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VARIETIES OF MORPHOLOGICAL DEFAULTS AND EXCEPTIONS[§]

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ABSTRACT: Default variant realization in inflectional morphology is both similar to and different from the concept of default or basic allophone in structural phonology and the use of elsewhere ordering in phonology, although all share the analytical insight that the statement of the distribution of the default should be maximally simple or parsimonious. I distinguish three uses of default realization in morphology: normal, exceptional, and orphan. The three uses can be unified if we treat the exceptional case default as a negative exception to a local norm rather than having the default realization directly override the more restricted local realization rule. Orphan defaults (usually borrowings) fall under the general case because they inherently lack any specification or morphological class. All three types are covered by a single very generally stated rule under this sort of analysis. The only downside is the addition of negative exceptions as a new type.
KEYWORDS: default; exception; borrowing; elsewhere.

1. DEFAULTS, BASIC FORMS, AND COMPLEMENTARY DISTRIBUTION

The idea that defaults figure prominently in the systematicity of language has been central in linguistics since Pāṇini. The Pāṇinian use of default ordering to express systematic relations among patterns, subpatterns, and single items by means of a parsimonious system of rules was revived quite explicitly in modern phonology by Anderson (1969) and Koutsoudas, Sanders, and Noll (1974). This general 'elsewhere principle' of default ordering was given a notable name by Kiparsky (1973) but it has a long history in modern linguistics and its importance extends far beyond phonology to semantics and even pragmatics (Jaszczolt 2010). It also plays a central role in both logic and computer science. In this article, I will discuss the use of defaults in morphological description and theory, with special emphasis on two points, one very general, the other quite technical. The general point is the ubiquitous role of

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complementary distribution and defaults in inflectional morphology. The particular point has to do with the theoretical or technical treatment of the resort to defaults in exceptional cases.

We can trace default reasoning in modern linguistics to structuralist phonology, where it was often noted that "a particular allophone of a phoneme may be looked upon as basic compared to one or more others" (Greenberg 1963, 70-71). Greenberg goes on in this passage to claim that "the non-basic allophone occurs in environments which share specific features with the allophone, i.e., are assimilative, while the basic allophone is independent of its environment" (ibid.). If we replace the word *basic* with *elsewhere* and translate the distributional statements of structuralist phonology into rules, we immediately understand that what lay behind Kiparsky's *elsewhere principle* and Koutsoudas, Sanders, and Noll's *proper inclusion principle* was the notion of *default*: X becomes or is realized by Y as W in environment Z. When no environment is specified, then X is realized by the default or elsewhere realization V. In a rule-based framework, this process may iterate and so there may be intermediate hidden layers. In a distributional framework there are no such layers. Default reasoning is also fundamental in constraint-based systems (where a more particular constraint outranks a more general one) but I will confine my remarks to realization, for simplicity's sake. In structuralist distributional systems of phonology, X is a *phoneme* and V and W are *allophones*, one of which is the basic or elsewhere variant of the phoneme. As Sapir (1925) so memorably demonstrated, phonemes are abstractions. Allophones are phonetic, closer to the concrete world, though still abstract compared to their physical manifestations in actual utterance. Phonemes and allophones are expressed in the same vocabulary, which acts together with the lack of hidden layers as a check on analytic abuse by way of excessive abstraction.

The classic insight about allophones, and one of the greatest discoveries of modern linguistics, is that they are by and large in complementary distribution. Each allophone is found in a subset of the set of environments in which the phoneme occurs (Swadesh 1934) and together all the allophones exhaust the distribution of the phoneme. As Greenberg noted, given a complementary distribution of allophones, once we define the environments of all the allophones but one, we are left with an allophone whose distribution we do not need to define narrowly. This is the *basic* or *elsewhere* or *default* allophone.

