyntactic properties of the conjuncts themselves, one of which is 3pl., the other 1sg.; Principle 4 has the effect of requiring that the verb be both 3pl. and 1sg.

But in fact 4 does not actually require that the verb in this example simultaneously bear the contradictory feature values 3pl. and 1sg; it merely requires that the verb have values CONSISTENT WITH both 3pl. and 1sg. subjects. The problem is only in part one of conflicting feature requirements; it is also a consequence of the fact that the Eng. verb *be* has no form consistent with both sets of values. But *be* has forms consistent with other contradictory sets of values—e.g., 3pl. and 2sg. in 6—and other English verbs (indeed, all other English verbs) have forms consistent with the contradictory sets 3pl. and 1sg., as in 7:

(6) *Either they or you are going to have to go.*

(7) *Either they or I sing better than he does.*

In general, conflicting feature values on conjuncts can be RESOLVED, as we shall put it, by the existence of combining material that is unspecified with respect to these features. This is the sense (promised above) in which 4 predicts that the restrictions on coördination can be lifted.

In discussing these matters, we will often have occasion to refer to material which acts as a sister to a coördinate constituent *C*—material bearing syntactic and semantic relations to *C*, and thus to all the conjuncts in *C*. With the analogy of arithmetical expressions like $x(y+z)$ in mind, we will refer to this material as a FACTOR in such cases. To illustrate the terminology, the word *old* is a factor in the structure for one reading of *old men and women* (the reading that has *old* modifying both nouns), but not in the other structure (where *old men* is a constituent); only the first structure is 'factorable'.

The claim in 4, then, can be restated somewhat more precisely in the following terms:

- (8) The syntactic feature values on a FACTOR in coördination must not be distinct from the values it would have in combining with any conjunct individually.

Three important observations must be made about the interpretation and applicability of 8, before we commence discussion of phonological effects in the resolution of syntactic feature conflict.

1.1. FACTORABLE COÖRDINATION. The statement in 8 affects only what we shall call 'factorable coördination'—i.e. constructions that can be analysed as coördinate structures in combination with factors. The phenomena in question involve only certain constructions which contain coördinating conjunctions; in the terms of classical TG, we will be discussing Conjunction Reduction and Right Node Raising cases, but not (for instance) Gapping or VP Deletion. The latter have structures in which a full *S* is conjoined with a defective *S*, and so are not factorable. These latter phenomena are subject to a number of specific conditions, but not to anything like 8. Thus the following are grammatical in

English, even though both contain conflicts between overt 3pl. and covert 1sg. verb forms:

(9) *They are going to Chicago, and I to San Francisco.*

(10) *They are behaving themselves, but not I.*

Note also the possibility of omitting under ellipsis a VP which, if present, would not be grammatical if it took the form of what is semantically its antecedent:

(11) *I haven't done it yet, but I will {*done it / do it} soon.*

This sort of thing is not possible in factorable coördination constructions, as we shall see.

1.2. PRINCIPLED RESOLUTION. There are principles which explicitly resolve certain conflicts that would otherwise violate 8. Some of these are familiar principles of universal grammar—e.g. the main generalization about number (that a conjunction, though not a disjunction, of singular NP's acts as a plural NP), and the main generalization about person (that 1 outranks 2 which outranks 3; see Zwicky 1977).² Others are clearly particular to specific languages or dialects.

Principled resolution in agreement has been examined by Corbett 1983a,b; he observes that it can be either semantically based, involving reference to the meaning of the conjuncts and disregard for their morphosyntactic features, or syntactically based, involving reference to the morphosyntactic features of the conjuncts, whether or not these are semantically justified. Resolution of gender conflicts in many Bantu languages is largely semantically based: 'the important thing is whether a noun refers to a human or to a non-human, irrespective of the gender class' (Corbett 1983a:184). Thus a conflict between two gender classes is resolved in favor of the specifically human class 1/2 if either conjunct refers to a human being, whatever its gender class. In contrast, French resolves a conflict between its masculine and feminine genders in favor of the masculine, even when the conjuncts refer to sexless objects or abstractions.

In another type of syntactic resolution, agreement is with a conjunct in a specified position; quite commonly, this is the conjunct nearest the factor. This sort of principled resolution is entirely regular in some languages (Corbett cites the resolution of person and number conflicts in Czech predicate-subject sentences); and it manifests itself as a tendency for some speakers even in languages where it is not a rule (cf. also Morgan 1972, 1984a,b on subject-verb agreement in English).

² SGWW predict, by virtue of a claim that all conjuncts in a coördinate structure are simultaneously heads, that there will be certain exceptions to Wasow's Generalization. In brief, coördinate NP's will be allowed to have conjuncts differing in number and person provided that the category of the coördinate node itself has a feature set in which the relevant subset (the set of specifications for 'HEAD features') is the intersection of the set of instantiated (i.e. not rule-stipulated) HEAD feature specifications on the conjuncts. Through a judicious choice of feature system (cf. Karttunen 1984 on an alternative), SGWW show that the familiar facts about number and person hierarchies can be made to follow from fundamental generalizations about coördination schemata and head feature distribution.

For some of the syntactic feature conflicts we examine (as we shall see in later sections), there are speakers with principled resolution in favor of the conjunct nearest the factor; for these speakers, resolution by principle will mask the effects of other sorts of resolution. Other speakers have different principles for resolution in certain situations—e.g. resolving the conflict in 5 in favor of 3rd person and plural number. For them, 5 is acceptable with *are*, but not with *am* or *is*: *Either they or I are going to have to go*. Again, principled resolution will mask the effects of other sorts of resolution.

1.3. NEUTRALITY VS. AMBIGUITY. The applicability of Principle 8 in particular cases hinges crucially on the existence of factors that are neutral, or unspecified, with respect to the conflicting features in the coördinate constituent. As we shall demonstrate, 8 does not license resolution via an accidental homophony between two forms with distinct feature values, and it should not in general do so. What this means is that the distinction between NEUTRAL forms and AMBIGUOUS forms will become very important to our later discussion, which concerns only ambiguous factors.³

We will say that a coördinate structure with conjuncts X and Y, and factor Z, has a CRUCIALLY AMBIGUOUS factor if the following conditions are satisfied:

(a) Z is (lexically or structurally) ambiguous, representing distinct syntactic structures Z1 and Z2.

