

10 Verbal Morphology

Verbal morphology is investigated primarily through the collection of verbal paradigms and texts—personal narratives, folk tales, etc. Most linguists use a combination of elicitation and text collection to develop a comprehensive description of a language's verbal morphology, but they generally begin by eliciting verbal paradigms. This chapter is intended as a starting point for the study of verbal morphology, and therefore focuses primarily on techniques for collecting paradigms. Of course, some particularly industrious students may also wish to collect and analyze texts. (For an extensive look at text collection, see Chapter 16.)

1. Verbal Paradigms

1.1. Finding the verb

You will probably want to begin by eliciting a sentence or two in the affirmative, preferably something simple. The key task here is just to identify the main verb and any other verbal elements in the sentence. These are the elements that you will focus on later when collecting whole paradigms. The first few elicitations should not be too complex—something like 'he runs' or 'she kisses the boy' should do fine.

When doing this kind of preliminary work, it is important to be prepared with a list of sentences that you intend to use for elicitation. These sentences should all be similar in form, which means that you don't want to start with 'he walks' and follow that up with 'she is bitten by ants'. Ideally, the sentences you use for your first elicitations should contain verbs which are sure to be understood by your informant. 'Eat', 'kick', and 'see' would be better choices, for example, than 'ponder', 'become', 'suggest', or 'engage'. Keep in mind that certain verbs which seem simple, such as 'run' or 'hit', can actually be very tricky. 'Run' often surfaces as a compound made up of two or more parts, for example.

Picking out the main verb may not prove as easy as it sounds. It is a well-known fact that not all languages exhibit the 'isolating' properties of English, in which individual words appear in relatively atomic form. In English, you can usually pick out the subject, verb and object as distinct entities (especially if you are an English speaker). If your informant's language is also an isolating language, then the your task may be relatively easy. However, if your informant speaks a highly synthetic language—a language which relies heavily on morphological markings—the verbal root may be buried among a number of morphemes expressing features such as agreement, tense, and aspect, just to name a few. Under these circumstances, you may have to collect quite a few sentences and do some careful analytical work before you decide what the basic verbal elements are. It is, in fact, possible for a language to have as many as four nominal arguments represented within the morphology of the main verb, as in Kinyarwanda (1) (data from Kimanyi as cited in Whaley 1997).

- (1) *j-a-kí-mú-bá-hé-er-eje*
He-PST-it-him-them-give-BEN-ASP
'He gave it to him for them'.

Fortunately, most languages do not have a verbal system which is as complex as that of Kinyarwanda. If it does turn out that your informant's language is extremely rich in verbal morphology, then it is important to remember that your informants will probably have little conscious understanding of the various types of agreement, tense marking, and so forth that go on in their language. For this reason, you should avoid relying too heavily on your

informants for glosses or explanations of individual morphemes. Working on Abkhaz, which marks agreement with subjects, objects, and various sorts of indirect objects, we found that our informant was sometimes unable to separate out and gloss individual agreement prefixes. When asked to segment a verb, he could distinguish the root from the prefixes, but would occasionally insist that all the prefixes were actually a single morpheme. If pressed further on these occasions, he would give what amounted to random glosses for the various prefixes. Still, his ability to distinguish roots from prefixes allowed us to identify the main root verb in most clauses, which was a good start. From there we were able to collect paradigms which showed what roles were played by the individual prefixes.

So, with any luck you should be able to pin down the main verbal elements of the first few sentences you collect. At this point, you will be ready to begin collecting full verbal paradigms. This can rapidly become an overwhelming business, as the number of possible variables involved in verbal agreement is truly remarkable. Verbs may agree morphologically with subjects and/or with objects, and this agreement may be triggered by any of a number of features. When you have four or five different features marked independently in the verbal morphology, collecting even one full paradigm can be a daunting task. Nida cites Barrow Eskimo as a language with particularly complex verbal paradigms: the subject-object paradigm for each transitive verb contains fifty-seven different forms (1946:182).

Each of the following sections introduces just one or two of the features that you may encounter working with your informant. By keeping these various notions separate in your mind and in your field notebook, you can avoid getting confused and making erroneous assumptions that may come back to haunt you.