Structuralist linguists carried this entire system over into morphology, terminology and all. Instead of phonemes we had morphemes and instead of allophones, allomorphs. The relation between them was also thought to be the same: allomorphs were realizations of morphemes and the allomorphs of a morpheme were in complementary distribution. The

main problem with the analogy, which was not understood until much later and has not been emphasized in the morphological literature, is in the realization: while phonemes and allophones are similar sorts of things (as evinced by the fact that they can be expressed in the same vocabulary), morphemes and allomorphs are very different kinds of entities. Indeed, the history of morphology since Matthews (1972) is the tale of a very slow working out of the consequences of this incommensurability, which Matthews was among the first to underscore. For Matthews, and for most morphologists since who have been interested in inflection, morphology mediates between the *grammatical representation* and the *phonological representation*, which do not resemble one another in substance or structure. Morphology is, in Stump's (2001) terms, *realizational*: the phonological representation realizes the grammatical representation through the morphology.

There are at least as many theories of what the grammatical representation looks like as there are theories of syntax. It must contain at least lexemes and morphosyntactic properties like FIRST PERSON, SINGULAR, ACTIVE, and PRESENT, though how these are arranged will be determined by the theory. All of these properties are abstract and the task of the morphology is to map the arrangement of these abstract entities onto a fairly linear phonological representation. Matthews understood that the traditional idea that this realization is achieved by simply mapping morphemes onto allomorphs could not be right, because, as he demonstrated in detail, there is no morphological analogue to the distributional relation between phonemes and allophones. But it was only much later that Anderson (1992) argued explicitly for abolishing the concept of the morpheme altogether. Except for proponents of Distributed Morphology (Halle and Marantz 1993), most everyone has accepted Anderson's extension of Matthews' framework. Even in Distributed Morphology, where the term *morpheme* is retained, what it stands for is actually largely identical to Matthews' *morphosyntactic property* and there is no sense at all in which the realizations can be viewed as allomorphs of morphemes. And yet, although morphological realizations are not allomorphs and hence not analogous to allophones in modern realizational theories, there are still several senses in which complementary and default distribution remain central in modern morphology, as we will see.

If we follow a little further along in the passage from Greenberg cited above, we find another common assumption about basic or default allophones, which is that they are in some sense more fundamental. Greenberg hypothesizes that basic allophones are always both more frequent and phonologically unmarked. In derivational theories like early generative phonology (Chomsky and Halle 1968), the default allophone is truly basic, in that it is the

underlying (morpho)phoneme, from which all others are derived. In distributional theories, the allophones are not derived from each other, so the default is not basic in the sense of 'underlying'. In default-centered phonological theories, there is no connection between the fundamental element and the default variant. The default variant is simply the one that is filled in as a last resort. It is often the most frequent allophone, though not necessarily.

The same two views are prevalent in morphology as well. In some theories of morphology, the default morphological realization or variant or morph is basic or underlying. In most current theories of morphology, the elsewhere realization is a default and not underlying in any sense. To some extent, this divergence tracks the difference between morpheme-based and realizational theories of morphology. Modern morpheme-based theories of morphology are conceptual residues of 'derivational' theories of phonology, in which the default form is also underlying.

The title of Matthews's book is *Inflectional Morphology*. He does not deal with derivational morphology at all and in the forty years since the publication of his book, there has been little interaction between work on derivational morphology (word formation) and inflection. Even those few researchers who have contributed to both endeavors have kept them quite separate. Very little in Aronoff (1994) relies on Aronoff (1976), except that both are lexeme-based and stem-based. The main reason for this lack of contact is that the tasks of the two uses of morphology are quite different. Inflectional morphology is tasked with going from a morphosyntactic representation of an utterance to phonological form, spelling out the forms that lexemes assume in different context. Derivational morphology is lexeme formation and it does not trade much in morphosyntax. In what follows, I will have nothing to say about lexeme formation.

