

Linguistics 1A Morphology

5 Morphological language variation

In the English verbal agreement paradigm, there is no plural number affix; all plural forms look the same as the first and second person singular forms. In a language like German, this is different: plural number of the subject is expressed by adding the suffix *-en* to the verb:

- (1) Ich arbeite Wir arbeit-en
I work-1SG we work-PLURAL

The past tense of a verb in German is formed in a way similar to that in English, by adding a suffix with a dental sound in it, namely *-te*:

- (2) Ich arbeite-te
I work-PAST
'I worked'

Let us see now what happens with the inflectional morphology on the verb in case it is both plural and in the past tense. The answer is very simple: we just combine the plural suffix with the past tense suffix, as in (3). (The [ə] sound of *-en* is not realized here because it follows another [ə] sound).

- (3) Wir arbeite-te-(e)n
we work-PAST-PLURAL
'We worked'

This seems so straightforward that you might think it needs no discussion at all. But, as it turns out, it is certainly not always the case that the combination of two or more different inflectional categories is expressed by a combination of the affixes that are used to express these categories separately.

Consider for example the word for 'city' in Serbo-Croat. The nominative singular form of this is *grad*. If we pluralize this noun, we get the form *gradovi*. So the suffix *-ovi* expresses plural number. However, it does not only express plural. This becomes clear when we look at the plural of another noun, *selo* 'village'. The plural of this is *sela*, not **selovi*. The difference between the two nouns concerns their gender: whereas *grad* is a masculine noun, *selo* is neuter. Apparently, then, the suffix *-ovi* in *gradovi* does not just express number but *also* gender. But this is not all. As noted, *gradovi* is used when the noun is in the nominative case. When it occurs in, for example, the accusative case, we do not add a second suffix, but rather we get yet another suffix: *grad-ove*. (Note that it cannot be assumed that *-i* in *-ovi* is a nominative suffix and *-e* in *-ove* an accusative one, since in the singular neither the nominative nor the accusative shows such a suffix, both have the same form *grad*). This means that suffixes like *-ovi* and *-ove* express number *and* gender *and* case at the same time. Morphemes of this type, which express more than one grammatical category simultaneously, are often referred to as *portmanteau morphemes*.

The above shows that we can distinguish two ways in which a combination of inflectional categories can be expressed. The first is to combine the morphemes that express the separate categories. This is known as *agglutination*. The second is to use a new morpheme that expresses the combined categories simultaneously. This is known as *fusion*. Thus, languages can be classified as being either *agglutinative* or *fusional* in nature. Note, though, that both processes can occur within a single language.

An example of a language whose morphology is clearly agglutinative is Turkish. Consider for instance the noun *el* ‘hand’. In Turkish, if a noun phrase contains a possessor (as in ‘my hand’ for example), the noun agrees with this possessor for person and number. For example, if the possessor is first person singular, the suffix –*im* is attached to the noun. If the possessor is plural as well, then a distinct plural number agreement suffix, namely –*iz*, is added to the noun in addition to the first person affix –*im*. And if the noun is in, say, the accusative case rather than the nominative, we add yet another distinct suffix that expresses this case, namely –*i*:

(4)	<i>el</i>	<i>el-im</i>	<i>el-im-iz</i>	<i>el-im-iz-i</i>
	<i>hand</i>	<i>hand-1POSS</i>	<i>hand-1POSS-PLUR</i>	<i>hand-1POSS-PLUR-ACC</i>
	‘hand’	‘my hand’	‘our hand’	‘our hand’ (in object function)

To give a good idea of what paradigms may look like in a more fusional language, here are more complete case/gender/number paradigms for some Serbo-Croatian nouns:

(5)	masculine		neuter		feminine	
	<i>grad</i> ‘city’		<i>selo</i> ‘village’		<i>ovca</i> ‘sheep’	
	sg	pl	sg	pl	sg	pl
Nominative	<i>grad</i>	<i>gradovi</i>	<i>selo</i>	<i>sela</i>	<i>ovca</i>	<i>ovce</i>
Genitive	<i>grada</i>	<i>gradova</i>	<i>sela</i>	<i>sela</i>	<i>ovce</i>	<i>ovaca</i>
Dative	<i>gradu</i>	<i>gradovima</i>	<i>selu</i>	<i>selima</i>	<i>ovci</i>	<i>ovcima</i>
Accusative	<i>grad</i>	<i>gradove</i>	<i>selo</i>	<i>sela</i>	<i>ovcu</i>	<i>ovce</i>
Instrumental	<i>gradom</i>	<i>gradovima</i>	<i>selom</i>	<i>selima</i>	<i>ovcom</i>	<i>ovcima</i>
Locative	<i>gradu</i>	<i>gradovima</i>	<i>selu</i>	<i>selima</i>	<i>ovci</i>	<i>ovcima</i>

In addition to the agglutinative type and the fusional type, a third type of language is often distinguished, the so-called *isolating* type. An isolating language is a language that shows an almost complete lack of inflectional morphology. Examples are (varieties of) Chinese and Vietnamese.

