

## THE CONTENT OF FIELD METHODS COURSES\*

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1.0 That training in field methods should be part of the training of every linguist appears to be no longer widely accepted. In recent years field methods courses have been dropped from the curriculum in a number of departments; in others field methods, while still offered, is not always taken seriously and is considered to be somehow peripheral to the 'real' work of linguistics. A quick survey of the catalogues of 48 linguistics departments and programs in the United States revealed only six which explicitly require field methods for Ph.D. candidates; many others do not even offer it. Informal conversations with colleagues around the country confirm this impression that field methods is no longer valued, as does its absence from the offerings of LSA Summer Linguistics Institutes for the past several years. There are interesting historical and sociological reasons for the recent neglect of field training, but it is the present-day justifications that people give for this neglect that we wish to address in this paper. We will argue that field methods deserves to be restored to a central place in the linguistics curriculum, because the field methods experience itself provides valuable, ESSENTIAL skills and insights about language and linguistics which are not acquired in other types of coursework.

2.0 Certain common, though generally tacit, arguments against inclusion of field methods in the linguistic curriculum we reject straightaway. For example, the idea that field work is in some sense 'applied linguistics' and therefore relevant to only some students seems misguided.<sup>1</sup> It is true that linguistic field work is often an essential tool in anthropological investigation and in missionary work, but arguing that field methods should be eliminated from the required curriculum of theoretical linguistics because it CAN be applied to other endeavors makes no more sense than arguing that phonology should not be required because it can be applied to work on communication disorders.

We also reject the notion that field methods is no longer necessary, whatever its value may once have been, because the construction and testing of linguistic theories can be based on already published materials. For most of the world's languages, there simply

are no adequate published materials, as anyone who has looked at grammars of American Indian, African, or Asian languages can attest. These grammars are often fragmentary and of questionable accuracy; to rely on them for theory testing would be a serious mistake. The alternative is either to do field work or to restrict linguistic research to the few languages spoken by trained linguists.

This brings us to a third argument against field methods, which we also reject, namely that only the most superficial linguistic analyses are possible from field work, that one must have native or near-native fluency in a language to investigate it in depth. The basis of this argument appears to be either the belief that one can get good data only by direct introspection, from oneself but no one else, or a total lack of familiarity with the techniques of field work. HOW to get good data from someone else is the whole point of field methods; and, moreover, getting good data from oneself is essentially the same process and requires many of the same techniques.

3.0 The argument against field methods courses that we would like to attack in detail is the one which holds that, while field work is actually essential to linguistic research, there is nothing to teach, that the substantive content of field methods courses is already covered in phonetics, phonology, syntax and semantics courses, and that the only novel subject matter would be how to get along with people, how to avoid culture shock, and the like, things not really teachable anyway. We submit that there IS substantive content in field methods courses that is NOT taught in other courses. That this is so is best demonstrated with specific examples.

3.1 Starting with phonetics, one can observe that many phonetics courses pay considerable attention to ear and mouth training. (Actually even this appears to be lacking in many departments.) Instructors attempt, via transcription and mimicry exercises, to improve discrimination and production skills. But no phonetics course is going to cover ALL human speech sounds and contrasts. Any field worker is inevitably faced with phonetic novelty, and with no instructor around to provide learning exercises. The issue is, then, are there specific techniques one can use to train oneself to discern and produce novel phones and novel contrasts? Yes, quite teachable ones.<sup>2</sup>

One of the most useful techniques for training oneself to perceive unfamiliar phonetic distinctions is the use of what are called 'rhyme sets'. Elicited items are placed in a set such that they match or 'rhyme' on some selected feature: pitch, initial consonant, vowel length, or whatever. The underlying principle is that differences and sameness are easier to perceive in direct juxtaposition. For example, the

Temne<sup>3</sup> word ɔbɔf shows a pitch drop from the first to the second syllable. Is it the same drop heard in ɔtik? Until one has learned to distinguish the particular pitch levels in Temne, this is a tough question. It becomes easier when disyllabic words are put in a rhyme set where the rhyming feature is pitch. Consider how the following (with actual relative pitches marked) would sound:

ɔtik	[ ˉ - ]	'the stranger'
ʌmbɔ:l	[ ˉ - ]	'the pot'
ɔbɔf	[ ˉ - ]	'the farmer'
ʌŋgbo:r	[ ˉ - ]	'the padlock'

In direct comparison, ɔbɔf clearly has a lower second syllable than those of the other words in the set. It's the odd-man-out and must be placed in a rhyme set of its own. The two resultant rhyme sets form not only an essential set of data but a training exercise in the production and perception of Temne pitch.