1.2. Person

Person distinctions are fairly straightforward. Most—probably all—languages distinguish semantically between the first, second, and third person. Of course, these distinctions are not reflected in the verbal morphology of every language. Using the paradigmatic approach, you should be able to determine relatively easily if person features are marked in your informant's language. Simply take a sentence that you have already collected, such as 'he walks', and substitute different subjects, such as 'you', or 'I', leaving the verb the same, and watching for any morphological changes. After you have collected a few forms with an intransitive verb, try a sentence with a transitive verb, such as 'she kicks the boy'. When working with transitive verbs, you may also wish to substitute different objects to see if the person features of the object are marked in the verbal morphology. Already, however, we see how quickly things can become complicated. We are now dealing not only with the person feature as a variable, but also with the subject/object distinction. For this reason, it is sometimes best to keep the object constant until you have a handle on subject-verb agreement.

1.3. Number

If person features are marked overtly in the verbal morphology of your informant's language, then it is likely that number is marked, too, as these two features often appear hand in hand. In a language such as Latin, for example, person and number features combine to create a full range of verbal endings (*-o/m*, *-s*, *-t*, *-mus*, *-tis*, *-nt*), corresponding to 1st singular, 2nd singular, 3rd singular, 1st plural, etc. When checking for subject-verb agreement, you will probably want to begin with singular subjects and then move on to plural subjects. The same strategy applies when checking for verbal agreement with objects. In addition to a singular/plural distinction, your informant's language may have a dual number, reserved for pairings of objects. Also, the first and second person plural forms may be divided into

inclusive and exclusive forms. In other words, the verbal morphology may reflect, for example, whether the speaker is saying "we, including you" or "we, excluding you".

1.4. Gender

Gender marking on verbs should not be confused with gender marking on nouns. A language which exhibits grammatical gender may show no gender markings in its verbal morphology. This is the case with German, for example. So, whether or not your informant's language has grammatical gender, you should be sure to check for gender distinctions in the verbal morphology. This involves substituting subjects (and objects, if you wish) of different genders for all possible persons and numbers. As odd as this may seem to an English speaker, there are many languages in which the verbal endings used by a male speaker differ from those used by a female speaker. Keep in mind that masculine, feminine, and neuter are not the only possible gender distinctions. There may also be verbal markings based on animacy, size, or shape, to name a few.

1.5. Negation

Negation figures heavily in the verbal morphology of many languages, including Armenian and most Bantu languages. Compare the following positive and negative pairs in Standard Western Armenian: *k'aret'si* 'I wrote', *t'fak'aret'si* 'I didn't write'; *gak'arem* 'I write', *t'jem k'arer* 'I don't write'. In such languages, the form of a negated verb is markedly different than the form of the same verb in the affirmative. It should not be difficult to figure out whether your informants' language works this way. You just need to collect a few identical sentences in the affirmative and in the negative, and compare them. If negation is marked on verbs in your informant's language, then you should collect as many paradigms as needed to figure out how negation works.

1.6. Tense/Aspect

So far, we have steered clear of tense and aspect. Tense and aspect form a complex and interesting part of the system of verbal morphology of many languages. They can also be extremely challenging to collect and analyze. For this reason, you will need to be especially well-prepared when working on tense and aspect. You should come to the session prepared with a list of sentences that you wish to elicit in each of the tenses that you are looking for. For a sentence such as 'they run', for example, you will want to have entries in your notebook for 'they ran', 'they will run', and whatever other tenses you may be looking for.

As always, communicating successfully with your informant is the most difficult task you face. Imagine that you wish to collect a sentence in the past tense; just giving a prompt in the past tense may not suffice. Because tense/aspect systems vary from language to language, informants often give translations in tenses other than the ones we expect. Working with our Gujarati informant—who does not speak English very well—we found that he usually translated our past-tense sentences into the present tense in Gujarati. In fact, he translated pretty much all of our prompts into the present tense, no matter what tense we gave him. To straighten things out, we had to add temporal adverbs like "today" or "yesterday" to our sentences. Consider the following excerpt from a session with our informant (English prompts are in contained in single quotations, Gujarati responses are italicized):

