From: Frommer, Paul R. and Edward Finegan. 2012. *Looking at Languages; A Workbook in Elementary Linguistics*. Wadsworth.

1.00 SOLVED PROBLEM

MORPHEMES: Hungarian Morpheme Identification

Below you will find a number of simple sentences in Hungarian. The sentences have been translated, but individual words and morphemes have not been identified. Examine the data carefully, comparing the different sentences and their translations. Without looking at the discussion and solutions that have been provided, answer the questions for yourself. Then check your answers. (Data adapted from Hudoba n.d.)

The data are given in standard Hungarian spelling. In Hungarian:

gy represents a sound similar to the *dy* combination in *did you*
s is pronounced like the *sh* in *show*
a is pronounced somewhat like the *o* in *above*

1.	Mi magasak vagyunk.	'We are tall.'
2.	Én beteg vagyok.	'I am sick.'
3.	Ti betegek vagytok.	'You (pl.) are sick.'
4.	Lankadtak vagyunk.	'We are weary.'
5.	Te magas vagy.	'You (sg.) are tall.'
6.	Mi betegek vagyunk.	'We are sick.'
7.	Én lankadt vagyok.	'I am weary.'
8.	Ti nagyon kedvesek vagytok.	'You (pl.) are very nice.'
9.	Beteg vagy.	'You (sg.) are sick.'
10.	Beteg vagyok.	'I am sick.'
11.	Ti nagyon magas vagytok.	'You (pl.) are very tall.'
12.	Magasak vagyunk.	'We are tall.'
13.	Te kedves vagy.	'You (sg.) are nice.'
14.	Nagyon betegek vagytok.	'You (pl.) are very sick.'

A. Isolate and identify all the morphemes in the data, grouping them into categories (adjectives, pronouns, etc.) and stating the meaning or function of each one. Note that one morpheme in the data has two forms.

B. Which morpheme has two forms? Based on this limited data, what would be your hypothesis as to when each form is used?

C. Based on this data, are subject pronouns optional or obligatory in Hungarian? Explain.

Discussion and Solutions

A. A useful approach to problems like this is to isolate pairs in the glosses or translations that differ by only one element. By comparing the differences in such glosses with the corresponding differences in the non-English data, you will be able to match morphemes with their meanings.

For example, by comparing items 2 and 6, you can conclude fairly safely that *én* means 'I' and *mi* means 'we.' In the same way, you can compare items 5 and 11 to conclude that the second word in each sentence corresponds to the adjective in the translation.

Solutions

Adjectives		Personal Pronouns		Verb Agreement Suffixes	
beteg	'sick'	én	'I'	ok	1st person singular
kedves	'nice'	te	'you (sg.)'	unk	1st person plural
lankadt	'weary'	mi	'we'	tok	2nd person plural
magas	'tall'	ti	'you (pl.)'		

Others

vagy	stem of 'to be'
ak/ek	plural agreement suffix for adjectives
nagyon	'very'

B. The plural agreement suffix for adjectives has two forms, *ak* and *ek*. The data show that *ak* attaches to *lankadt* and *magas*, while *ek* attaches to *beteg* and *kedves*. You might suspect, though, that *ak* and *ek* have more general distribution than these particular words; if so, you might note that *ak* attaches to an adjective containing *a* vowels, while *ek* attaches to an adjective containing *e* vowels. (Additional data would show this to be part of an even more general process in Hungarian, whereby vowel sounds within a root or stem govern the form of an affix.)

Solution

The morpheme with two forms is *ak/ek*, the plural agreement suffix for adjectives. Based on this limited data, you can form the following hypothesis:

> *ak* is used with adjectives containing *a* vowels.
>
> *ek* is used with adjectives containing *e* vowels.

C. The data allow you to form the following hypothesis about subject pronouns in Hungarian.

Solution

Subject pronouns for 1st person and 2nd person are optional. The omission of the subject pronoun doesn't cause confusion because the verb suffix—or lack of suffix in the case of the 2nd person singular—indicates the person and number of the subject unambiguously.

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1.09 MORPHEMES: Malay/Indonesian Morpheme Identification

Malay (known in Malaysia as Bahasa Malaysia, 'the Malaysian language') and Indonesian (known in Indonesia as Bahasa Indonesia) are essentially the same language, differing only slightly more than do British and American English. Malay/Indonesian (MI) is among the top ten languages in the world in terms of number of speakers.

Examine the following sentences, given in standard MI spelling. One possible translation has been given for each.

1. Ini kuda.	'This is a horse.'
2. Ini Ali.	'This is Ali.'
3. Ali bagus.	'Ali is good.'
4. Ali menjual kuda itu.	'Ali sells that horse.'
5. Kuda Ali bagus.	'Ali's horse is good.'
6. Jualan ini bagus.	'This merchandise is good.'
7. Kuda ini dijual oleh Ali.	'This horse is sold by Ali.'
8. Ali penjual kain.	'Ali is a cloth seller.'

A. List all the *morphemes* in the data, giving their meanings or explaining their uses in each case.

B. Identify one *inflectional* and two *derivational* morphemes in the data.

C. Based on the prior data, are these statements true or false?

1. Every MI sentence must have a verb. [ ] T [ ] F
2. MI has no possessive morpheme. [ ] T [ ] F
3. MI has no indefinite article. [ ] T [ ] F

D. Translate into English:

Kuda bagus ini kuda Ali.

_____

E. Translate into MI:

1. 'Ali's merchandise is cloth.'

_____

2. 'This is a good horse.'

_____

3. 'This horse is good.'

_____

F. If *mendidik* means 'educate,' what is the probable meaning of the following?

1. pendidik

_____

2. didikan

_____

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1.10 MORPHEMES: Persian Morpheme Identification 1

Here are some data in Modern Colloquial Persian, given in phonetic transcription.