(b) The conjunct X can be construed syntactically only with Z1, while the conjunct Y can be construed syntactically only with Z2.

We should expect all coördinate structures with crucially ambiguous factors to be ungrammatical, since there is no way they could be generated. Principle 8 will bar coördinate structures with crucially ambiguous factors, because it will be impossible to assign syntactic feature values to such factors in a non-contradictory way.⁴ Thus 8 requires that Z have the features of Z1 that permit

³ See Zwicky & Sadock 1975 for an extended discussion of the difference between ambiguity and lack of specification.

⁴ Zaenen & Karttunen 1984 formulate a special constraint, their Anti-Pun Ordinance (APO), to rule out crucially ambiguous factors. The APO is stated in semantic, rather than syntactic, terms, and so covers a somewhat wider range of facts than Wasow's Generalization; e.g., it prohibits interpreting one occurrence of a singular pronoun as referring to two different individuals via construction with two different phrases, whether in coördination (as in their example *She is married to John and to Bill*) or not (as in *We persuaded her to leave*).

However, the APO is stated much too broadly, in the form 'A phrase cannot be used in two different senses at the same time'; this marks puns, intentional or not, as UNGRAMMATICAL. That is, Zaenen & Karttunen claim that, if we refer to an exhausted trespassing kangaroo as being 'out of bounds', we are transgressing against a linguistic principle, rather than using the language entertainingly. This is surely not correct. When Shakespeare has Margaret exclaim 'A maid, and stuff'd!', on finding her virgin cousin Beatrice with a head cold [*Much ado about nothing* III,iv], we get both senses immediately and thus perceive the bawdy joke; this is not what happens in the truly deviant examples for which the APO is supposed to be accounting.

Moreover, insofar as the APO contains some truth (indeed, in *We persuaded her to leave*, the person persuaded must be the same one who agreed to leave), we see no reason for stipulating it, since the work it does is already implicit in the operation of rules of syntactic combination and semantic interpretation.

Z1 to occur with X, as well as the features of Z2 that permit Z2 to occur with Y; but since Z1 and Z2 are lexically or structurally distinct, they will have inconsistent features.

Consider in this context the following facts about German.⁵ In conjoined subordinate clauses, the verb of the non-final clause(s) can be omitted:

- (12) a. ... *weil Hans Bier trinkt und Franz Milch trinkt.*
 because Hans beer drinks and Franz milk drinks
 ‘... because Hans drinks beer and Franz drinks milk.’
 b. ... *weil Hans Bier und Franz Milch trinkt.*
 because Hans beer and Franz milk drinks

But, as 8 predicts, no grammatical parallel is found for the (b) case when a person conflict exists between the conjuncts:

- (13) a. ... *weil ich Bier trinke und du Milch trinkst.*
 because I beer drink and you milk drink
 ‘... because I drink beer and you drink milk.’
 b. ... **weil ich Bier und du Milch {trinkst/trinke}.*
 because I beer and you milk drink

However, not all person differences are associated with formal differences in verb inflection. In particular, every verb in the language has a single form (in *-en*) which serves for both 1pl. and 3pl. A form like *kaufen* ‘buy’ is neutral with respect to the difference between the person values 1 and 3; thus Principle 8 predicts that it can resolve an agreement conflict between those values. The (b) construction is now acceptable:⁶

- (14) a. ... *weil wir das Haus kaufen und die Muellers den Garten*
 because we the house buy and the Muellers the garden
 kaufen.
 buy
 ‘... because we buy the house and the Muellers buy the
 garden.’
 b. ... *weil wir das Haus und die Muellers den Garten kaufen.*
 because we the house and the Muellers the garden buy

The difference between persons 1 and 3 is also neutralized elsewhere in German inflectional morphology: thus modal verbs have a single form that is neutral as between 1sg. and 3sg. (for *können* ‘can’, this form is *kann*), and so do all verbs in the past (for *kaufen*, this form is *kaufte*; for *können*, *könnte*). Again, 8 licenses the resolution of conflicts by means of such neutral forms:

⁵ These data are discussed in Eisenberg 1973, which is cited by Rivero & Walker 1976 (§1.3). Both presentations assume that ambiguity, rather than neutrality, is at issue (we shall show that it is not); hence both claim that phonological identity is involved here in conflict resolution (again, we shall show that it is not).

⁶ According to Eisenberg (418), ‘It seems that the difference in person can be “compensated” for by the identity of the phonological shape of the verbs ... Coördinate Deletion can refer under certain conditions to the identity of phonological features instead of to identity of certain “syntactic” ones.’ But this assumes that the formal identity of 1pl. and 3pl. is a phonological accident. On the contrary, it is an exceptionless generalization about German verb forms.

- (15) a. ... *weil Franz das Haus kauft und ich den Garten kaufe.*
 '... because Franz buys the house and I buy the garden.'
 b. ... **weil Franz das Haus und ich den Garten kaufe.*
- (16) a. ... *weil Franz das Haus kaufen könnte und ich den Garten kaufen könnte.*
 '... because Franz could buy the house and I could buy the garden.'
 b. ... *weil Franz das Haus und ich den Garten kaufen könnte.*

Next consider some facts about French, involving case rather than person and number.⁷ The difference between accusative and dative case in French is almost never formally indicated by inflection; all nouns, and nearly all pronouns, are neutral with respect to this distinction. Two clitic pronouns, 3sg. *lui* and 3pl. *leur*, are distinctively dative, contrasting with accusative 3sg.masc. *le*, 3sg.fem. *la*, and 3pl. *les*. The remaining clitic pronouns—1sg. *me*, 2sg. *te*, 1pl. *nous*, 2pl. *vous*—are neutral with respect to the case difference.

Clitic+auxiliary units can generally serve as factors in coördination, but Principle 8 predicts that a case conflict in person 3 is not resolvable:

- (17) *Paul l'a frappé et {l'a / Ø} mis à la porte.*
 Paul him-has struck and him-has put to the door
 'Paul struck him and threw him out.'
- (18) *Paul l'a frappé et {lui a / *Ø} donné des coups de pied.*
 Paul him-has struck and to-him has given some blows
 of foot
 'Paul hit him and kicked him.'