- Vaux: How do you say 'I gave my wife her book'?
- Informant: *mari patni-ne teni tʃɔpri apū-tʃū.*
my wife-to her book I-give
'I give my wife her book'.
- Vaux: How do you say 'yesterday'?
- Informant: Today...uh...yesterday, *gakale.*
- Vaux: Can you say *gakale mari patni-ne teni tʃɔpri apū-tʃū?*
- Informant: (correcting Vaux) *gakale mari patni-ne teni tʃɔpri api-hati.* Means 'was'. *apū-tʃū* means 'now'.
- Vaux: Ah.
- Cooper: So how do you say 'I gave my wife the book' in the past?
- Informant: *mari patni-ne (teni) tʃɔpri api-hati.*
my wife-dat. (her) book gave-I.was

Even this is not a foolproof approach, because some languages use temporal adverbs in place of changes in the tense of the verb. In other words, a tense marker such as 'future' might appear only when a word like "tomorrow" was not present. Cross-linguistically, it is very common to indicate the future, at least optionally, with a present tense form of the verb and an adverb, rather than by way of an actual future tense. This is the case in many Indo-European languages, including English, where *I leave tomorrow* is another way to say 'I will leave tomorrow'.

Things can be even more confusing if your informant's language makes a distinction in tense/aspect morphology which English lacks. Take the case of Modern Western Armenian, where a distinction is made in the perfect tense between "witnessed" and "non-witnessed" events. If a speaker has personally witnessed an event, then he or she uses a form such as (2a), but if the speaker was not present for the event in question, only a form like (2b) is appropriate.

- (2) a. *merʒadz en*
'they refused' (witnessed)
- b. *merʒer en*
'they refused' (non-witnessed)

It is easy to imagine an investigator collecting these two forms and having no idea why they were different. In most cases, the informant would not be able to explain the difference between the two forms, and so the investigator would be left very confused.

1.7. Voice

Use of the passive voice is not common to all languages, nor is it exclusively a morphological phenomenon. Nonetheless, you may wish to elicit some passive constructions in your work on verbal morphology. Note, however, that collecting data on passives may prove surprisingly difficult. Passives are often used in very specific, real-world contexts which are hard to create in a laboratory setting. Your informant may not see the difference between 'The cat catches the mouse', and 'The mouse is caught by the cat'. Also, informants often do not share linguists' willingness to see language as an abstract entity, and therefore resist producing utterances which they find nonsensical. To a linguist, a sentence such as 'I am being eaten by a purple dog' is perfectly acceptable, but an informant might reject the sentence on the grounds that there are no purple dogs, and that if there were, they would not eat humans.

Keep in mind also that passive morphology can sometimes overlap with other morphological phenomena. You might find, for example, that the passive marker is the same as the marker for intransitive verbs.

2. Collection Techniques

In the paradigmatic approach, one generally begins with a single clause or sentence, and then makes substitutions or alterations to parts of this sentence in order to collect a full paradigm. So, if you have a sentence such as 'The man kicks the tree', and you are looking for morphological markings on 'kick', then substitute different subjects, objects, tenses and so forth in order to collect the desired forms. Ideally, the best strategy is to collect the whole paradigm for a given verb before starting in on a different verb. This can take a considerable amount of time, however, and can be terribly boring for the informant. You may want to break up the monotony at times by moving to another topic and then returning to your paradigm when the informant's interest has been revived.

By going through your elicitations one verb at a time, you make the crucial task of organizing your field notebook much easier. One of the keys to successful collection of verbal paradigms is keeping a well-organized notebook. The entries in your notebook should be organized around the basic sentences from which you are working. So, you may want to devote a certain amount of space in your notebook to each verb that you use. For example, you might have a page for the verb for 'to eat', another for 'to run', and so on. Depending on how far you wish to delve into the verbal morphology of your informants' languages—and depending on their attention spans—you may be collecting as few as three or as many as thirty paradigms for each verb you use, so the amount of space needed may vary. We have found it useful to have separate sections of the notebook for field notes and paradigms. This way you can neatly fill in your paradigms in one space, and make as many cluttered notes as you need elsewhere.

Alternatively, in some situations an investigator may be primarily interested in targeting the behavior of a single feature across a range of verbs. In this case, some modifications to the above approach must be made. Rather than having a one verb/one entry scheme, you may wish to organize your data according to the feature(s) you are particularly interested in. So, if you have found that the first person singular behaves oddly in your informant's language, and you want to focus on this phenomenon, then you may wish to collect the first person singular forms of many different verbs, one after another. These data could then comprise a whole entry in your notebook, as seen in (2b), as opposed to the more standard one verb/one entry approach, seen in (2a).

