Allomorphs

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It is now time to sharpen and extend our understanding of the morpheme. So far we have been treating the morpheme as if it were invariable in phonemic form, that is, in the way it is pronounced. There are occasional variations in phonemic form, for instance, the morpheme {*press*} of *pressure* ends in an /*š*/, whereas the same morpheme standing alone as the word *press* ends in /*s*/. Likewise, the first morpheme in *depth* is pronounced /*dep*/, but the same morpheme occurring as the word *deep* has the phonemic form of /dip/. So we see that a morpheme may have more than one phonemic form.

Next we'll go back to the past-tense ending, the morpheme {-D pt}. This morpheme has three phonemic forms, the choice depending on the preceding sound. After an alveolar stop, /t/ or /d/, the sound is /əd/, as in parted /partəd/ and faded /fedəd/. After a voiceless consonant other than /t/ it is /t/, as in passed /pæst/ and laughed /læft/. After a voiced sound other than /d/ it is /d/, as in seemed /simd/ and begged /begd/. Furthermore, these three phonemic forms of {-D pt} are not interchangeable. The occurrence of one or another of them depends on its phonological environment, in this case, the preceding sound. This pattern of occurrence of related forms, according to which each form occupies its own territory and does not trespass on the domain of another, is called complementary distribution, abbreviated CD. When the related forms of a set, like the three forms of (-D pt), have the same meaning and are in complementary distribution, they are called allomorphs, or positional variants, and belong to the same morpheme. So we say that the morpheme {-D pt} has three allomorphs: /-əd/, /-t/, and /-d/. This is expressed in the formula:

{-D pt} = /-əd/ ~ /-t/ ~ /-d/

Braces are used for morphemes and slants for allomorphs; a tilde (~) means "in alternation with." It must be emphasized that many morphemes in English have only one phonemic form, that is, one allomorph-for example, the morphemes (boy) and (-hood) each have one allomorph/boy/ and /-hud/—as in boyhood.

Now we are in a position to refine our understanding of free and bound morphemes. It is really not the morpheme but the allomorph that is free or bound. Consider, for example, the morpheme (louse). This has two allomorphs: the free allomorph /laws/ as a singular noun and the bound allomorph /lawz-/ in the adjective lousy.

Conditioning: Phonological and Morphological

In examining the past-tense morpheme {-D pt}, we saw that the three allomorphs /-əd~-d~-t/ were in CD and that this distribution was determined by the phonological environment, in this case by the nature of the preceding sound. The same was true of the plural morpheme {-s pl}, where the addition of /-əz/, /-z/, or /-s/ was also determined by the kind of sound immediately preceding the suffix. In these and similar cases, when the phonological environment determines which allomorph is used, we say that the selection of allomorphs is phonologically conditioned. But the plural morpheme {-s pl} has further allomorphs, as shown by the /-ən/ of ox-oxen and by the (zero) suffix of sheep-sheep. These two, /-ən/ and /ø/, are in CD with all the others in that they stay in their own territory, associate only with specific words, and do not overlap in positions where /-əz/, /-z/, and /-s/ are found. But the positions in which they occur—that is, the words they attach themselves to have nothing to do with their phonological environment. Instead the use of /-ən/ as the plural of ox is determined by the specific morpheme ox; in other words, ox simply takes /-ən/ and that's that. Likewise, the occurrence of the plural o allomorph in a few words—wine, deer, sheep, trout, pike, quail, grouse, and others...is determined by the fact that these special morphemes require a ø plural. In such cases, when we can describe the environment that requires a certain allomorph only by identifying specific morphemes, we say that the selection of allomorphs is morphologically conditioned. To describe by formula these five allomorphs of {-s pl} we write

{-s pl} ≃ /-əz/ ~ /-z/ ~ /-s/ ∞ /-ən/ ∞ /ø/

The (~) refers to a phonologically conditioned alternation and the oo to a morphologically conditioned alternation.

Replacive Allomorphs

Most of the allomorphs we have been dealing with have been additive; that is, we have been forming words by adding prefixes and suffixes to bases. Now we must look at an allomorph of a different kind, the replacive, which can be illustrated by going back to the past-tense {-D pt}. We noted that this morpheme has three allomorphs, /-əd ~ -t ~ -d/. But if this is all, how do we account for forms like sang? It would appear to contain an allomorph of {-D pt} since it is a parallel formation with regular past-tense forms:

Yesterday we parted /partəd/

Yesterday we laughed /læft/

Yesterday we played /pled/

Yesterday we sang /sæŋ/

What happens is that there is a replacement here instead of an additive.

The /ɪ/ of sing is replaced by the /æ/ of sang to signal the past tense. This is symbolized as follows:

$$/\text{sæŋ}/ = /\text{sɪŋ}/ + /\text{ɪ} > \text{æ}/^7$$

Here the /ɪ >æ/ is another allomorph of {-D pt}, and you can readily see how it is in CD with the others. Sometimes replacive allomorphs are called "infixes," because they are positioned within a word, as opposed to prefixes and suffixes, as in *sang* and *rode*.

Homophones

You are acquainted with many pairs, trios, and even foursomes of words in English which sound alike but differ in meaning: heir, air; pare, pair, pear. Such words are called homophones. In morphology it must be remembered that words like these are different morphemes.

Examples: Did you like the meet? /mit/ (track meet)

Did you like the meat? /mit/ (roast beef)

The same is true of bound forms. Compare:

Verbal infectional suffix: It feels /-z/ good

Noun plural inflectional suffix: Those frogs /-z/

Noun possessive inflectional suffix: John's /-z/ book

These three homophonous /-z/s are three different morphemes.