In persons 1 and 2, however, neutral forms are available, and will resolve a case conflict:

- (19) *Paul nous a frappés et {nous a / Ø} donné des coups de pied.*
 Paul us has struck and to-us has given some blows of foot

The first *nous a* sequence here has a 1pl.acc. clitic (note that *frappés* shows agreement with a plural direct object); but the second, which is omissible, has a dative clitic (so *donné* shows no agreement).

In contrast to the neutrality of forms like Ger. *kaufen* and *könnte* and Fr. *nous a*, the fact that the present tense forms of a few verbs in English happen to be the same as their (irregular) past-tense forms constitutes, for most speakers, a genuine ambiguity; and phonological identity does not allow resolution to take place for them. For example:

- (20) a. **At present the project managers, but in the past the executive directors, set the research priorities.*

⁷ These data are from Kayne (1975:100–102), where they are taken to involve phonological conditioning on a rule of Auxiliary Deletion. According to Kayne, 'this syntactic rule must be sensitive to whether there is any difference in phonological representation between the two case forms of the pronoun in question. This means that linguistic theory must countenance syntactic rules having the power to refer to phonological information' (102). The conclusion follows only if forms like *nous* are, incorrectly, treated as ambiguous as between acc. and dat.

- b. **When we were younger almost all of us, but these days hardly any of us, put our trust in the government.*
- c. **Last year the major airlines, and every day numerous computer companies, cut their prices quite dramatically.*

Some English speakers accept all these examples: for them, verb forms like *cut* are presumably neutral, rather than ambiguous, with respect to the present/past distinction. For other speakers, present *cut* and past *cut* must be separately listed in the lexicon, and Principle 8 requires verbs like *cut* to bear both the feature [VFORM: present] and the feature [VFORM: past]⁸ in 20a–b, which is impossible under standard conceptions of features and categories.

We must thus recognize at the outset that idiolectal variation can exist in the treatment of particular phenomena. What is at issue, we believe, is whether individual speakers treat a particular identity of form as SYSTEMATIC—as a consequence of morphological rules, so that the two forms represent the ‘same word’ (i.e. a single form in the lexicon) for them—or whether they treat the identity as ACCIDENTAL, requiring the specification of two distinct, though phonologically identical, forms in the lexicon.⁹ There are some identities of form—e.g. the noun *bee* and the base verb form *be*—that presumably no speaker of English would take as other than fortuitous. There are other identities of form—e.g. the noun *bee* and the nonce base verb form *bee*, as in *They will bee about the garden, buzzing in at every flower*—that presumably no speaker of English could fail to interpret as resulting from a morphological rule, in this case of zero derivation. Still other identities of form might be open to more than one interpretation, especially if the number of instances of the putative rule is small in comparison with the number of counter-instances, or when the identity is not very likely on universal grounds. In a language with nominative, genitive, accusative, dative, and instrumental cases, one scarcely expects to find a rule requiring identity of nominative and instrumental for a declension in which all the other case distinctions are maintained formally; but the syncretism of nominative and accusative would provoke no comment.

But let us make these observations directly relevant to the example at hand, which involves the inflectional morphology of English verbs. We believe, first, that some generalizations about formal identity have such wide applicability that no grammar could be called optimal if it failed to express them. Thus the past *jumped* and the past participle *jumped* are systematically identical—the one word is neutral as between the two sets of feature values—because of the

⁸ To distinguish forms of the verb paradigm, we use the feature VFORM of Gazdar et al. 1985.

⁹ We thus follow Huddleston 1975 in steering a middle course on the question of the relationship between words and word forms. Although we do not necessarily echo Huddleston’s decisions with regard to particular forms, we agree with him that we cannot take formal identity to entail word identity; this would mean that there were no cases of ambiguity and no cases of homophony. We also agree with him that formal distinctness in one paradigm cannot be taken to entail word distinctness in all related paradigms, which would mean treating the modal *can* as three distinct but homophonous words because of the formal distinctness of *am/are/is*—or even worse, assuming that there are distinct words for each combination of values for features relevant in the language, which would mean treating the modal *can* as six distinct but homophonous words.

existence of a rule which stipulates this identity as a default (i.e. as applying unless specifically countermanded):¹⁰

- (21) [VFORM: past participle] has the same form as [VFORM: finite, TENSE: past].

Similarly, present tense *jump* and the base form *jump* are systematically identical—the one word is neutral as between the two sets of feature values—because of the existence of a rule which stipulates this identity as a default:

- (22) [VFORM: finite, TENSE: present] has the same form as [VFORM: base].

Again, the 1sg. *sing* and 3pl. *sing* are systematically identical—the one word is neutral as between the two sets of feature values—because nothing stipulates any distinction. The only relevant rule of inflectional morphology is 23, which affects neither 1sg. or 3pl. verb forms, and there is no reason to posit a lexical exception to it here (as there is for the form *is*):

- (23) [VFORM: finite, TENSE: present, PER: 3, NUM: sg] has /z/ suffixed to it.

In all three cases, the number of instances in which identity is correctly predicted is huge in comparison to the number of counter-instances; indeed, the rules are extended automatically to novel verbs in the language, making the set of 'instances' indeterminately large. And the feature differences that syncretize are ones we might expect on universal grounds.

Now consider the English verbs with identical past and present forms. There are only around two dozen; the list varies some from speaker to speaker, but we give ours here:

- (24) *beat, bet, bid, burst, cast, cost, cut, fit, hit, hurt, let, put, quit, rid, set, shed, shit, shut, slit, spit, split, spread, thrust, wed, wet.*

The syncretism of past and present would be no surprise from a universal point of view. Nevertheless, the number of verbs exhibiting this particular identity is tiny in comparison to the number in which the present and past are distinct; and it is the latter pattern that extends automatically to novel verbs. Consequently we assume that most speakers, when they are confronted with very little evidence in favor of it, simply fail to induce a generalization which makes the past identical to the present for some verbs. Still, one person's anomaly can be another person's small subregularity, and the fact that the verbs in 24 share the phonological property of ending in /t/ or /d/ might encourage some speakers to see a generalization. Such people would then be treating the identity of form as neutrality, while those who induced no pattern would be treating it as ambiguity.