The construction and manipulation of rhyme sets is a specific technique that needs to be taught, and is more involved than might first appear. List intonations must be avoided, for example. A common list intonation in the world's languages is a pitch drop in the last item on the list, which when present can force spurious pitch rhymes. A Temne speaker reciting the rhyme set above as a list, rather than as four separate utterances, would drop the final pitch on the last item. If correctly transcribed, ʌŋgbo:r would then rhyme with ɔbɔf, but spuriously. Its place in the list causes it to end in a low pitch, and that is not its normal pronunciation. If ʌŋgbo:r appears anywhere in the list but finally, its pitch contour will be high-mid, not high-low. On the other hand, if the rhyme set had happened to end with an item like ɔbɔf, and if the field worker were aware of list intonation phenomena, the final low pitch of ɔbɔf might well be incorrectly attributed (subconsciously) to its place in the list and actually transcribed as a mid pitch. Only by placing ɔbɔf in various places in a rhyme set will the field worker discover that this item always has a high-low pitch contour, unlike all the other items, and should therefore be analyzed as constituting a high-low tone pattern. Students need to be taught that list intonations exist, that they can affect perception, and that they can be avoided by repeatedly rotating the items in the list.

3.1.2 The manipulation of rhyme sets is not only a method of removing uncertainty about transcriptions; it is also a method of checking for errors in transcriptions about which there is NO uncertainty. Such errors generally involve underdifferentiation of

phones. English speaking students transcribing Thai<sup>4</sup>, for example, very often fail to distinguish unaspirated voiced and voiceless stops, writing [b] for both [b] and [p]. They will do this with no suspicion of anything wrong. What they need to be shown is that after a number of items containing what they have transcribed as [b] have been collected, the items should be formed into a rhyme set and be read through by the informant. If both [b]'s and [p]'s actually occur in this set there is a good chance that the inconsistency of the [b] transcription will come out; this will lead to the construction of two rhyme sets, one for each of the two stops.

Likewise, students will frequently transcribe labiovelar coarticulated stops as simple labials, that is, [gb] and [b] will both be transcribed as [b], for instance. This is done even by students who know that coarticulated stops exist. It is important to emphasize that having had phonetics training will not necessarily protect against an error such as this one and the one preceding. Knowing that a particular phone exists in some of the world's languages is no guarantee that it will be perceived when first encountered. Checking and rechecking transcriptions is the way to guard against misperceptions, and students need to be taught to do this. And they need to be taught that listening to multiple repetitions of an item is not the only way, nor in many cases even the best way, to refine transcriptions; the use of rhyme sets is indispensable.

It needs to be pointed out here that minimal pairs, if encountered, will reveal an underdifferentiation in transcription too--but minimal pairs may be hard to come by. It depends on the language. Given that most Thai morphemes are monosyllabic and that Thai has severe constraints on syllable shape, minimal pairs involving voiced and voiceless unaspirated stops will crop up very quickly in field work, forcing a differentiation of [b] into [b] and [p]. But given that Temne morphemes are commonly not monosyllabic and that Temne has relatively weak constraints on syllable shape, minimal pairs involving [b] and [gb] may not be encountered for quite a long time. In fact, there are very few such minimal pairs in the whole language. Rhyme set manipulation would clear up mistranscription problems here long before minimal pairs surfaced to force the necessary transcription refinement.

3.1.3 Informants' judgments as to whether or not items rhyme can be used, but students need to be taught to exercise care in utilizing them. With the Temne high-mid pitches given above, one informant rejected the rhyming purity of the set, not because of the pitches but because some of the second syllables are long and others short. The data are repeated here for convenience.

otik [ ˉ - ]

ʌmbɔ:l [ ˉ - ]

ʌŋgbo:r [ ˉ - ]

In terms of pitch these items rhyme perfectly; in terms of length they do not. The informant and the linguist were simply attending to different features without knowing it, and miscommunication between the two was not initially realized. The linguist was right all along in his judgment, and the informant's judgment, which was right too, was an unintentional red herring. The linguist came to doubt his transcriptions and was thrown off the trail. What ultimately happened was that the informant was asked to form what HE thought were pure rhyme sets from the (apparently) high-mid items. The length criterion the informant was using to form his two sets immediately became evident. Miscommunication of this and many other sorts is far more common than many people realize and must be constantly guarded against.

3.1.4 Other specific and teachable techniques for improving and perfecting transcriptions abound. Asking an informant to hum items is an effective way to focus on pitch without being confused by the perceptual variables that various consonant types tend to induce. Having an informant tap his finger on the 'heaviest' syllable during an utterance is a standard way of focussing on stress, and certainly a useful one in languages where pitch and stress, or pitch and length, do not correlate. Having an informant pass judgement on the acceptability of the linguist's attempted pronunciations is valuable too, because the linguist's transcriptions will improve as his pronunciations are improved through the trial-and-error process.