Note: In these examples,

ʃ represents a sound similar to *sh* in *show*;
x represents a sound similar to *ch* in the German pronunciation of the name *Bach*;
ɑ represents a sound similar to the *a* in *father*;
æ represents a sound similar to *a* in *cat*.

1.	mæn mixunæm	'I am reading.'
2.	ʃomɑ ketɑb mixunin	'You are reading a book.'
3.	ʃomɑ ketɑbro næxundin	'You didn't read the book.'
4.	mæn ketɑb nemixunæm	'I am not reading a book.'
5.	mæn næxundæmeʃ	'I didn't read it.'
6.	ʃomɑ xundineʃ	'Did you read it?'
7.	ʃomɑ xundineʃ	'You read it.' (past tense)

A. Isolate and identify *all* the morphemes in the data, and state the meaning of each one. (Note that the negative morpheme has two pronunciations.)

B. Translate into Persian:

'You aren't reading it.'

C. How do you suppose yes/no questions are formed in Colloquial Persian? (A yes/no question has an answer of either yes or no.)

D. Consider the following additional data: (* indicates that something is ungrammatical.)

8.	*mæn ʃomɑ mibinæm	'I see you.'
9.	mæn ʃomɑro mibinæm	'I see you.'

How will you have to revise your original analysis, if at all, to account for these new data? Explain.

E. To express a past-progressive verb ('was reading,' 'were eating,' etc.), the two morphemes you isolated in part A that relate to tense or aspect are used *together.*

Translate into Persian:

'I wasn't reading the book.'

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1.12 INFLECTIONAL MORPHOLOGY: Latin Declensions

Latin, the ancestor of the modern Romance languages, has nouns that change their form according to their grammatical role in the sentence. In this problem you will examine some different forms, or *cases*, of certain Latin nouns.

Examine the Latin sentences given below in standard orthography, and answer the questions that follow.

Note: Since Latin has distinctive vowel length, long vowels are sometimes represented with a macron (¯), even though the Romans themselves did not do this. You need not try to account for any changes in vowel length in your solution to this problem.

1. Senātor gladiātor erat.	'The senator was a gladiator.'
2. Crātēr senātōris est.	'It is the senator's bowl.'
3. Structor senātōrem aspexit.	'The carpenter looked at the senator.'
4. Senātōrem aspexit structor.	'The carpenter looked at the senator.'
5. Senātor aspexit structōrem.	'The senator looked at the carpenter.'
6. Structōrem senātor aspexit.	'The senator looked at the carpenter.'
7. Senātor sorōrem gladiātōris aspexit.	'The senator looked at the gladiator's sister.'
8. Structor crātērem senātōrī dedit.	'The carpenter gave the bowl to the senator.'
9. Gladiātōrī crātērem dedit senātor.	'The senator gave the bowl to the gladiator.'

A. List the nouns in the data, and divide them into their component morphemes. Then state the meaning or function of each morpheme.

B. Carefully examine sentences 3 through 6. Compared to English, is word order in Latin more or less important in determining the meaning of a sentence? Justify your answer.

C. Translate into English:

Gladiātōrī structōrem senātor commendāvit. (commendāvit = 'recommended')

D. Translate into Latin:

'The gladiator gave the carpenter's bowl to the senator's sister.'

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1.13 INFLECTIONAL MORPHOLOGY: Lakota Verbs

Lakota belongs to the Siouan family of Native American languages. Today it is the most widely spoken language in the Siouan group, with about 6,400 speakers. You can hear the language spoken in the film *Dances with Wolves*.

Examine the following inflected forms for several Lakota verbs. By comparing the given forms, you can identify the morphemes and state their meanings or functions.

Note: Some of the Lakota sounds are represented by symbols that may be unfamiliar to you. Although you don't need this to solve the problem, here is some information about the pronunciation of these symbols.

- ʧ represents a sound similar to the *ch* in *chance*.
- ʃ represents a sound similar to the *sh* in *show*.
- j represents a sound similar to the *y* in *you*.
- ĩ, ũ represent nasalized vowels.
- ʔ represents a glottal stop.
- k' represents a glottalized consonant, produced when air is set in motion by raising the larynx with the glottis closed. A distinct break is heard between such a consonant and the following vowel.

A. Identify the morphemes in the data given below. You should be able to isolate the verb stems as well as several agreement markers. Indicate which such markers are prefixed to the stems in these data and which are suffixed. In one case, you should also indicate the semantic effect of using two of the markers in combination.

Note that two abbreviations have been used in the glosses:

we_1 = you (sg.) and I

we_2 = she/he and I, or several of us (more than two)

1.	wahi	'I arrive.'
2.	ʧĩ	'She/he wants.'
3.	ũk'upi	'We_2 give to him/her.'
4.	ʔũpi	'They are.'
5.	gili	'She/he arrives here.'
6.	jaʧĩpi	'You (pl.) want.'
7.	wak'u	'I give to him/her.'
8.	ũpsiʧapi	'We_2 jump.'
9.	ʃkatapi	'They play.'
10.	ũhi	'We_1 arrive.'
11.	jaʔũ	'You (sg.) are.'
12.	japsiʧapi	'You (pl.) jump.'
13.	ũʃkata	'We_1 play.'
14.	jagili	'You (sg.) arrive here.'

Verb Stems	Agreement Markers

B. Now, using the morphemes you have identified, give the complete paradigm of the verb *t^{h}i* 'to live or dwell':

_____ 'I dwell.'

_____ 'You (sg.) dwell.'

_____ 'He/she dwells.'

_____ 'You (sg.) and I dwell.'

_____ 'She/he and I/several of us dwell.'

_____ 'You (pl.) dwell.'

_____ 'They dwell.'