

the meaning, for this suffix generally adds an unfavorable connotation to the word. The suffix -ly also identifies a quality, e.g. manly, friendly, worldly, cowardly, princely, but there are no unpleasant situations necessarily associated with words having this -ly suffix. Such problems of defining the meanings of forms are very complicated and the whole of Chapter 6 is given to a consideration of various difficulties. Principle 5 will treat some of the complications involved when identical forms have widely differing meanings.

2.21.2 The Application of Principle 1

In order to understand the procedures we should employ in isolating morphemes in accordance with Principle 1, we may examine the following set of forms in an Aztec dialect of Veracruz:

Problem 1

1. ničoka 'I cry'
2. ničoka? 'I cried'
3. nimayana 'I am hungry'
4. nimayana? 'I was hungry'
5. nimayanaya 'I was hungry (and may still be)'
6. timayana 'you (sg.) are hungry'
7. nimayanas 'I will be hungry'
8. tičoka 'you (sg.) cry'
9. ničokaya 'I was crying (and may still be)'
10. ničokas 'I will cry'

There are several possible steps in procedure in isolating the morphemes in this series of Aztec words. After practice one may go about such a task almost instinctively, but the beginner frequently needs to have some helpful hints. The exact order in which the steps are carried out is not fixed, but the following suggestions may prove valuable:

A. Steps in Procedure

1. Compare forms and meanings, beginning with the first of the series.
2. Having isolated a possible form-meaning distinction, check it throughout the series.
3. Isolate and check all possible form-meaning distinctions.
4. Look for residues, and assign these to morphemes or reserve them for further check.

In carrying out these four points of procedure the analyst would note forms 1 and 2 in the data. The form-meaning distinction is the final glottal stop -ʔ, with the apparent meaning of past tense, in contrast with the present-tense form. Having isolated this probable morpheme, he should then check down the series for a similar form with a corresponding meaning. It may be found in form 4 (compare form 3), but there are no other occurrences of this final glottal stop.

The third step in procedure is essentially a repetition of the first two steps until all the forms have been discovered. The next contrast will be found in comparing forms 2 and 3. The chances are that as a result of this comparison the initial ni- will be isolated as meaning 'I.' It is also possible, however, that the final or prefinal -a denotes the first person, but a quick check of all the forms will confirm the deduction that ni- is probably the first person singular element.

B. Problems of Residues

If this procedure is followed through the entire series, a number of forms may be isolated:

1. ni- (or possibly only n-) as first person indicator.
2. ti- (or possibly only t-) as second person indicator.
3. -čok- the stem meaning 'to cry.'
4. -mayan- the stem meaning 'to be hungry.'
5. The suffix -y-, or -ay- or -ya indicating past incomplete action.
6. The suffix -s or -as indicating future time.

These forms of the suffixes and prefixes show that we have some residues which have not been adequately assigned. It may be that the forms ni- and ti- both contain a common element -i- meaning, for example, that the subject is singular. It may be that the final -a, or in some words the prefinal -a-, indicates that the verbs are intransitive. Before we can adequately determine the forms of the prefixes and suffixes we must treat these two possible residues i and a.

Assigning these residues is only possible if we find other forms which show contrasts. Accordingly, let us add the following forms to the series above:

Problem 1 (cont.)

11. ankwake 'you (pl.) ate'
12. nitehkawi 'I climb'
13. titehkawi? 'you (sg.) climbed'
14. nitehkawiya 'I was climbing (and may still be)'
15. nitehkawis 'I will climb'
16. nikwake 'we ate'

These forms make it clear that the i before the verb stems is not an indicator of a singular subject, for it appears in form 16 with a plural subject. Furthermore, the i is not an indicator of some aspect,³ since it does not occur throughout the series (cf. form 11), as we would expect if that were true. The a after the stem can no longer be regarded as some indicator of the kind of action, since i does not appear in all the words in the series, as may be seen from forms 12-15.

³Aspect means the kind of action, e.g. habitual, frequent, repeated, beginning (see Chapter 6).

C. The Tentative Nature of an Analyst's Correlations

It would be possible to argue that we are not absolutely sure of these morphemes in Problem 1. Perhaps it could be said that we have jumped to conclusions. That is true, and it is precisely what we do constantly in linguistic analysis, but we introduce into our overall approach features which protect us from mistakes. We may describe this more inclusive procedure as follows:

1. We look for every possible correspondence of forms to discover morphemes.
2. We isolate these units in their simplest and most obvious forms.
3. We realize that we may be mistaken, so we are constantly on the lookout for supplementary data which will confirm or disprove our tentative analyses.

In Problem 1 we still have reason to be suspicious of some of the forms, especially the long verb stems *mayana* 'to be hungry' and *tehkawi* 'to climb.' We frequently cannot break down such forms into constituent parts, but we should be constantly watchful for possibilities to do so. That is to say, we must look to see if some part of these stems does not occur in other words. In fact, our entire analytical procedure consists in discovering the recurring parts of utterances and classifying them. The recurring minimal meaningful parts of utterances are morphemes. A recurring partial may be any part of a language, i.e. a phoneme, a morpheme, a grouping of morphemes. The recognition of certain of these recurring partials is the means by which we isolate morphemes.

Following the procedures which have been outlined, isolate and identify the form and meaning of the morphemes in all of Problem 1, including the series below.

Problem 1 (cont.)

17. *nimayanati* 'I go to be hungry'⁴
18. *nimayanato* 'I went to be hungry'
19. *nimayanaki* 'I come to be hungry'⁴
20. *nimayanako* 'I came to be hungry'
21. *nikmayanati* 'I cause him to be hungry'⁵
22. *nikmayanati*? 'I caused him to be hungry'
23. *nimicmayanatis* 'I shall cause you (sg.) to be hungry'

The morphemes of Problem 1 may be listed as follows:

1. *ni-* 'I'
2. *ti-* 'you (sg.)'
3. *-čoka* 'to cry'
- etc.

⁴The forms translated with the help of the verbs 'to come' and 'to go' indicate direction away from and toward the speaker.

⁵The causative *-ti* may be considered distinct from the directional *-ti*.