Sometimes a fourth type of languages is included in this typology, namely the *polysynthetic* languages. However, the defining property of such languages does not really concern the *way* in which they apply morphology (whether they are agglutinative or fusional), but rather *how much* they apply morphological processes. Many grammatical relations that are expressed by combining words in English (that is, by syntactic constructions) are expressed by combining morphemes in these languages (that is, by morphological constructions). In some cases a whole sentence in English can be ‘telescoped’ into a single complex word, as the following examples show; (6) is from Chukchi (a Chukotko-Kamchatkan language) and (7) is from Turkana (Nilo-Saharan).

- (12) Tpwɪ i-kay-a-pan-kiak.
sago-PLURAL PLURALOBJECT-1PLURALSUBJECT-DEFINITE-*pound-tomorrow*
 ‘We will pound sago tomorrow.’

The ubiquitous use of morphology in polysynthetic languages is also shown in another way: there is obligatory agreement morphology on the verb for both subjects and objects. (The only exception to this is that in some cases there need not be agreement with an incorporated noun that functions as object). This is also illustrated by the example above. Since it can thus be indicated by a variety of morphological means what the verb’s subject and objects are (namely by obligatory agreement morphemes and/or by incorporation of the object into the verb), the syntactic ways of doing this become less important in a sense. Typically, then, it is optional in a polysynthetic language to have a subject or objects in the sentence, and if such phrases occur, the word order is very free. Thus, (13b) is as grammatical a sentence in the Athapascan language Navajo as (13a) is, even though (13b) consists of just one word, the complex verb.

- (13) a. At’édéd ashkii yiyii-tsa.
girl boy 3SGOBJECT-3SGSUBJECT-*saw*
 ‘The girl saw the boy.’
 b. Yiyii-tsa.
 3SGOBJECT-3SGSUBJECT-*saw*
 ‘She/he saw her/him.’

Let us now turn back to how languages apply morphology, rather than how much. The agglutinative/fusional distinction is based on one particular way of expressing inflection, namely by affixation. But we have already seen in the previous lecture that there also exist certain other types of inflectional morphology. It was noted there that, instead of being expressed by affixation, inflectional morphology can involve a vowel change in the stem (ablaut) or even the use of a completely different allomorph of the stem (suppletion). Such types of morphology, which are not based on combining stems and affixes but rather on modifying the form of the stem, are known in general as *nonconcatenative morphology*.

An interesting sort of nonconcatenative morphology is found in Semitic languages such as Hebrew and Arabic. Here, a word consists of a combination of two things. First, a particular combination of consonants, the so-called *root* of the word. Second, a particular pattern of vowels that gets inserted into the consonant combination. For example, the root for ‘write’ in Arabic is *k-t-b*. This root can be morphologically derived or inflected by *changing the vowel pattern inside the consonant combination* (this type of nonconcatenative morphology is therefore also referred to as ‘root-and-pattern morphology’):

- (14) kataba ‘wrote’
 yaktubu ‘writes’
 kitab ‘book’
 kutub ‘books’
 maktaba ‘library’

A final distinctive type of morphology to be discussed is of the concatenative type again. However, it is concatenative in a peculiar way. Instead of adding a distinct affix to a stem to express a particular morphological category, it adds a morpheme to the stem that doubles part or all of the stem (although it need not always be completely identical, there can be a vowel change for instance). This process is known as *reduplication*. Examples are the perfect tense of verbs in Classical Greek (15a), the plural of nouns in Indonesian (15b), and the progressive or iterative aspect of verbs in Afrikaans (15c).

- (15) a. grapho ge-grapha
 'I write' 'I have written'
- lúo lé-luka
 'I loosen' 'I have loosened'
- b. anak anak-anak
 'child' 'children'
- gunung gunung-gunung
 'mountain' 'mountains'
- c. huil huil-huil
 'cry' 'crying'
- speel speel-speel
 'play' 'playing'