Within realizational theories of morphology, inflection mediates between syntactic objects and phonological forms. The objects to be realized occupy the cells of a paradigm. The cells form an n-dimensional matrix that is characterized in terms of morphosyntactic properties or feature values (the terms are interchangeable) like tense, aspect, person, number, and gender. Morphosyntactic features or properties are simply those syntactic features or entities that are realized morphologically in any given language. Whether these features are universal in any sense is irrelevant to the current discussion. How the features are organized is also irrelevant to the current discussion. The feature structure may also contain purely morphological properties, most commonly declension and conjugation classes. Whether the notion of a paradigm is fundamental is not relevant to the importance of paradigms in morphological realization. A given cell in an inflectional paradigm must (almost) always be

realized, because of Katz's (1978) principle of effability (whatever is thinkable is sayable). Because of effability, inflection is usually thought of as obligatory.[2]

In inflection, some expressions are always in complementary distribution, just as with phonemes and allophones. Just as in phonology, one of these complementarily distributed expressions can be characterized as the elsewhere or default variant. This is my main point, but the two systems are quite different. One way in which morphology differs from phonology is in the characterization of the environments in which the variants occur. Most notably, the environment of one or more of the expressions may be lexical, consisting of one or more specific lexemes. There are always lexical exceptions to both general and more restricted rules. Lexical exceptions figure much less prominently in phonology (though see Orgun 1996).

2. DIFFERENT DEFAULTS

Within a realizational approach to morphology, there is no reason to expect that the default realization will be the most frequent one. A classic example of an infrequent default comes from German, where the *–s* suffix has been analyzed as the default PLURAL marker, though it is far from frequent. Every German noun that is semantically eligible has a plural form but the language has a fairly large variety of plural markers on nouns. Their distribution is determined by a number of factors, with a few rules and a few strong tendencies. Feminine nouns ending in –e exceptionlessly take an *–n* suffix: *Dame* (SG), *Damen* (PL). Certain derivational suffixes are consistent: most feminine derivational suffixes (*-heit*, *-keit*, *-schaft*, *-ung*) take *–n;* nouns ending in *–ling* have a plural in *–linge*; *-er*, *-ler*, and *–ner* are unsuffixed. There are a few strong tendencies: masculine nouns whose last syllable contains a schwa tend to be unsuffixed but there are exceptions, e.g. *bauer(n)*, *muskel(n)*. There are also other tendencies of various lesser strengths. Many nouns must be marked lexically for which plural marker they take (including umlaut, sometimes combined with other markers). Some nouns borrowed from Latin or Greek borrow their plural markers (and in very learned German, their case markers).

The default plural marker is *–s*, as has been demonstrated experimentally (Clahsen et al. 1992). German plural *–s* is associated with no large class and occurs most commonly with borrowed words, nonce forms, acronyms, and proper names: *autos*, *parks*, *kiosks*. The

[2] We will ignore defective paradigms here, though they have interesting properties.

German plural–*s* is a pure default that cleans up residue; it is not more frequent in the language than any other plural marker. It is not normal in any sense of the term; it just picks up the cases that are left over by the other plural realization rules and lexical forms. It doesn't make any sense to think of a pure default of this type as underlying in any sense of that term either. It is a strength of realizational morphology, which is freed from having to assume that any of the morphological realizations of a morphosyntactic property is basic or underlying, that it is able to handle cases like that of German, where the default realization is not frequent.

Another nice case of the use of defaults comes from the complex system of gender and noun inflectional classes in Arapesh, a language of Papua New Guinea. It has been much discussed in the literature (Fortune 1942, Aronoff 1994, Fraser and Corbett 1997, Dobrin 2012). Arapesh has thirteen genders and twenty-two inflectional classes for nouns. Gender and inflectional class in this language are assigned according to semantic or phonological criteria. Gender viii and noun class 8b are default classes that emerge when the normal methods of assigning gender or noun class fail, for whatever reason. A noun that does not fit into the regular assignment system or is a lexical exception is placed into both, as in the following examples:

1) Nouns ending in *b*, *k*, or *s* have no phonological gender assignment and so fall into gender viii and the inflectional class 8b: *mib* 'thigh', *mibehas* 'thighs'
2) Sex-neutral terms for persons show default gender because the two genders for persons are male and female: *arapeñ* 'friend', *arapeʃ* 'friends'; *batouiñ* 'child', *batouiʃ* 'children'
3) A few nouns do not follow their expected inflectional class assignment. They show noun class 8b plurals and gender viii agreement; *lim* 'roller', *limehas* 'rollers'
4) A few nouns are inflected properly for their inflectional class but agree as if they do not belong to the gender that the class corresponds to. Instead they show gender viii agreement: *diliat* 'side post', *diliatogu* 'side posts'; gender viii, inflectional class 11.

