

File 5.5

Language Files:
Materials for an Introduction
to Language & Linguistics

How to Solve Morphology Problems

When a linguist comes in contact with a new language, one of his or her major tasks is to discover the meaningful units out of which the language is composed. Just as with discovering phonemes and allophones, it is important that the linguist have procedures for discovering these minimal units, since it is impossible to isolate morphemes by intuition.

For example, the Classical Greek word [grap^hɔ:] means 'I write', but if the word is considered in isolation the linguist has no way of knowing what sound or sequence of sounds corresponds to 'I' and which sequence corresponds to 'write'. It is only by comparing [grap^hɔ:] with another form, for instance, [grap^he:] 'he writes', that one is able to determine what the morphemes of these Greek words are.

Comparison, then, is the best way to begin morphological analysis. But of course you will not want to compare just any forms. Comparing a Greek word like [p^he:mi] 'to speak' with [grap^hɔ:] will not provide us with much information, since the forms are so dissimilar and seem to have no single morpheme in common. What must be compared are partially similar forms in which it is possible to recognize recurring units. In this way we can identify the morphemes of which words are composed.

Now let us consider our Classical Greek example once more. If we compare [grap^hɔ:] with [grap^he:] 'he writes', we note similarities between the forms. The sequence [grap^h-] appears in both forms [grap^he:] and [grap^hɔ:], and if we compare these to the English correspondences we find the meaning 'write' appears in both 'he writes' and 'I write'. From this, we are justified in concluding that [grap^h-] means 'write', since [grap^h-] and *write* are constants in both the English and Greek. Furthermore, since the final vowels in both Greek forms contrast—and since this contrast is accompanied by a difference in meaning in our English correspondence—we can safely assume the difference between vowels in Classical Greek corresponds to differences in meaning in our English translation. Therefore we assign the meaning 'I' to [-ɔ:] and 'he' to [-e:]. In sum, then, the initial step in doing morphological analysis is to *compare and contrast* partially similar forms.

To give yourself practice, identify and translate the morphemes in the Hungarian data below. ([j] is a voiced palatal stop.)

[hɔz]	house
[ejhɔz]	a house
[hɔzɔ]	his/her house
[bor]	wine
[ejbor]	a wine
[borɔ]	his/her wine

But, sometimes just comparing and contrasting partially similar forms is not enough to allow a complete morphological analysis. Consider the following examples.

1. Compare the following English words:

work – worker

fast – faster,

We notice the morpheme spelled *-er* and pronounced [ɹ] for both [fæstr̩] and [wɜrkɹ]. However, if we think about it for a minute, it is apparent that *-er* has two different meanings even though phonetically it looks like the same morpheme. The *-er* in *worker* is the same *-er* that shows up in words like *painter*, *killer*, *lover*, and *actor*. In each of these cases, *-er* attaches to verbs to form a noun and means something like ‘one who paints’, ‘one who kills’, ‘one who loves’, etc. The suffix *-er* in these cases is known as the *agentive* morpheme.

The *-er* in *faster*, on the other hand, is the same *-er* that shows up in words like *wider*, *longer*, *colder*, *prettier*, etc. In each of these cases, *-er* attaches to adjectives to form a new adjective, with the extra meaning ‘more’. The suffix *-er* in these cases is known as the *comparative* morpheme.

We will want to argue, then, that [ɹ] represents two separate morphemes—[ɹ] as an agent marker, and [ɹ] as a comparative marker—even though they are the same phonetically, i.e., *homophonous* morphemes. The [ɹ] that is added to verbs to yield nouns and the [ɹ] that is added to adjectives to yield new adjectives clearly have *distinct* meanings.

2. Compare the following set of words in (a), (b), and (c). We notice that each word has a prefix that means ‘not’.

- | | |
|----------------------|-------------|
| a. <i>imbalance</i> | [ɪmbæləns] |
| b. <i>inability</i> | [ɪnəbɪləri] |
| c. <i>incomplete</i> | [ɪnkəmplit] |

The problem here is the inverse of the problem in example (1). Whereas in example (1) we had the same phonetic forms representing two different meanings, in example (2) we have three different phonetic forms with the *same* meaning. Since the phonetic forms of the morpheme meaning ‘not’ can be predicted on the basis of phonetic environment, i.e.,

[ɪm] before labials—[p], [b], [m]

[ɪŋ] before velars—[k], [g]

[ɪn] elsewhere (before vowels and other consonants),

we conclude that even though the forms differ phonetically, they belong to the *same* morpheme since they have the same meaning. Recall that we call [ɪm], [ɪŋ], and [ɪn] **allomorphs** of the same morpheme. Another example of allomorphy in English is the plural morpheme, which is realized as either [s], [z] or [əz], depending on the form of the root to which it attaches. (See File 5.1.)