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| (2) | a. possible paradigm for 'run' | b. focusing on 1st sing. |
| | <i>I run</i> | <i>I run</i> |
| | <i>you run</i> | <i>I walk</i> |
| | <i>he runs</i> | <i>I jump</i> |
| | <i>she runs</i> | <i>I swim</i> |
| | <i>it runs</i> | <i>I flee</i> |
| | <i>we run</i> | <i>I ride</i> |
| | <i>you (pl.) run</i> | <i>I sprint</i> |
| | <i>they run</i> | <i>I go</i> |

There are two different schools of thought on collecting paradigms, one favoring accuracy at the expense of efficiency, and the other favoring efficiency, perhaps at the expense of accuracy. Many linguists, including the present authors, prefer to move extremely

cautiously when collecting paradigms, which means changing only one element of a sentence between one elicitation and the next. For example, we would follow up an elicitation such as 'The woman left yesterday', with 'we left yesterday', and then 'you (pl.) left yesterday', and so on. In each case, only the subject of the sentence is changed; everything else remains the same. This is as tightly controlled an experiment as one can conduct, given the fact that informants are decidedly human. The disadvantage of working this way is that one often has a limited amount of time with the informant, and this plodding approach necessarily reduces the amount of ground that one can cover. Also, the informant may become exceptionally bored when asked to repeat the same sentence over and over again with only one slight change each time.

The other school of thought on paradigm collection says that you should get as much data from the informant as possible within the limited time that you have. This means combating redundancy between elicitations by changing several sentential elements at a time. An investigator working this way might elicit (3a) and (3b) in succession, in order to eliminate unnecessary redundancies.

- (3) a. 'he is crying'
b. 'the man from the village was crying'

At first glance, this experiment may look somewhat loosely controlled, but linguists who work this way would argue that this is not the case. The substitutions made between (3a) and (3b) are not random. Rather, the verb remains in the third person singular in both sentences, and only the tense of the verb is changed. The internal make-up of the subject is also altered, but this change should have no effect on the form of the verb, since the subject is still in the 3rd person singular. In this way, one can test for both the past tense and for noun phrase complements in one fell swoop. The key to collecting paradigms in this manner is not to lose track of what you are doing or become disorganized—having control over the experiment at all times is crucial. As always, thoughtful preparation ahead of time can eliminate a great deal of confusion during and after the actual elicitation session.

The main problem with this second, more expansive method is precisely that the experiment is not as tightly controlled as it could be. By using the sentences in (3), you open the door to possible misanalyses of the data. It might turn out, for example, that verbs agree differently with pronominal subjects (3a) than with full-NP subjects (3b) in the informant's language. An unsuspecting investigator would probably assume that the morphological differences in the verb between (3a) and (3b) were related exclusively to the change in tenses, and thereby miss the other distinction. Also, it is easy to miss important data using this method. The fact is that you never know where an interesting phenomenon is going to turn up, and so you need to be as thorough as possible. By using a more cautious method, in which only one element of the sentence is changed at a time, you can better protect yourself against missing data that you might need.

One other advantage to using the more cautious method, changing only one element at a time, is that the informant is more likely to catch on to what you are doing and then be able to help you out. When you change only one element in a sentence from one elicitation to the next, it is easy for the informant to see the pattern in what you are doing. If the informant observes, for example, that you always change the subject from one sentence to the next, then he or she may be able to quickly give you a whole paradigm with every different type of subject, thereby making your task much easier.

3. Texts

Some linguists use the paradigmatic approach only as a stepping stone toward text collection, which they consider the bread and butter of field work. Text collection does not, of course, mean going to the library and looking up "texts" in the informant's language—there is a good chance that no such texts exist. Rather, text collection means asking the informant to relate a personal narrative, a traditional story, or something of this sort, and transcribing and analyzing the entire passage. Often, the informant's personal narrative will be the thrilling tale of what he had for breakfast that morning, or how he wrestled a particularly cagey pipe into place while fixing his toilet. Fear not; these stories can provide you with just as much good data as any entertaining anecdote would. Also, informants generally enjoy stories more than individual sentences. When you collect a story, you put the informants in the driver's seat, which can be a lot of fun for them.