Within Network Morphology (Brown and Hippisley 2012), two mechanisms for default realization are distinguished: *normal case* and *exceptional case* default. Normal default realization of a morphosyntactic property set operates when no more specific realization is called for either lexically or by a rule that applies only to a subset of lexical items. In both the normal case and the exceptional case, the same default is called for. What distinguishes the two cases is the manner in which they are invoked: generally or as an exception to a more restricted rule.

Normal-case default is what we usually think of as default: the rule that applies generally. It is a default also because it applies to anomalous items that would otherwise fall between the cracks, a phenomenon we will return to below. For example, with Arapesh cases 1 and 2 above, there are no gender assignment rules for nouns ending in *b, k,* and *s,* and so the normal case takes over for both gender and inflectional class; similarly, the language has no rules for dealing with sex-neutral terms for person because the human genders cover only male or female, and so the default gender and noun class are invoked.

Exceptional-case default is a different sort of animal. It characterizes a type of lexical exception to a narrowly distributed realization. Most exceptions are idiosyncratic and one off. The past tense of the English verb *have* is *had*. This form bears no relation to any other forms in the language. But sometimes a lexeme that belongs to a narrow class will be irregular in having a form that is characteristic of the overall default: the default form constitutes an exception. This sort of exceptional reversion to the general rule is an exceptional case default. Here are some simple examples.

In Modern Israeli Hebrew, there are two genders, masculine and feminine. For this illustration, masculine can be regarded as the default gender, though that is not obviously true (Aronoff 1994). Most feminine nouns have one of several characteristic gender-specific suffixes (ending in *–a* or *–t*), while masculine nouns have none. The masculine plural marker is *–im*: *dod, dodim* 'uncle(s)'. The feminine plural marker is *–ot*: *doda, dodot* 'aunt(s)'. Occasionally, a feminine noun will have a masculine plural: *šana, šanim* 'year(s)', constituting an exceptional case default: the default (masculine) plural marker is used instead of the expected feminine form. Arapesh examples 3 and 4 are exceptional case defaults: *lim* is an exception to the rule that assigns nouns ending in *m* to gender v and noun class 5, and so it falls into the default gender and noun class; *diliat* does belong to the noun class (11) that it is assigned to by rule, but for some unknown reason, it does not belong to the corresponding gender, xi, as we can tell because the elements that agree with it are in the default gender viii.

Normal or exceptional, the default is always the elsewhere variant. Just as with allophones, the default or elsewhere variant picks up the residue of environments left over from the more specific allophones or realizations, the complement set of environments. The default is also often normal in a more exact sense, in that it occurs normally or is the most frequent or *modal* form, but, as we have just seen with German, that is not always true: the default case may not be the most frequent one.

Within Network Morphology, the mechanisms involved in describing these two uses of the default, normal and exceptional, are quite different. The normal default is realized by

means of a very general rule (for example: PLURAL is realized by the suffix *–s*). More specific realization rules (for example: PLURAL is realized by the suffix *n* for feminine nouns ending in *–e*) will override the default realization, simply because they are more specific, just as an allophone that is specified for a more specific environment will override the elsewhere allophone. Exceptional case defaults are different from specific realization rules: they are reversions from the specific to the overall default form: exceptions to the more specific rules that operate in a narrower domain than the default rule.

We may think of exceptional case defaults as violations of local rather than general norms. The noun *diliat* in Arapesh is assigned to gender xi because it ends in *–t* and all nouns ending in *–t* are assigned to this gender normally. This assignment is more specific than the general default assignment because the class of nouns ending in *–t* is more narrowly defined than the general class of all nouns. The noun *diliat* should also undergo the rule that assigns nouns ending in *–t* to noun class 11, but it violates this local norm and reverts to the general default inflectional class 8b. We call it an exceptional case default because it *exceptionally* reverts to the default class: the use of the default form here is an exception to a more specific rule. In Network Morphology, the mechanism for stating this type of exception is to have the general default rule override in this special instance the more restricted rule that normally overrides it. The noun *diliat* will be flagged as exceptionally undergoing the default gender assignment rule, which assigns nouns to gender viii.