Procedure for Doing Morphological Analysis

Goal:

Given a set of data in phonetic representation, perform a morphological analysis of the forms in the data, identifying each morpheme, its meaning and type. You should also be able to tell where a morpheme appears with respect to other morphemes in the word. Is it a prefix, suffix, or base? Does it attach directly to the root or does it attach after or before another morpheme?

Procedure (Keys to Analysis):

1. Isolate and compare forms that are partially similar, as we did for Classical Greek [grap^h-e:] and [grap^h-ɔ:].
2. If a single phonetic form has *two distinctive meanings*, it must be analyzed as representing two different morphemes (as in example 1).
3. If the *same meaning* is associated with different phonetic forms, these different forms all represent the same morpheme (i.e., they are allomorphs of the morpheme), and the choice of form in each case should be predictable on the basis of the phonetic environment (as in example 2).

Some Cautionary Notes

People frequently assume that languages are pretty much the same in terms of what each language marks morphologically. For example, English speakers often assume that all languages mark the plurals of nouns with an ending, or that the subject and the verb agree in person and number in other languages. This is simply not the case. For example, Tagalog does not usually mark the plural of nouns (in most cases, the number is clear from the context). When it is necessary to be specific, a separate word, *mga*, is used to indicate plural.

[aŋ bataʔ]	<i>the child</i>
[aŋ mga bataʔ]	<i>the children</i>

When a number is specifically mentioned, no plural marker appears in Tagalog, although the plural marker is obligatory in English (**three dog* is ungrammatical).

[dalawa]	<i>two</i>	[dalaway bataʔ]	<i>two children</i>
[lima]	<i>five</i>	[limay bataʔ]	<i>five children</i>

([-ŋ]) is a “linker” that links numerals and adjectives to the nouns they modify; English does not use this type of device.)

English marks subject-verb agreement (e.g., *I eat* vs. *he eats*), but Tagalog does not. In Tagalog, the same form of the verb is used with all subjects.

[kumakain ako]	<i>eat I</i>	=	<i>I eat</i>
[kumakain siy]	<i>eat he</i>	=	<i>he eats</i>

Other languages also make distinctions that we don't. While English distinguishes only singular and plural verbs, some languages have a dual verb form for when just two persons are involved. Consider Sanskrit *juhomi* 'I sacrifice', *juhuvas* 'we (two) sacrifice', and *juhomas* 'we (pl.) sacrifice'.

Some languages also have two kinds of first person plural pronouns where English has only *we*. Notice that English *we* in *we are going*, for example, may include everyone in the group the hearer is addressing (i.e., *we* = every one of us), or it may include only some hearers (i.e., *we* = 'I and (s)he', but not 'you'). Many languages distinguish these two *we*'s: Tagalog has *tayo* (inclusive, i.e., 'you and I') in addition to *kami* (exclusive, i.e., 'he and I').

Comanche, a Native American language of the Uto-Aztecan family, makes a number of distinctions that English doesn't. In addition to a singular/dual/plural distinction and an inclusive/exclusive distinction, Comanche also makes a distinction between visible/not visible and near/far. Thus, if you are referring to a thing that is within your view, you use a different form than if the thing

is not visible to you. Likewise, a nearby object is designated with a pronoun different from the one used for an object that is far away. Consider the following subject forms:

singular/dual/plural distinction

ini 'you (singular)'
 nikwi 'you (two)'
 mii 'you (plural)'

inclusive/exclusive distinction

taa 'we (inclusive)'
 nini 'we (exclusive)'

visible/not visible

ma? 'it (visible)'
 ?u? 'it (invisible)'

near/far distinction

?i? 'it (proximate)'
 ?o? 'it (remote)'

The lesson to be learned here is that you cannot assume that another language will make distinctions in the same way that English does. For example, while every language has some method of indicating number, not all languages do so in the same way or under the same circumstances. As we've seen, English uses an affix, Tagalog uses a separate word, and Indonesian reduplicates the word to show plurality (see File 5.4). Nor can you assume that the distinctions English makes are the only ones worth making. Languages must be examined carefully on the grounds of their own internal structures.