

NOTES AND DISCUSSION

Rules of allomorphy and phonology-syntax interactions

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1. In a thoughtful discussion of Romance agreement phenomena that appear to run counter to various attractive proposals for universal constraints on linguistic rules, Plank (1984) exposes several cases presenting apparent difficulties for the Principle of Phonology-Free Syntax (PPFS) of Zwicky (1969). The two most telling of these, in French and Spanish, involve what seem to be masculine singular forms occurring where agreement rules of the ordinary sort would call for feminine singulars; in each case, one of the conditioning factors for the peculiar agreement is the phonological shape of the word following the 'agreeing' word (which is a possessive pronoun in French, a definite article in Spanish).

I will be maintaining that such examples do not subvert the PPFS. But they are still of considerable interest. One simple lesson to be learned from them is that analytic proposals must be fleshed out in some detail if they are to be evaluated; in particular, we must be clear about what rules of allomorphy – in the cases at hand, rules of inflectional allomorphy – do and what sorts of conditions they can be subject to, if we are to evaluate an analytic proposal appealing to rules of allomorphy.

A more specific lesson is that 'zero morphemes' (if there are any such) are not the same thing as absent morphemes. Another lesson is that morpho-syntactic features must be distinguished from formatives; a given bundle of features can have several different formatives as its exponent in different contexts, and a given formative can serve as the exponent of several different feature bundles in different contexts.

Finally, examples like Plank's can help us to sharpen our knowledge of the way rules of allomorphy can be conditioned or constrained by phonological, morphological, or syntactic properties of their contexts.

In what follows I will assume a process approach to allomorphy rules, building on such works as Matthews (1967, 1972, 1974), Anderson (1977), and Janda (1983). In this approach a rule of inflectional allomorphy describes how a bundle of morphosyntactic features on a base is realized phonologically, via some operation or operations on that base. The only such operation we need be concerned with here is affixation, in particular suffixation.

For the most part, we also need concern ourselves only with single allomorphy rules, and so do not have to discuss how to achieve disjunctive application within sets of them. However, it is important to note that I am assuming that inflectional allomorphy rules (as a set) are distinct from, and precede, phonological rules of all types; and that syntactic rules distributing morphosyntactic features precede all inflectional allomorphy rules.

A simple example from English will demonstrate the main lines of the approach. The present tense inflection on verbs can be described by an allomorphy rule of roughly the shape in (1), and the plural inflection on nouns by another rule as in (2):

- (1) [CAT: verb, TENSE: pres, NUM: sg, PERS: 3] is realized by suffixation of /z/.
- (2) [CAT: noun, NUM: pl] is realized by suffixation of /z/.

Note that (phonologically) identical formatives can thus appear as exponents of different bundles of morphosyntactic features.

Rules (1) and (2) apply after the syntactic rules ensuring that the TENSE feature of a finite clause is associated with its head verb and that this verb has the same person and number features as the subject noun in its clause. And they apply before the phonological rules predicting /s/ and /ɪz/ as variants of /z/.

2. Zero exponence versus no exponence. Within this framework there is a natural and quite simple account of zero expression for some bundle of morphosyntactic features: there is no allomorphy rule providing an exponent for this bundle.

In the case of English present-tense verbs (other than *be*), there is no need to stipulate that plural and non-third-person forms lack suffixes or other exponents of number and person, no need to posit 'zero morphemes' for these person-number combinations. It suffices that no allomorphy rule provide an exponent for these combinations. The base itself will then serve as the input form for phonological rules.

These remarks are directly relevant to an Armenian example cited by Plank, who characterizes the facts as follows: '...if adjectives are in prenominal position, they fail to agree when polysyllabic, while they may show regular case and number agreement when monosyllabic, depending on number and case of the noun phrase' (332). What is potentially problematic here is the reference to number of syllables; as Plank puts it,

... agreement regularities of this kind would seem to be hard nuts to crack for proponents of phonology-free syntax. In order to avoid having to recognize phonological interferences in the operating of agreement rules proper, the account of the variation between agreeing and non-agreeing

forms would have to be relegated to the domain of rules of allomorphy; but zero allomorphs seem not very convincing under such circumstances (333).

I do not propose to discuss the facts of Armenian here. Indeed, for my purposes it will do to consider whether the PFS is consistent with an agreement system in which monosyllabic adjectives show agreement but polysyllabic ones do not. It is. All that is needed is that a set of allomorphy rules (those providing exponents for the relevant agreement features) be subject to the condition that the base be a monosyllable; the absence of any allomorphy rules specifically applying to polysyllabic bases will mean that such bases show no agreement – just as the absence of any allomorphy rules specifically applying to plural or non-third-person verbs in English means that they show no agreement. Zero allomorphs, or zero morphemes, do not come into the matter. In fact, there is not much to recommend the idea of zeroes in morphology at all, as Janda & Manandise (1985), among others, have argued.

A side issue here is whether rules of allomorphy can be subject to conditions referring to phonological properties of bases, in particular to the number of syllables in the base. Such conditions are not hard to find. In Turkish, for instance, the main generalization about the aorist (or general) tense is that it is formed with the suffix /Ar/ (where /A/ is an archiphoneme covering /a e/) for monosyllabic bases, but /Ir/ (where /I/ is an archiphoneme covering /i ü ı u/) for polysyllabic bases (Lewis, 1967: 115–117).

3. Referral rules. It is an inescapable fact about the inflectional apparatus of many languages that rules of exponence like (1) and (2) cannot capture all the obvious generalizations about that apparatus.