There are other violations of local norms besides exceptional uses of the default. Imagine a noun that resembles *diliat* in not being assigned to its proper gender v but is instead exceptionally assigned to gender vi. It will be lexically assigned to gender vi, which will override the normal assignment of gender v for nouns ending in *t,* but it will not be assigned to the default gender viii in the way *diliat* is. Latin verb conjugation provides real examples. According to most analyses, there are four conjugation classes in Latin, distinguished by their theme vowels: *-ā, -ē, -ī,* and a short vowel that varies in quality. They differ in the forms of their stems. The *-ā* class is the default: a majority of existing verbs and almost all newly coined verbs fall into this class. In the *–ā* class (as well as the *–ī* class), the perfect and third stems are derived by adding *–v* and *–t* to the basic thematic stem. We may regard these realizations as the defaults. Let's ignore for simplicity the short vowel class, leaving only the *–ē* class. In the *–ē* class, there are several ways to form the perfect and third stems.[3] The most common way of forming the perfect stem for *–ē* verbs is to substitute *-u* for *–ē*: *terreō,*

[3] I discuss only the perfect stem here but similar remarks apply to the third stem.

terruī ‘frighten’, ‘deter’; *doceō, docuī* ‘teach’, ‘instruct’. But a subset of *-ē* verbs follows the same pattern as the overall default that operates on the *–ā* and *–ī* classes: add *–v* or *–t*: *dēleō, dēlēvī* ‘destroy’, ‘efface’; *cieō, cīvī* ‘arouse’, ‘stir’. This pattern is an example of exceptional case default: the verbs take the default for all verbs instead of the form expected for their conjugation. But some perfect forms follow a pattern that is neither the norm for *–ē* verbs nor the default. One pattern has the suffix *–s* instead of *-u*: *augeō, auxī*, ‘increase’, ‘enlarge’; *ubeō, iussī* ‘order’, ‘bid’. Another shows reduplication: *mordeō, momordī*, ‘bite’, ‘nip’. These are simple exceptions, more like English *have,* not exceptional case defaults, though there is more than one verb in each exceptional subset.

A Network Morphology description of all these patterns would contain, besides the general default for all verbs, a class default local norm for the *–ē* verbs and several overrides for the smaller sets of *–ē* verbs that violate the local norm. Verbs that undergo these override patterns would be lexically specified for them, unless the patterns are more locally predictable. One of the overrides would be the exceptional case default, in which the overall default is an exception to the general rule for *–ē* verbs. This exceptional case default would cover the *–ē* verbs like *dēleō* that pattern with the general default *–ā* class.

A third use of the default that we have implicitly touched on is not usually discussed because it may be thought of as a subtype of the general case default. Here, the default is used as a catch-all for phenomena that fall outside the system. I will call this use the *orphan default.* In Arapesh, agreement provides numerous opportunities for orphan defaults. Consider a demonstrative, which must agree with its controlling heads or antecedent. If for any reason the antecedent of the demonstrative is unknown, then the demonstrative will show the default class 8b form. Similarly for interrogative words, which show class 8b if the controller is unspecified. Even for people, if it is not known whether we are talking about males or females, the question work *amwi* ‘who’ will show the class 8b form: *amwi-ña*. Default agreement emerges in verbs, which must agree with their subjects, whenever the subject is unspecified or there is a gender clash between coordinated nouns in the subject.