This is a striking contrast with the German and French examples that began this section. In German, the distinction between 1st and 3rd person is syncretized universally in plural verb forms, and in many singular paradigms as well. In French, the distinction between accusative and dative case is syncretized in all but two (clitic) forms. It is hard to imagine acquiring these languages

¹⁰ For a fuller development of the theory of inflectional rules in morphology, and for the notion of 'rules of referral' such as those we give below, see Zwicky 1985.

while remaining insensitive to such generalizations. However, the fact that the verbs in 24 have something in common is hardly salient.

2. PHONOLOGICAL RESOLUTION. We turn now to a set of instances in which the restrictions imposed by Principle 8 are lifted. These cases involve genuinely ambiguous (not neutral) factors, and it is the fortuitous PHONOLOGICAL IDENTITY OF DISTINCT ITEMS that permits resolution. Here we illustrate the phenomenon of phonological resolution with an example from English. Further data, from Xhosa and German, are considered in §3.

In English, the Right Node Raising construction can allow a single sentence-final VP to be syntactically associated with two auxiliary verbs in separate sentential conjuncts:

(25) *Sandy has and you have not BEEN HELPING US WITH THE JOB.*

Here the two verbs are both instances of perfective *have*; hence the VP syntactically associated with them must be in past participial form, as the emphasized one is in this case. If conflicting requirements are set up on the VP—which can be done by selecting auxiliary verbs that take incompatible inflections on the verbs they govern in simple sentences—then the feature conflict produces ungrammaticality, at least for many English speakers:

(26) *I certainly will clarify the situation with respect to the budget, and you already have clarified the situation with respect to the budget.*

(27) **I certainly will, and you already have, {clarify/clarified} the situation with respect to the budget.*

Some speakers accept 27 with *clarified* (and similar examples). They have principled resolution of the syntactic feature conflict, in favor of the conjunct nearest the factor—here, the perfective *have* which governs the past participle verb form.

Now note that the following example is grammatical, even for speakers who reject 27:

(28) *I certainly will, and you already have, set the record straight with respect to the budget.*

This example is grammatical despite its feature conflict between the past participle value and the bare infinitive (or base) value of the feature VFORM. The reason, clearly, is that *set* is one of the limited class of irregular verbs in English that have past participle and base forms with identical shape. There are only some two dozen such verbs. The list varies from speaker to speaker, but we give ours here:¹¹

(29) *bet, bid, burst, cast, come, cost, cut, fit, hit, hurt, let, put, quit, rid, run, set, shed, shut, slit, spit, split, spread, thrust, wed, wet.*

¹¹ The list in 29 overlaps considerably with, but is not the same as, the one in 24. The verbs *come* and *run* have identical past participle and base forms, but distinct past (*came, ran*) and present (*come, run*) forms. The verb *beat* has identical past and present forms, but distinct past participle (*beaten*) and base (*beat*) forms.

For many English speakers, examples analogous to 28 can be constructed with any of these verbs, but only with these; e.g.,

(30) **There before me sat one of the ugliest creatures I ever have or ever will {encountered/encounter} in the whole of my life.*

(31) *There before me sat one of the ugliest creatures I ever have or ever will come upon in the whole of my life.*

(Again, speakers with principled resolution in favor of the nearest conjunct will accept 31 with *encounter*.)

We have been assuming that, for many speakers, the verbs in 29 exhibit an ambiguity between the past participle and base forms; i.e., we claim that these data illustrate fortuitous homophony of forms, not neutrality. For such speakers, there is no rule of inflectional morphology specifying that the default is for infinitives and past participles to have the same form. Such a rule would not be easy to induce, given the shortness of the list in 29, and the fact that this is not the pattern extended to novel forms. Instead, Rule 21 makes the past participial form identical to the past as a default, the past being suffixed (or suppletive) but the base form not; and most non-default past participles undergo a rule which suffixes *-en* or alters their vowels. Finally, a syncretism between the past participle and the base form is probably not to be expected on universal grounds.

We have now observed that in the verbs of 24, which are ambiguous between past and present, phonological resolution is barred; but in the verbs of 29, which are ambiguous between past participle and base, phonological resolution is possible. We analyse this distinction in §4, but first we must present some further instances of phonological resolution.

3. PHONEMIC IDENTITY. In the English case just considered, the accidental identity of phonological shape could be taken as a matter of underlying representation. There are cases, however, in which the operation of morphophonemic rules obliterates phonological distinctions in such a way that underlyingly distinct items become phonologically identical. Interestingly, it turns out that phonological identity so achieved can resolve conflicts in feature values.

These examples have a double value. First, they constitute strong evidence for phonological resolution as a phenomenon distinct from resolution via neutral forms. The identical items could be listed as a single neutral form only at the cost of totally failing to state certain phonological generalizations—those embodied in the morphophonemic rules.

Second, these examples settle the question of what sort of phonological identity resolves conflicts: not identity of the underlying phonological forms of items, but something more superficial. The systematic phonetic level does not seem to be the one involved, however, since some low-level rules seem incapable of sanctioning phonological resolution. (To see this, the reader may attempt to construct examples in which resolution is achieved through reduction to identity of a pair of words like *pat* and *pack* under the rule that allows final voiceless non-labial stops to become glottal stop.) We believe the right

generalization may be that phonological resolution can be sanctioned on the basis of identity of forms at the (derived) 'lexical stratum' of lexical phonology (Mohan, §3.4); but this can hardly be taken as established on the basis of the research presented in this paper, and must remain a conjecture at the present stage.

3.1. XHOSA GENDER. The first of our cases is from the Bantu language Xhosa, spoken in southern Africa; our source is Voeltz 1971.