When collecting texts, you can hope to discover grammatical phenomena which would not be uncovered in collecting paradigms. For example, a tense or aspect distinction which would not come out in the course of an elicitation session might appear in a transcribed text. Collecting a whole text can be very difficult, however, particularly if one has little or no knowledge of the informant's language. Each word can become a perplexing puzzle when transcribing a text in an unfamiliar language. The informant is certain to grow bored, if not downright vexed, as it takes you several minutes to transcribe a single sentence. One linguist, who was not actually looking for a text at the time, described his difficulties with lengthy transcriptions when working with a Wauwana informant:

"How do you say 'I run' in your language?" The Indian was quiet for a while. First he looked down; then he looked out. Suddenly his face lit up as if struck by a sudden flash of inspiration. He spoke very rapidly. If I had been able to transcribe what he said, it would have spread across the page several times. I gulped and bravely started to write; but after a few syllables, I was already hopelessly bogged down.

"How did you say that?" With his repetition I added two more syllables, then bogged down again. When I asked for the third repetition, the informant began to waver and finally to change his story, and so I had to give up entirely. To my half self-justifying and half self-accusing, "But that surely doesn't all mean just 'I run'," he said, "Why of course not. It means I was sitting here with you; then I looked out of the door and saw a deer, so I quickly grabbed my spear and now I am running after it". Then, almost philosophically, he added to himself, "Only a fool would run for nothing".

(Samarin, p. 37)

To combat this sort of difficulty, you can just record the story with a tape recorder and then try to transcribe it later, first on your own, and then with your informant's help. Once you have a story recorded and partially transcribed, your informant can actually be of great help in refining the transcription. In general, try to keep your stories short and simple, and make your transcription as narrow as possible, without boring the informant.

4. Warnings

There are certain difficulties that crop up again and again when working on verbal morphology. By alerting you to some of these potential problems, we hope to make your elicitation sessions more productive and less frustrating than some of ours have been.

- **Boredom—yours and theirs.** Collecting verbal paradigms is not an exciting business; few linguists go to bed dreaming of getting the pluperfect of 'to harvest'. Beware, however, that if you become too bored during your elicitation session, you may become careless. After collecting paradigms which look identical for three verbs in a row, it is easy to assume that the fourth will be identical to the others, and then not to listen carefully to the forms that the informant actually produces.

Compared to the boredom of the informant, however, your boredom is likely to be negligible. You, at least, are in control of the situation and have a clear idea of both the purpose and direction of the exercise you are engaging in—not so for the informant. Famous field linguist Eugene Nida discusses this very problem (1947:138):

Repeating a word fifty times, as some field investigators have insisted upon, is of course boring; and without some understanding of what is expected any interest that the [informant] may have had originally is likely to wane. This is especially true with long, involved paradigms, which to us seem perfectly easy to recall, but for the informant these are sometimes quite a chore.

The informant's boredom can have a number of repercussions, including your receiving bad data because the informant's head is no longer in the game. One linguist, whose name shall remain undisclosed, was in the habit of sending e-mail messages to his informant containing 20 or 30 pages' worth of paradigms for translation (the informant's language was written with very transparent orthography, making e-mail a viable medium for elicitation). After a while, the linguist realized that the data he was receiving was unreliable; the informant was simply too bored and overwhelmed to render meaningful judgements.

We recommend avoiding marathon sessions with your informant. It is also best to mix things up a bit when collecting paradigms; try working on something else for a while and then return to them. In the meantime, you could give a little more time to some nagging question about phonology, for example, or try to collect a short text. Best of all, you can keep the informant's interest by making your sentences interesting. Use whatever you can to accomplish this. Throwing some local place names into your sentences might help, or using the names of friends, relatives or political figures, rather than just "John" and "Mary" could liven things up.

- **Beware of informants' glosses.** When collecting verbal paradigms, one often longs for a quick and easy morpheme-by-morpheme gloss of each sentence, especially of the verbal elements. Asking the informant for this information, however, may lead only to frustration. Our Vank^h informant often confused us with his glosses. For example, when asked the meaning of the morpheme *-a* in the phrase *ɪŋk^h-kal-æts-a*, meaning 'he bought', the informant first answered that it meant 'the'. He then corrected himself, saying that it meant 'a', and then changed his mind again, arriving at 'one' as his final translation. In the end, it turned out that *-a* is a clitic 3rd person singular copula, best translated as 'is'. In a particularly extreme case, he once glossed the phrase *na haŋs^h-a* as 'he' or 'who'. It means 'it/that is bread'.