Consider the traditional five declensions of Latin nouns. In every one, the suffixes for the dative plural and ablative plural are identical: /i:s/ in the first and second declensions, /ibus/ in the third and fourth, /e:bus/ in the fifth. Conceivably, /ibus/ and /e:bus/ can be treated as phonological variants, determined by the thematic vowels associated with these declensions, but /i:s/ and /ibus/ must be distinct phonologically. How do we say that these exponents of the dative and ablative plural are identical? If we say only that the dative and ablative cases form a natural morphological class, then the generalization is split, at least in two: dative/ablative for declensions 1 and 2 is /i:s/, while for declensions 3–5 it is /Vbus/ (for some V), and nothing connects these two facts. To make the right generalization, we must say directly that the dative and ablative plural are identical – but this cannot be done by realization rules like (1) and (2) alone.

A simple scheme that permits the right generalization to be made involves (a) assigning phonological realizations to some bundles of morphosyntactic features and then (b) referring the exponents of other bundles to those in the

first. One possible treatment of the Latin syncretism in the dative/ablative plural employs the referral rule in (3) as well as realization rules like those in (4) and (5); I am not defending the details of this analysis here, merely presenting it as one plausible member of a family of analyses using ‘referral rules’.

- (3) [CAT:noun, NUM:pl, CASE:abl] has the same realization as the otherwise identical bundle with the value [CASE:dat] in it.
- (4) [CAT:noun, DECL:1/2, NUM:pl, CASE:dat] is realized by suffixation of /i:s/.
- (5) [CAT:noun, DECL:3/4/5, NUM:pl, CASE:dat] is realized by suffixation of /Vbus/.

On other occasions a rule of referral describes not an invariable identity, as in (3), but rather a default identity, as in the English situation described by (6), which says that the past participle of a verb is identical to the past of that verb, *ceteris paribus*.

- (6) [CAT:verb, VFORM:pastpart] has the same realization as the otherwise identical bundle with the value [VFORM:past] in it.

Note that by virtue of a referral rule like (3) or (6), a given formative is (again) associated with several distinct bundles of features.

I do not know what the universal constraints on referral rules are, but it seems (on the basis of examples not considered here) that this type of rule must be allowed considerable latitude; apparently, more than one feature can be referred, and referral can be across paradigms as well as within paradigms. What is important here, however, is not the development of a general theory of referral rules, but rather the mere recognition that on occasion the task of describing the exponents of morphosyntactic features calls for referring one set of features to another.

Now let us consider the French and Spanish examples that Plank’s discussion primarily depends on.

In French, a possessive form *mon, ton, son* appears instead of the expected feminine form *ma, ta, sa*, respectively, when the next word in its NP begins with a vowel. Since *mon*, etc. are otherwise masculine forms, Plank concludes that the distribution of the morphosyntactic feature of gender must be sensitive to phonological context: ‘depending on phonological properties of elements other than the (dis)agreeing ones, single-possessor possessive pronouns alternatively agree or disagree in gender with their feminine singular head nouns’ (336). Plank does entertain the possibility of rules of allomorphy – *mon* etc. ‘could be considered phonologically conditioned allomorphs’ (336) – but dismisses such an analysis because ‘this interpretation... raises the question of why on earth allomorphs of feminine possessives should be exactly identical to the corresponding masculine possessives’ (336).

We can now see that there is a simple answer to Plank's question. The allomorphs are identical because they are set identical, by a referral rule, which says that the exponent of the feminine singular is the same as that of the masculine, in certain specified contexts. Referral rules are exactly the vehicles for expressing such cross-category generalizations about inflectional shapes.

The Spanish case is much the same. The definite article *el* appears instead of the expected feminine form *la* when the next word in its NP is its head noun and that noun begins with stressed /a/ (Plank, 337–338). I agree with Plank that 'the interpretation that requires the least explanatory effort is that *el* in [such cases] indeed is [the same formative as] the masculine article, rather than only resembling it by sheer chance' (339), but I do not thereby conclude that a syntactic (dis)agreement rule, subject to phonological conditions, is at work here. Instead, a rule of referral sets the exponent of the feminine singular article to that of the masculine, in certain specified contexts.

4. Conditions on rules of exponence. Morphophonemic rules can be subject to a variety of conditions involving phonological, morphological, and syntactic context; Kaisse (1985) surveys much of the literature concerning such conditions. It should then come as no surprise that rules of allomorphy, in particular the two types of rules of exponence (realization and referral rules) that I have mentioned above, are also subject to conditions of these sorts.

Plank stresses that the phonological conditioning in his cases involves words adjacent to the affected words. The suggestion – a good one, I believe – is that the locality requirement on the triggering of morphophonemic rules (Lieber, 1983; Zwicky, 1984b: 389) be extended to rules of exponence.

The French case seems to involve mere adjacency (though the triggering element and the affected element do belong to the same NP), but the Spanish case clearly involves some syntactic factors as well: the trigger must be the head noun in the NP. Assuming a phrase structure for Spanish in which NP branches into Det and Nom (in that order), and Nom into AP and N (in either order), this is to say that the trigger must be an N immediately dominated by Nom. Syntactic conditions on rules of exponence are not new; in Zwicky (1984a: 124–125) I propose that the choice of exponents for the dative definite articles in a dialect of Yiddish depends in part on whether the following N is unmodified, that is, on whether the N is the only daughter of Nom. What is not known is the full range of such conditions.

Plank has called our attention to the need for a general theory of conditions on rules of exponence. But his examples make no dent in the PPFS.

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