Xhosa, like other Bantu languages, has a rich system of noun classes. The classes are conventionally grouped in pairs; thus class 5/6 is the union of the class 5 singular nouns with their corresponding plurals, which constitute class 6. Pronouns exhibit the noun class that would be appropriate in a full NP making the same reference (and thus agree in noun class with their antecedents); and predicates (verbs and predicative adjectives) show concord with the noun class of the head noun of their subject NP's. NP's with different noun class features may be conjoined, and thus feature value conflicts can arise on coördinate nodes. As a simple example, note that neither 32b nor 32c can be used as a contextually licensed abbreviation for what 32a says, because both the class 5/6 pronoun *wona* and the class 7/8 pronoun *zona* are incompatible with *igqira nesanusa* 'doctor (5/6) and-diviner (7/8)':

- (32) a. *Ndibona igqira nesanuse.*
 I-see doctor(5/6) and-diviner(7/8)
 b. *Ndibona wona.*
 I-see them[5/6]
 c. *Ndibona zona.*
 I-see them[7/8]

Now consider the operation of verb agreement. In the dialect of Xhosa that Voeltz describes, there is no word-for-word translation of 'The doctor and the diviner go home', because of an irresolvable agreement feature conflict illustrated here:

- (33) a. **Igqira nesanuse a-ya-goduka.*
 doctor(5/6) and-diviner(7/8) 5/6-PRES-go.home
 b. **Igqira nesanuse zi-ya-goduka.*
 doctor and-diviner 7/8-PRES-go.home

Neutral forms will of course resolve such conflicts. Thus a single form *zi-* serves as the plural prefix for secondary adjectival concord with both classes 7/8 and 9/10, just as a single form *zona* serves as the plural pronoun for both classes. Consequently, the following is grammatical:

- (34) *Izandla neendlebe zi-bomvu.*
 hands (7/8) and-ears (9/10) 7/8,9/10-red
 'The hands and the ears are red.'

However, as Voeltz points out, classes 7/8 and 9/10 have distinct concord prefix forms in the plural of the PRIMARY concord system, as shown in Table 1.

CLASS		ADJECTIVAL CONCORD PREFIXES			
		SECONDARY		PRIMARY	
SG	PL	SG	PL	SG	PL
7	8	<i>si</i>		<i>si</i>	<i>zi</i>
			<i>zi</i>		
9	10	<i>i</i>		<i>in</i>	<i>zin</i>

TABLE 1.

Primary concord is restricted to a small, lexically stipulated subset of Xhosa adjectives, e.g. *-hle* 'beautiful' and *-ncinane* 'small'. Conflict between these primary concord prefixes can cause ungrammaticality:

- (35) a. **Izandla neendlebe zi-hle.*
 hands(7/8) and-ears(9/10) 7/8-beautiful
 b. **Izandla neendlebe zin-tle.*
 hands and-ears 9/10-beautiful

But Xhosa has an automatic morphophonemic rule of consonantal degemination; e.g., pl. *izin-* combines with *nama* 'weak or unsteady person' to give *izinama*, not **izinnama*. When the 9/10-class primary plural concord prefix *zin-* is attached to a stem beginning in *n*, the degemination rule applies, reducing *zin + n...* to *zin...*, so that *zi-* and *zin-* would not be distinct at superficial levels of phonology. What is particularly interesting—and somewhat surprising—is that the application of this morphophonemic rule can resolve a conflict between 7/8 and 9/10 primary concord. Thus the following is grammatical:

- (36) *Izandla neendlebe zincinane.*
 hands and-ears 7/8,9/10-small
 'The hands and the ears are small.'

The phonetic form of *zincinane* is ambiguous between *zi-ncinane*, with the 7/8 prefix, and *zin-ncinane*, with the 9/10 prefix, though these are distinct at the underlying (and all pre-degemination) levels of the phonology.

3.2. GERMAN CASE. The phonological resolution in Xhosa illustrated above is paralleled in German, where case government rather than gender agreement is at issue.

Case in German does not normally allow resolution on direct objects. Thus, if we conjoin a verb like *finden* 'find', which governs an accusative object, with one like *helfen* 'help' or *ähneln* 'resemble', which governs a dative object, we usually get an irresolvable conflict in case:

- (37) a. **Sie findet und hilft Männer.*
 she finds and helps men(acc.pl.)
 b. **Sie findet und hilft Männern.*
 men(dat.pl.)

The conflict can, of course, be resolved by forms that are neutral with respect to the acc./dat. distinction—by singular proper nouns, for instance, which can occur without the articles that would otherwise distinguish the two cases:

- (38) *Sie hat Karl gefunden und geholfen.*
 she has Karl found and helped
 'She found and helped Karl.'

At least one other set of NP's permits resolution. These lack articles and modifying adjectives, and have head nouns whose plurals end in *-en*; the set of such nouns includes both those with zero plurals, based on singulars ending in *-en* (like *Flicker* 'patch'), and also those with *-en* plurals (like *Frau* 'woman'):

- (39) *Diese ähneln, aber jene verkleiden, Flicker.*
 these resemble but those disguise patches
 (40) *Er findet und hilft Frauen.*
 he finds and helps women

What licenses these examples is the fact that an automatic morphophonemic rule of degemination makes the *-n* of the dat.pl. inaudible following *-en*; as a result of degemination, dat.pl. *Flicker* and *Frauen* (underlyingly *Flicker-n*, *Frau-en-n*) are phonemically identical to acc.pl. *Flicker*, *Frauen*.

4. FAILURES OF PHONOLOGICAL RESOLUTION. However, it is not true that all syntactic feature conflicts on a factor in coördination can be resolved phonologically. In §1, we noted that English verbs like *put* and *set*, which are ambiguously present or past, will not make such a resolution. In German, the ambiguity between the fem.3sg. personal pronoun *sie* and the (gender-neutral) 3pl. personal pronoun *sie* will not resolve a number conflict, and 41 is quite impossible:

- (41) **Sie singt und singen.*
 sings (3sg.) and sing(3pl.)
 'She sings and they sing (respectively).'

The unacceptability of these phonological resolutions is just what we should expect, given the discussion of Wasow's Generalization in §1.3. These examples happen to involve differences of only one or two syntactic features; but they do have crucially ambiguous factors, just like the more blatant examples below, involving crucial lexical and/or structural ambiguities in their factors. In 42a, *can* represents both a main verb and the stressed modal; in 42b, *driving* represents both a verb and a noun; in 42c, the form *bursting* is a constituent both of an NP complement of the verb *avoid* and of a VP complement of the verb *keep on*; and in 42d, the Ger. *werde* represents both the passive auxiliary *werden*, which combines with a past participle like *gelobt* 'praised', and the future auxiliary *werden*, which combines with an infinitive like *winnen* '(to) win':

- (42) a. **I can tuna for a living and get a new job tomorrow if I want.*
 b. **his driving the car and of the motorcycle* 'the fact that he drives the car and the way that he drives the motorcycle'
 c. **At first he avoided, but later he kept on, bursting into tears.*
 d. **Ich werde gelobt und winnen* 'I am praised and will win.'

