

ON INTRODUCTORY-LEVEL EXAMPLES OF LINGUISTIC EXPLANATIONS

Edith A. Moravcsik

University of Wisconsin-Milwaukee

One of the ways in which we may be able to increase the degree of enthusiasm with which students emerge from their first encounter with linguistics is by showing them that linguistic knowledge can actually make one come to understand why some things are the way they are. For this purpose, it would be useful to have a set of simple examples of linguistic explanations available for use in introductory courses. The purpose of this note is to call attention to one such example and to ask if any of you know of other similar or better ones that are particularly suitable for intro-level discussions.

The example that I would like to briefly present here seems to be a good one for two reasons. First, it involves facts - plural and past formation in English - which are almost certain to be discussed in introductory courses. Second, it shows different levels of explanations:

The facts concerning the phonetic shapes of the two obstruent suffixes in English are well known. Although their syntactic distribution is more extensive, they will be referred to here as the past morpheme and the plural morpheme. In both cases, the facts can be accounted for in terms of two processes: the obstruent is subject to assimilation in voicing to the preceding, stem-final segment; and, just in case this stem-final segment is an alveolar stop (for the past morpheme) or a sibilant (for the plural), the stem must first be augmented by a schwa.

On the plane of synchronic descriptive explanations, these facts fall into three classes. Part of the facts follows from a (language-specific) morphophonemic generalization; another part is governed by a language-specific phonetic generalization; and, finally, a small subset of these facts are also relatable to a universal phonotactic constraint.

The first subclass of the facts - those that are explained on the lowest possible level - includes voice assimilation after voiced sounds. That *d* and *z*, rather than *t* and *s*, should occur after voiced obstruents, liquids, nasals, glides, and vowels in past and plural forms does not follow from any phonetic regularity of English. Word-final clusters that consist of such sounds followed by *t*, *s*, and other voiceless obstruents do occur; witness *hilt*, *alert*, *dreamt*, *hint*, *fit*, *plate*, or *else*, *terse*, *once*, *place*, *kiss*; as well as *width* (which may be pronounced either with a final voiced or with a final voiceless fricative). The

lack of tolerance for voiceless obstruents following voiced sounds at the ends of words is thus restricted to cases where these obstruents are suffixes. Therefore, the highest-level generalization from which the particular facts can be deduced is only a morphophonemic one: "Suffixal obstruents are voiced following a voiced sound."¹

Things make more sense when we consider voice-assimilation following voiceless sounds. From the point of view of voicing, English has three types of word-final obstruent clusters: a/ voiceless-voiceless (e.g. *act*); b/ voiced-voiced (e.g. *adze*); c/ voiced-voiceless (e.g. *width*). The fourth logical possibility - voiceless-voiced - does not exist. These facts are consistent with the following phonotactic constraint: "If the first of two word-final obstruents is voiceless, so is the second."² The voicelessness of the past and plural markers after voiceless sounds is directly dictated by this constraint.

Forms operated on by the schwa-insertion process also belong to this second class of facts in the sense that the insertion of the schwa, too, is motivated by a phonotactic constraint of the language. Thus, if the past suffix were simply added to bare *t-* or *d-*final stems, and if the plural suffix were added to bare *s-* and *z-*final stems, double consonants would arise which are phonotactically excluded in English (although they are occurrent in other languages; cf. Hungarian *ott* 'there', *oss* 'hand out!', or *hozz* 'bring!' (in contrast with *hoz* 'he/she brings!')). Similarly, the direct suffixation of the *s/z* following sibilants other than *s* and *z* would result in clusters (*šs*, *žz*, *čs*, *žz*) which are never pronounced in English. The relevant phonotactic constraints are thus the following two: "English has no non-medial sequences of identical consonants." and "English has no non-medial sibilant sequences." Schwa-insertion is one logically possible way of avoiding the violation of these constraints.

There is one portion of the second constraint, concerning sibilants, which itself follows from a further phonotactic generalization. This further generalization is universal in validity. According to Greenberg, no language has a final cluster that consists of a "hushing sibilant" followed by a "hissing sibilant"; i.e., *šs*, *žz*, (and, I assume *čs*, *žz*) do not occur in any language in final position (Greenberg 1978:257). If this is true,³ plural forms in English that involve inserted schwa fall into two classes. The schwa after stems ending in *s* and *z* is called for by a language-specific constraint as one possible remedy for an impermissible sequence. The schwa after stems ending in *š*, *ž*, *č*, and *ž*, however, functions as one possible solution to conflict with a universal phonotactic constraint.

In sum: facts about the phonetic shape of the plural and past morpheme in English fall into three groups from the point of view of their explainability. Voice-assimilation after voiced sounds is accounted for by a low-level, non-universal, morphophonemic statement. Voice-assimilation after voiceless sounds and schwa-insertion after identical sounds both serve to remedy conflict with a non-universal phonotactic constraint. Schwa-insertion after *š, ž, č, and ĵ*, eliminates clusters that are phonotactically excluded not only in some but in all languages.

FACTS:	EXPLANATORY PRINCIPLE:
voice-assimilation after voiced sounds	← non-universal morphophonemic generalization
voice-assimilation after voiceless sounds	← non-universal phonotactic generalizations
schwa-insertion after identical sounds	
schwa-insertion after <i>š, ž, č, ĵ</i>	← universal phonotactic generalizations

As a result, the three classes of facts should resist historical change to varying degrees. If English were to eliminate voice assimilation after voiced sounds tomorrow, the nature of the language as a whole would not change much. Such a change is thus quite conceivable. However, the elimination of voice assimilation after voiceless sounds and the elimination of the schwa between identical sounds are unlikely unless other corrective devices were immediately adopted to prevent conflict with general pronunciation habits. Finally, if English started dropping the schwa after alveopalatal sibilants such as in *lashes* and *garages*, it would not only commit violence against its own specific nature but against its very languagehood.

NOTES

¹ Because of its lack of productivity, I assume that the *th* of *width* is not a suffix.

² The constraint is actually more general. In initial clusters, either both obstruents are voiceless or - in the single case of the word *svelte* (Bloomfield 1933:132ff) - the first is voiceless and the second is voiced. Accordingly, the constraint can be formulated as follows: "In word-marginal obstruent clusters, if the inner obstruent is voiceless, so is the outer one."

³ One possible - but at present unclear - counterexample is Hungarian *olvassz* 'you_s read' (Robert Hetzron, personal communication). I am uncertain whether it is pronounced *olvašs* or *olvass*.

REFERENCES

- Bloomfield, Leonard. 1933. *Language*. New York: Holt, Rinehart and Winston.
- Greenberg, Joseph H. 1978. Some generalizations concerning initial and final consonant clusters. In J. Greenberg (ed.) *Universals of Human Language*, volume 1, 243-79. Stanford, California: Stanford University Press.