Orphan default is common across languages with borrowed words that do not resemble a native morphological pattern in form: the language does not provide any guidance and so the default is used. Many instances of German *–s* are orphan defaults of this type. A simple example of an orphan default *–s* plural form from French was supplied to me by Marine Lasserre: French nouns ending in *–al* normally have a corresponding plural form in *–aux* (*cheval, chevaux*), but the word *festival* was borrowed from Italian at a fairly late date and takes instead the default plural: *festivals.*

Russian borrowings are instructive.[4] Borrowed nouns ending in *-a* (e.g., *spanakopita*) will normally be feminine, because they resemble the largest class of feminine nouns, which ends in *–a* in the nominative. Borrowed nouns ending in *–i* will often be plural (e.g. *suši*), because *–i* is the most common nominative plural ending. Borrowed nouns ending in unpalatalized consonants (e.g. *mitbol*) will be masculine for the same reason. Masculine nouns in Russian may be animate or inanimate, depending on their referent, and borrowed nouns follow this pattern too.[5] The declension pattern of the borrowed noun will follow its gender. Most instructive are the borrowed nouns that do not fit any of the patterns of the language. They are *indeclinable:* they do not vary at all in case forms. A noun like *vudi* 'Woody (Allen)' has only this one form. Similarly for the frequent words *kafe* 'café' and *kenguru* 'kangaroo'. In terms of gender, these formally anomalous nouns are feminine if they denote females and the default masculine otherwise. Based on the evidence from borrowings, we might conclude that the default gender is masculine, following the majority of native nouns, but that the default declensional class is indeclinable, a very small class, which apparently arose only in the nineteenth century, when borrowings, especially from French, became common.

Indeclinable as a default category for nouns may not be restricted to Russian. In Classical Greek, all the letter names, which are borrowed from Phoenician, are indeclinable, as are Egyptian words in Herodotus and Hebrew words in the Septuagint (the first Greek translation of the Old Testament). In both Latin and Greek, the indeclinable nouns are not restricted to borrowed words. Cardinal number words above four in Greek and above two in Latin are indeclinable, which may reflect a basic human cognitive distinction (Dehaene 1999).

3. UNIFYING DEFAULTS

The existence of indeclinable words and other orphan defaults is not simply a curiosity. It may help us to decide between two quite different formal approaches to the relation between normal and exceptional instances of defaults in inflection. As Brown and Hippisley (2012) emphasize, both normal and exceptional cases default to the same realization, but they do so by two quite different mechanisms. Brown and Hippisley do not consider instances of orphan default of the sort that we have described for Arapesh and Russian. Here, the default realizations are used because the items in question lie outside the

[4] Thanks to Andrei Antonenko for providing and discussing the Russian examples.
[5] Animate and inanimate masculine nouns differ only in the accusative case.

system. The language has no pattern to apply and so the default pattern is used. In Optimality Theory, this might be called 'the emergence of the unmarked', though we should substitute the term *elsewhere* for *unmarked*, since we can find no universal sense in which one morphological realization is less marked than another within the system of the language. The important point is that the orphans are incorporated into the system of the language through the normal default mechanism.

We can now get to the main question: how to unify all three uses of the default: normal, exceptional, and the new orphan. In all frameworks, the normal or elsewhere variant, in either phonology or morphology, is less specific than other variants. The idea that Anderson, Kiparsky, Koutsoudas, Sanders, and Noll all shared was that the more specific rule that applied in the narrower environment would be ordered before the less specific rule that applied in the wider environment by what was variously called the Elsewhere Principle, Pāṇini's Principle, or the Proper Inclusion Principle. Realizational morphology achieves the same effect by stating the general variant first through an unrestricted rule and having it *overridden* by the realizations that have more restricted distributions. It is easy to see how both the normal and orphan uses of the default receive a unified treatment in a realizational system with overrides. Both involve the absence of information and they will fall together through the normal or elsewhere realization rule, so long as the environment for this realization is defined as parsimoniously as possible, thus earning the name *basic*. The German *–s* PLURAL marker will be realized by an unrestricted rule that simply says "realize PLURAL as *–s*." The other more specific plural realizations, such as *–n* for feminine nouns ending in *–e*, will be introduced only in restricted environments. They will be less parsimonious by their very nature.