What, then, characterizes the (smaller) set of cases from §§2-3, in which

phonological resolution is allowed—Eng. *set* (past participle or infinitive), Xhosa *zincinane* (7/8 or 9/10), and Ger. *Flicken* and *Frauen* (acc. or dat.)? In particular, what distinguishes these from cases like Eng. *set* (present or past) and Ger. *sie* (pl. or fem.3.sg.), which follow Wasow's Generalization in failing to permit phonological resolution?

We believe that the distinguishing feature of the cases which disallow phonological resolution is that, in them, the relevant morphosyntactic features of the potentially resolving material are not syntactically imposed on the factors in coördination, but rather are 'freely chosen'; this is true of tense features on English verbs, and of gender and number features on German (pro)nouns. In contrast, all our examples of phonological resolution have involved factors in which the relevant features (VFORM in English, gender in Xhosa, case in German) are syntactically imposed on them, by rules of agreement (Xhosa) or government (English, German). We suggest that phonological resolution is possible only for factors with an ambiguity in syntactically imposed (and hence redundant) features.

There are, then, two conditions which permit phonological resolution for conflicts in feature values:

- (43) The Resolution Principle (RP): A syntactic feature conflict on a factor in coördination can be resolved if (a) particular values of the features are syntactically imposed on the factor; and (b) a phonological form is available which is, at the relevant [lexical?] stratum of representation, ambiguous between these values.

Though our purpose here is not to criticize existing theoretical frameworks or to develop new ones, we must point out that, if the RP is to refer to syntactic imposition, then an adequate theory of syntax must permit this notion to be defined. In particular, rules of agreement and government must be distinguishable in some fashion from other rules; the agreeing or governed features in such rules must be distinguishable from other features mentioned in the rules; and the marking of certain feature occurrences as imposed must itself be treated as a kind of 'head feature'—so that if, and only if, the case feature on an NP is imposed, then that case feature on the head (pro)noun is also marked as imposed.

We now return to the distinction between ambiguity and neutrality. According to 43, there can be important differences between ambiguity (with which the principle is concerned) and neutrality (about which the principle says nothing at all): neutral—but not ambiguous—forms can resolve conflicts in intrinsic features, those that are not syntactically imposed. We have already observed that ambiguities involving intrinsic-feature differences cannot be excused, as in Eng. *set* (present or past) and Ger. *sie*. Two cases from German will demonstrate that intrinsic-feature conflicts can be resolved by neutral forms.¹²

¹² The data are again from Eisenberg. As noted earlier, although we agree with the main point of Eisenberg's squib—that phonological identity can resolve feature conflicts in coördination—we find ourselves in the odd position of rejecting all his examples; they illustrate resolution via neutral forms or principled resolution, not phonological resolution *sensu stricto*.

In the first, the conflicting feature is the intrinsic feature of gender on nouns; the conjuncts are nom.sg. definite articles (masc. *der*, fem. *die*); and the factor is a nom.sg. noun—masc. *Lehrer* 'teacher', fem. *Lehrerin* 'teacher', common gender *Abgeordnete* 'delegate':

- (44) *der oder die* {**Lehrer* / **Lehrerin* / *Abgeordnete*}

The noun *Abgeordnete* belongs to a class of nouns declined in the same way as the so-called 'weak declension' adjectives. Indeed, all adjectives can be converted to nouns of this sort (so that *der und die Alte* 'the old man and the old woman', employing a noun derived from *alt* 'old', is entirely parallel to 44); and *Abgeordnete* itself is based on an adjectival form, namely the past participle of the verb *abordnen* 'to delegate'. The forms of the weak declension are governed by four principles, one of which expresses the generalization about German nouns according to which the form *Abgeordnete* is neutral with respect to its value for the feature of gender:

- (45) [DECL: weak, NUM: sg, CASE: nom] has *e* suffixed to it.

In our second example, the conflicting feature is the intrinsic feature of number on nouns, the conjuncts are masc. gen. definite articles (sg. *des*, pl. *der*), and the factor is a gen. noun meaning 'teacher(s)'—sg. *Lehrers*, pl. *Lehrer*, neutral *Dozenten* 'lecturers':

- (46) *der Antrag des oder der* {**Lehrers* / **Lehrer* / *Dozenten*}
petition

The masc. noun *Dozent* belongs to a class with massive reduction in inflectional forms; such nouns have their base form in the nom.sg., and add the suffix *-en* for all other case/number combinations. Again, the phonological identity (here, of gen.sg. and gen.pl.) is systematic rather than accidental, and a form like *Dozenten* is neutral with respect to its value for the feature of number.¹³

5. UNIVERSALITY OF THE CONDITION. If it were a rule of English, Xhosa, or German grammar, the RP would be a striking anomaly. It involves a phonological condition on a principle of syntax; if it were parochial, this would constitute a clear violation of the Principle of Phonology-Free Syntax (Zwicky 1969). We can offer two proposals for averting this undesirable consequence. First, the RP may not be a rule that an individual language can possess or lack, but may instead be a principle of universal grammar. Second, the RP may not be a principle of grammar at all, but rather a generalization about language use,¹⁴ in particular a condition on parsing.

5.1. THE STATUS OF THE PRINCIPLE. Maintaining that the RP is a universal principle means that individual languages or dialects cannot differ with respect to whether they obey it; crucially ambiguous factors of the appropriate sort would always resolve feature conflicts, and (in the absence of principled resolution) factors not satisfying the conditions in 43 would always fail to resolve

¹³ To be fully satisfying, claims about which forms are neutral, in German and English, must be embedded in a general account of the inflectional morphology of these languages—which must itself be couched within a plausible theoretical framework. For some steps in these directions, see Zwicky 1985.

such conflicts. As a universal, the RP becomes part of the substance of our theory of how syntax and phonology interconnect, and thus a positive contribution to theory. To include a statement of this sort in the grammar of a particular language would imply that languages could contain arbitrary references to phonological predicates in their syntactic rules—which, as we have argued in various publications (see the summary in Zwicky 1983), is not the case.