Using visual information is yet another technique which can be of great value in perfecting transcriptions. Students need to be explicitly taught to use their eyes as well as their ears, to watch for visual concomitants. In a class working on Rapa Nui<sup>5</sup>, one student, even after several weeks of field work, continued to describe /t/ as alveolar, despite the fact that the speaker's tongue had been clearly visible between his teeth, indicating a more advanced articulation. In a class working with Diegueño,<sup>6</sup> where dental and alveolar stops contrast, it was by watching for the speaker's tongue that the class was initially able to distinguish the two sounds.<sup>7</sup>

The pursuit of extra-auditory cues to articulation is not limited to such obvious indicators as lip closure and interdental tongue position. It is also possible to obtain information on details of articulation not externally visible under ordinary circumstances. Sometimes, with minimal training, the informant can provide articulation information. For example, Diegueño has a contrast between alveolar and

alveo-palatal voiceless laterals which is initially very difficult to distinguish. In the Diegueño class, several minimal and near minimal pairs appeared early on to indicate the existence of a contrast of some sort here which no one could yet perceive. Though no OBVIOUS external cues distinguish the two sounds, there is in fact a marked difference in tongue position which speakers can easily be taught to be aware of; during production of the alveo-palatal consonant, the speaker's tongue tip is held behind the lower teeth, with the blade of the tongue contacting the palate, whereas the alveolar consonant is articulated with the tip at the alveolar ridge and the blade lowered. By asking the informant to hold the articulation of these consonants, the class found they could see the lowered tongue between her teeth, and with a little instruction the informant was able to indicate on request whether her tongue was 'up' or 'down' in a particular word. The use of this information enabled the class to distinguish the consonants during the early stages of investigation with greater accuracy than would have been possible using auditory information alone.

Various props can also be used to assist the informant or the linguist in identifying tongue position. A pencil placed crosswise between the teeth can distinguish dental consonants (tongue contacts pencil) and alveolar consonants (no contact) in languages where the dental articulation is not advanced enough for the tongue to be clearly visible. A pencil could, if necessary, help distinguish the Diegueño laterals in the preceding example as well. Placed somewhat farther back, the pencil will be contacted by the tongue during production of both laterals, but if the articulation is alveolar it will be the underside of the tongue which touches the pencil, and if alveo-palatal, the top of the blade. Aspiration can be detected by placing a hand (or piece of paper) in front of the informant's mouth. One can even create crude palatograms by placing cocoa on the informant's tongue and checking to see where it rubs off when the consonant is uttered. These examples indicate that there are numerous techniques by which a field worker can pin down phonetic detail and identify difficult contrasts; more than just attentive listening is involved. These techniques need to be taught, and 'transcription exercises' as given in most phonetics classes do not deal with them.

3.1.5 We will present one final example of transcription problems, this one involving phonology as well as phonetics, before turning to syntax. In a field methods class working on Vietnamese,<sup>8</sup> it became obvious that in some morphemes what had been transcribed as final unreleased [p̚] was always accompanied by a puffing of the cheeks, while in other morphemes it never was, e.g., [fup̚] (puffed) versus [fap̚] (unpuffed). Though none of us had yet heard a difference between these two stops, we formed rhyme sets based on the visual criteria of 'puffed' and 'unpuffed'. Gradually we learned to hear the difference and eventually discovered through attempted mimicry that the puffed stops

involved a velar closure as well as a labial one, that they were labiovelar coarticulated stops. The phonological problem--whether the two phones contrast--is harder than it first appears, because the coarticulated one, now correctly transcribed as [k̟p], might be an allophone of /p/ OR of /k/, if not of a distinct /k̟p/ phoneme. We pursued this issue by hypothesizing that it was an allophone of /k/, and began looking for a labializing environment by investigating vowel rounding. But, since Vietnamese has back unrounded vowels, as well as rounded ones, at two tongue heights, there were almost certainly transcription errors in the data to obscure whatever conditioning environment there might be. Given that we were unsure of the consistency of our transcriptions [u], [ɯ], [o], [ɔ], and given that we were hypothesizing that the lip closure on [k̟p] was due to the lip rounding of the preceding vowel, there was a subtle pressure to change transcriptions of these vowels to conform to the hypothesis. We most certainly would not have consciously changed transcriptions to save the hypothesis, but the real danger was that merely having the hypothesis in mind would tend to pressure us into HEARING rounded vowels where the hypothesis wanted them to be heard. The danger was a perceptual one, and did not involve ethical issues of honesty and standards of scholarship. Special care in sorting out the back vowels irrespective of cooccurrence with [k̟p] was necessary before the hypothesis was confirmed with confidence. In this example, what had started out as a transcription problem involving voiceless, unreleased bilabials evolved into a phonological problem which in turn evolved back into a transcription problem, this one concerned with vowels. Problems of mistranscription are not normally dealt with in any depth in phonology courses, and the influence of hypotheses on perception of sound is not dealt with in phonetics courses. The complex interplay of perception and hypothesis is a central concern of field methods classes, however.