Brown and Hippisley do not treat exceptional-case defaults in this parsimonious fashion. Instead they apply the normal realization rule to this pattern as a double exception, an exception to an exception: the lexical item is marked so that the elsewhere realization overrides the specific case. Thus, the Arapesh word *lim*, which should by right belong to gender v and inflectional class 5, because it ends in *m*, will be marked as exceptionally belonging to gender viii; the rule that normally assigns gender viii and inflectional class 8a as a default will exceptionally apply, overriding the more restricted rule for gender v. This treatment makes the exceptional case defaults quite different from both the normal case and the orphan case. It also complicates the otherwise simple statement of the distribution of the elsewhere variant, which must now be specified to appear not only in a wider elsewhere environment but also in a lexically specified environment. It also hides the fact that, in

Arapesh at least, the only exceptional items are exceptional-case defaults, which fall within the system. There are no truly idiosyncratic exceptional forms.

There is another way to handle the exceptional-case defaults that allows for a unified treatment of all uses of the default and, more importantly perhaps, allows us to preserve the parsimonious statement of the default realization rule. This is to encode exceptional-case defaults as *negative exceptions* rather than as overrides: they are flagged lexically to *not undergo* the realization that normally applies to items of their specific type. The default realization then fills in automatically because these lexical items have been exceptionally deprived of their specific realization. Exceptional-case defaults are still different from orphan defaults, because they have to be marked as exceptions, while orphan defaults bear no such scars. Arapesh *lim* will be flagged as *not* being assigned to gender v and inflectional class 5 as expected. It will consequently be accommodated by the rule that sweeps up both elsewhere cases and orphans into gender viii and class 8b. But it will be different from both normal and orphan instances of default, because it carries a flag that brands it as an exception.

In this analysis, there may be two types of exceptional items in any system: negative and positive. In Arapesh, where all exceptions are of the default type, we will have only negative exceptions, lexical items specified to not undergo the realization rule that applies to their class. In English, there will also be positive exceptions, lexemes like *man* or *ox*, whose plural form must be spelled out lexically. In English, positive exceptions are purely individual and do not depend on there being rule-governed inflectional classes: there are no inflectional classes of PLURAL nouns in English, only regular nouns that show a PLURAL affix *–s* and those that are lexically specified for their form. The same may or may not be true of English verbs depending on one's analysis. If some English irregular verbs can be grouped into subclasses, then we might want to indicate membership in each subclass by means of a specific flag and apply a restricted rule to each distinctly flagged subclass (Bloch 1947). In Latin, there will be both negative exceptions such as *–ē* class verbs that follow the default *–v* suffix rule for perfect stems, because they are marked as exceptional to the local rule for their class, and positive exceptions. But the positive exceptions will certainly be of two types: those like English plurals, whose forms are lexically specified in full; and those that follow minor sub-patterns, like the ones for *–ē* class verbs discussed above.[6]

[6] In some sense, all subclasses are positive exceptions. Whenever a language has genders or inflectional classes of any sort, all classes except for the default class may be construed as positive exceptions. What makes Latin verbs stand out is that there are subclasses of subclasses.

Esthetically, invoking negative as well as positive exceptions allows for a uniform statement of the distribution of the default variant and preserves the notion of default or elsewhere that we morphologists have inherited from phonology. It also allows for a better understanding of orphan lexical items within an inflectional system. The cost is a new type of exception (negative) but the type fits into a larger taxonomy of both positive and negative exceptions along with the default. If negative exceptions do exist, as I have claimed, then they may have further interesting properties that distinguish them from the better-known positive exceptions. With luck, if they exist, they will also be distinguishable experimentally from the more usual positive exceptions. For one, they should contain less information than positive exceptions, since they simply bear a flag indicating that they do not undergo the usual class rule rather than a lexically specified form or a flag that triggers an even more specific subclass rule.

4. CONCLUSION

I have shown that the notion of a default variant realization in inflectional morphology is both similar to and different from the notion of a default allophone in structuralist phonology and the use of elsewhere ordering in phonology. What all share is the analytical insight that the statement of the distribution of the default should be maximally simple or parsimonious. This goal of simplicity or parsimoniousness, I suggest, leads us to prefer one technical treatment of exceptional uses of the default form over another. It also leads us to a better understanding of the varieties of morphological defaults and exceptions.

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