Maintaining that the RP is a condition on parsing means saying (to put it intuitively) that, in parsing, we may recognize a factor as playing a double role in coördination, so long as the difference between the items is not crucial in this context—i.e. so long as expression of the feature distinguishing the items is redundant. The involvement of phonological representation at the lexical stratum, rather than some more abstract sort, would follow from Mohanan's claim (§3.3) that this is the crucial type of phonological representation in the use of language, i.e. in its comprehension and production.

Our inclination is to see parsing considerations as the justification for the existence of a principle like the RP in universal grammar, rather than as a substitute for such a principle. That is, we are inclined to see the RP as a grammaticized version of a condition on parsing. Nevertheless, no other assumptions about grammatical theory commit us to the universal grammar position over the parsing condition position, and we view the matter as one requiring both more argument and more evidence. In the remainder of this section, we sketch our reasons for taking the universal grammar position. However, certain facts suggest that the RP must be revised to incorporate a parameter subject to idiolectal variation—a change which somewhat favors an interpretation of the phenomenon as a parsing condition—and we review this evidence in §5.2.

The nature of a theory of parsing and its articulation with a theory of grammar are scarcely settled matters, as is obvious from the papers in King 1983 and Dowty et al. 1985. It is fair to say, however, that the field has been dominated by a view of parsing principles as heuristics or strategies, which interact with one another and with rules of grammar in a complex way. Typically, then, a condition on parsing predicts that certain configurations are relatively easy or relatively difficult to parse, *ceteris paribus*, rather than that they are absolutely unparseable.

If relative ease of parsing is the decisive matter in the phonological resolution of syntactic feature conflict, then we would expect the data to exhibit some gradience, with additional properties of contexts making the double role of ambiguous factors easier or harder to detect. Such contextual gradience is common for constructions presenting difficulties in parsing, such as the celebrated 'garden path' reduced relatives in *The horse raced past the barn fell*. Preliminary story-telling, along the lines of 'We raced several horses on different courses' or 'The horse driven past the paddock stumbled', relieves or eliminates these difficulties, depending on how effective the context is in guiding the hearer's expectations.

But in fact we find a very sharp line between the ambiguous factors that can resolve conflicts and those that cannot. For someone who finds an example

like 47 ungrammatical (= 20a), there is no redemption via preliminary storytelling that predisposes the hearer to entertain both readings for *set*, along the lines of 'Let me tell you how priority-setting is different now from the way it used to be':

- (47) **At present the project managers, but in the past the executive directors, set the research priorities.*

If the RP is a condition on parsing, then, it must be interpreted as an absolute constraint on parsability. But it seems to us that examples like 47 do occur in speech (at least speech of such a style and register as to use Right Node Raising), where they happen when speakers lose track of what has gone before in complex sentences. Our impression is that people will not balk when they hear such a sentence in speech (as opposed to when they are asked to make explicit judgments of grammaticality), though they should be expected to if the RP represented an absolute constraint on parsability. These observations, if accurate, would suggest that the RP constrains parsing only relatively. Admittedly, this is not proof; experimentation is needed to determine just how speakers react when they hear such examples, and what they understand them to mean.

5.2. VARIATION IN PHONOLOGICAL RESOLUTION. Our proposed universal grammar treatment of the RP is put in doubt by a fact reported by Zaenen & Karttunen 1984 (henceforth Z&K), who maintain that truly ambiguous forms can never resolve feature conflicts. The discussion on which we now embark is intended to open up a field of investigation in which only a small sampling of data is currently available. We note in advance that the revision of the RP which we will eventually put forward includes a parameter open to idiolectal variation; thus it would seem more compatible with a parsing condition approach than with a universal grammar treatment, despite our remarks above.

Z&K report that, in Icelandic, the following example is judged grammatical by some and ungrammatical by others:

- (48) *Hann stal og borðaði köku* 'He stole and ate (a) cookie.'

Here *köku* '(a) cookie' is compatible with either accusative (which is what the verb 'eat' governs) or dative (which the verb 'steal' governs).

Z&K propose that the speakers who accept sentences like 48 have a single lexical entry for *köku* and similar forms, while those who reject such examples have two separate homophonous lexical entries. This proposal is consistent with the analysis we have been developing here, which does not stipulate when speakers will (or may or must) decide that particular identities of phonological form are systematic rather than accidental.

However, the proposals advanced by Z&K for cases of apparent phonological resolution—that they all represent instances of morphological neutrality, and that the appropriate descriptions can be achieved by allowing lexical items to have disjunctive feature specifications—do not seem tenable to us, at least in their full generality. The issues extend well beyond this one Icelandic example, in which speakers who accept 48 might be assumed to have a lexical entry for *köku* containing the disjunction [CASE: dat v acc]. In at least two

instances discussed below (involving the German verbal suffix *-t* and the Finnish possessive suffix *-nsa*), we find forms that seem ambiguous with respect to two independent syntactic features, and so resist analysis in terms of unspecified (rather than disjunctive) lexical entries.

Three matters are intertwined here. First, some question exists as to the desirability of disjunctive lexical entries. Second, there is the possibility of some limitation of the scope of the RP, such as the hypothesis (which we entertained at an earlier stage of our research for this paper) that it might apply only to crucial ambiguities involving a single syntactic feature. Third, disputes over the acceptability of particular data are present. We shall consider these issues in turn, without advocating definitive answers. We believe that no such answers can be defended, given the current state of knowledge about the range of relevant facts in the languages of the world; this is an area in which most of the data remain to be collected.

First, consider the matter of disjunction in lexical entries. The chief reason we find this undesirable as a descriptive device is that it induces an exponential increase in the number of different possible dialects of a language. Under the assumption in question, we would expect that, for any given word that gave rise to a possibility for phonological resolution of a feature conflict, speakers might or might not allow the resolution, according to how they had decided to construct the lexical entry for the crucial item—and this variation would be quite independent of the status of any other potential cases of resolution.