In general, the glosses provided by informants are somewhat better for open-category morphemes (nouns, verbs, adjectives, etc.) than for closed-category morphemes (prepositions, articles, inflectional clitics, and so forth).

- **Watch for theme vowels and the like.** It is easy to be fooled by certain features of verbs which appear to be morphological phenomena, but are not. A thematic vowel (THM.) which is associated with a certain class or group of verbs—sometimes called a "conjugation"—can look a lot like an inflectional morpheme. Unless you control your experiments carefully, you can be lead into a faulty analysis. Looking at the Polish data given below, for example, one sees that there is little difference, syntactically, between (4a) and (4b), and yet the vowel preceding the personal ending is different. If you know the roots of these words, *czyt-* [ʧɨt] and *kup-*, and the personal ending, *-sz* [ʃ], then it is tough to explain what role these vowels play. One might conclude that the vowel change is triggered by agreement with the direct object, for lack of a better hypothesis. In fact, the two verbs simply belong to different conjugations.

- (4) a. *ti* *ʃɨt-a-ʃ* *kɔ̃ʃkə* <*ty czytasz książkę*>
 you read-THM.-2nd. sg. book
 'You are reading a book'
- b. *ti* *kup-uj-ɛʃ* *samoxut* <*ty kupujesz samochód*>
 you buy-THM.-2nd. sg. car
 'You are buying a car'

The sort of confusion sketched out above provides another argument in favor of a cautious approach to paradigm collection, in which only one element is changed from one elicitation to the next.

- **Watch out for special citation forms.** The citation form of a word or sentence is the form that a native speaker uses when asked to produce that word or sentence in isolation. For example, the citation form of the English verb which describes moving rapidly by foot is *(to) run*. In speech, one probably says *run* or *runs* or *running* more often than *(to) run*, but if your French teacher asks you "What does *courir* mean in English?" you still reply with the citation form: *(to) run*.

So, why is this a problem when working on verbal morphology? As we found out from our Vank^h informant, in some languages the citation form for whole sentences is not the present tense. Whenever we asked our informant how to say something like 'I am running', he would respond with the equivalent of 'I ran'. Because the only way to determine the tense of the informant's response is by checking it against other data you have collected, it took us a while to figure out that this was going on.

- **Beware of hidden feature distinctions.** When I took Russian as an undergraduate, I remember being surprised to find that there is subject-verb agreement for gender in the 1st, 2nd and 3rd person in the past tense, but only in the third person in the other tenses. So, if you are cross-dressing in Russia, you had better only use the present and future tenses, lest you slip up and use the wrong agreement pattern in the past tense, thereby revealing your true identity.

The point of all this is that certain feature distinctions may be dependent upon the values of other features. For example, number might be marked only in the present tense in your informant's language, or person might be marked only when the subject is singular. If you find in the course of collecting a paradigm that a certain feature, such as gender, is not marked, do not write this feature off and forget about it; it may pop up later in another paradigm where other feature values are different.

- **Beware of ergativity.** Absolutive/ergative systems work differently than the nominative/accusative systems many of us are used to. In languages of this type, subjects of transitive sentences are treated one way, while subjects of intransitive sentences and objects of transitive sentences are grouped together and treated differently. You should be aware of this phenomenon when studying verbal morphology. It is also important to note that your informant's language may use both a nominative/accusative system and an absolutive/ergative system. In many Indic languages, for example, an absolutive/ergative distinction is made in past tenses, but in the present and the future the distinction is nominative vs. accusative.
- **Don't trust negative evidence.** Just because you don't find a certain form does not mean that it doesn't exist. In some dialects of Armenian and Turkish, for example, plural markers can be omitted in certain contexts. In this case, it is easy to assume that there is no plural marker. Avoiding this mistake involves some degree of vigilance. You must always check for any forms that you suspect might exist, even if you see no evidence of them at first glance.

Suggestions for further reading

More advanced readers interested in theoretical aspects of verbal morphology should consult the relevant chapters of an introductory morphology text, such as Spencer 1991 or Carstairs-McCarthy 1992.