There is a possible middle position, assumed implicitly in Zwicky 1985: that disjunctions of values for a particular feature are permitted, so that a lexical entry could contain feature references like those in 49a; but that disjunctions of values across distinct features are not, so that lexical entries with feature references like those in 49b–c would be inadmissible:

- (49) a. [CASE: dat v acc, PER: 2 v 3]
- b. [CASE: dat v PER: 2]
- c. [(PER: 3, NUM: sg) v (PER: 2, NUM: pl)]

This position would permit Z&K's analysis for Icelandic. However, it would not permit parallel analyses for the German and Finnish examples, which we now describe briefly.

The German verbal suffix *-t* sometimes represents 3sg. and sometimes 2pl., so that a form like *kauft* 'buy(s)' can be either. The question for Z&K is then whether *kauft* is neutral with respect to this difference or ambiguous. We cannot say that the lexical entry for *kauft* refers to the values [PER: 2 v 3], with number unspecified—because that would predict, incorrectly, that *-t* also represents the 2sg. (which has *-st*) and the 3pl. (which has *-en*). If this form is to be analysed as neutral, then apparently its lexical entry must contain a disjunction across features, namely that in 49c above.

As Z&K observe, the Finnish possessive suffixes (among them, the 3sg. *-nsa*) trigger a morphophonemic rule deleting a preceding case/number affix, with the result that otherwise distinct nom.sg., gen.sg., and nom.pl. (but not gen.pl.) noun forms can end up phonologically identical. If a form like *kirjansa*

(from *kirja*- 'book'), which represents any of these three case-number combinations, is to be analysed as neutral—and so as having only one lexical entry—then that lexical entry must have a disjunction across features.

Why should we exercise ourselves over this small analytic point? Because different analyses, when combined with various theoretical assumptions, make different predictions about phonological resolution. Z&K assume that there is no phonological resolution, but only resolution licensed by neutral forms. Consequently, if a form like *kauft* or *kirjansa* is neutral, it will license resolution; but if it is ambiguous, it will not. In contrast, our RP permits phonological resolution by ambiguous forms, so long as the feature values in question are syntactically imposed—in addition (of course) to all resolution by neutral forms. An additional distinct position is our earlier proposal, in which the RP was constrained to allow phonological resolution only of one-feature differences, thus barring such resolution via *kauft* or *kirjansa*, though continuing to permit all resolution via neutral forms.

The three proposals make quite distinct predictions about possible idiolects. Z&K's proposal predicts that forms like *kauft* and *kirjansa* can license resolution for some speakers and not for others, depending on whether a speaker posits neutral or ambiguous forms, respectively; indeed, their proposal makes the same prediction about Eng. *set* (infinitive or past participle), Xhosa *zincinane*, Ger. *Flicken*, and Icel. *köku*. Our current proposal predicts that all these forms should allow resolution for all speakers. Our earlier proposal (coupled with our eschewing of disjunction across features) predicts no resolution for any speakers in two-feature cases like *kauft* and *kirjansa*, but resolution for all speakers in one-feature cases like *set*, *zincinane*, *Flicken*, and *köku*.

It follows that an extensive and careful elicitation of data, in a variety of languages including all those already mentioned, is needed. Such elicitation must be sensitive, to avoid judgments of (un)acceptability based on irrelevant criteria and to factor out the effects of principled resolutions. The judgments that have been reported to us thus far give direct support to none of the three proposals, though (we shall argue) they favor a version of the RP in which some allowance is made for idiolectal variation with respect to feature distance.

Consider first the four one-feature cases. For three of these (*set*, *zincinane*, and *Flicken*) we know of only positive judgments; in the case of Eng. *set* (infinitive or past participle), we have queried a great many speakers, all of whom give rapid positive judgments. These are in line with any proposal involving the RP, but not with Z&K's approach. However, Z&K report mixed judgments on *köku*, a situation consistent with their approach, but apparently against our prediction in favor of uniformly positive judgments.

Now consider the pair of two-feature cases. Our German consultants regularly reject the phonological resolution in cases like 50b, but Z&K have privately reported that at least one of their speakers accepts it:

- (50) a. ... weil ihr das Haus kauft und Franz den Garten kauft.
 b. ...weil ihr das Haus und Franz den Garten kauft.
 '... because you (pl.) buy the house and Franz buys the garden.

However, Z&K report only positive judgments (though they ought to find some positive and some negative) on Finnish sentences in which the factor *kirjansa* resolves a conflict between a gen.sg. and a nom.pl. conjunct. Our current proposal predicts grammaticality for both the *kauft* and the *kirjansa* examples, while our earlier proposal predicted ungrammaticality in both cases.

This last observation suggests that our statement of the RP in 43 is simply too rigid. Our earlier discussion suggests that Z&K's proposal, permitting no phonological resolution for any speakers, is also too rigid. An alternative is to assume that one thing varies between speakers here: the degree of syntactic distinctness that can be resolved phonologically. That is, we might assume that a given speaker can tolerate resolution of a single feature value, or two feature values, or even (though neither we nor Z&K have cases to cite) three. Even the variability on *köku* can be accommodated, if we assume that there are some rare speakers who tolerate no resolution at all—i.e. who tolerate degree zero of syntactic distinctness; if such speakers also treat *köku* as ambiguous rather than neutral, then this word cannot resolve feature conflicts for them. We revise the universal principle governing phonological resolution as follows:

- (51) A syntactic feature conflict on a factor in coördination can be resolved if (a) particular values of the features are syntactically imposed on the factor; (b) the values of no more than n features are so imposed; and (c) a phonological form is available which is, at the relevant [lexical?] stratum of representation, ambiguous between these values. The value of n ($= 0, 1, 2, \dots$) varies idiolectally.

The numerically-valued tolerance parameter here looks somewhat arbitrary, but it does at least offer a concrete prediction—namely, that a speaker who can tolerate resolution of a contrast involving n feature values in a given case will (*ceteris paribus*) tolerate them in all cases, rather than vacillating from construction to construction and from lexical item to lexical item (as permitted by Z&K). The prediction may be quite difficult to test, since a range of distinct situations offering the logical possibility of two-feature contrasts would be needed within a given language, and situations of the needed sort are not easy to find in most languages. In principle, however, it is clear what would refute or confirm the hypothesis. The matter would appear to offer good prospects for further research.

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