3.2 In the area of syntax, too, courses generally rely on data on which a great deal of analysis has already been performed. The student is given a corpus containing some interesting puzzle, a problem which is preselected. The lexical items, the types of construction, even the translations are chosen to highlight a main issue and facilitate grammar construction. Working with exercises of this sort is not by itself an adequate preparation for real life data acquisition and analysis, which must include discovery of the interesting questions in the language and acquisition of a corpus which will illuminate those questions.<sup>9</sup> The difficulty of this task is attested to by the fact that students in field methods courses are inevitably overwhelmed by the question of where to start. They want to select an interesting issue and generate a corpus for it. But what constitutes an interesting issue in a language one knows nothing about? All too often, students proceed on the assumption that an interesting problem in English will remain an interesting problem when translated into another language, and we are no

longer surprised when someone on the first day tries to find out if Irish has a Raising transformation or exhibits ambiguities of quantifier scope. While there is nothing inherently wrong with seeking out previously discussed phenomena like these in a new language if they are of interest to the investigator, students must be made aware of the dangers of relying solely on this method of building a corpus.

3.2.1 A common tactic is to use sentences directly from the technical literature as the vehicle for elicitation in such cases, assuming that whatever differences are found between related sentences in the language of elicitation will surface in a parallel form in the object language. A number of general problems of reliance on translation will be discussed later, but there are specific problems associated with the use of examples and issues from the literature which we would like to point out here.

Firstly, in seeking data on a particular previously published problem, students frequently begin by eliciting fairly complex sentences, and find themselves faced with too much detail too early. The sentences cannot readily be analyzed or even transcribed with any accuracy. If sentences elicited in the early stages are too involved, the effort expended in analyzing them will not justify the result. It is all too easy to spend an entire class hour working with a single sentence under such circumstances.

Secondly, much of the discussion in the literature relies on examples which are stylistically marginal. The use of such examples for elicitation can lead to problems in interpreting the response; depending on the informant's fluency in the language of elicitation, he may not even understand what's being asked for. All too often a beginner will insist on a distinction between pairs of sentences when the distinction doesn't really exist in the object language. This can confuse and alienate the informant, who, understanding that a distinction is being made without necessarily knowing what the distinction is, may even produce sentences which are not really acceptable in the object language.

Finally, it is easy to overlook matters of real interest in a language by insisting too much on pursuing 'imported' issues from the literature on English or other languages. In working on Rapa Nui, for example, one student, having read a little about passivization in Maori and other Polynesian languages, began looking for evidence of passive morphology in Rapa Nui on the first day of elicitation. As it happens, Rapa Nui does not have a productive passive at all, as should have become apparent almost immediately, but the student assumed that the language would, being Polynesian, exhibit forms parallel to those discussed for Maori. He continued to demand distinct translations of English active and passive forms, perhaps assuming the informant didn't

understand what was being asked for. The sentences elicited did indeed provide extremely interesting data on case marking and word order possibilities in Rapa Nui, but these went unnoticed by the student, who was doggedly intent on the question of passivization and its effect on verb morphology; he couldn't accept that the question was irrelevant in this language. The result was that the informant became annoyed and began producing what turned out to be very questionable Rapa Nui sentences, and the student was frustrated at not getting the information he wanted, ignoring the facts which did emerge. This example recalls the old, but valid, idea that a language should be described in its own terms. This is not to say that a new linguistic theory is necessary for each language approached--quite the contrary--but it cannot be assumed that what's interesting in one language will be interesting in another.

3.2.2 So where does one start? The purely practical problem of transcription dictates starting with extremely short utterances, as does common sense, one would have thought. But all too often, as we have seen, students try to start off by eliciting complicated sentences immediately, either because they are importing an issue from the literature or perhaps because they are used to working with exercises containing such sentences and have given no thought to the process involved in the development of those exercises. In doing field work a definite plan is called for, so that investigation proceeds systematically and variables are carefully manipulated. To take an example, one can begin by eliciting single nouns and then progress to simple NP's, looking for determiners, adjectives, numerals, demonstratives, and so forth. One can then turn to verbs, watching for changes in NP's as they take on various argument functions and using as many already familiar lexical items as possible. Of course, one could equally well start with verbs, working from intransitives to transitives to ditransitives, keeping the NP's as simple as possible. The exact sequence followed is not important as long as there is a plan. A willingness to alter this plan as field work progresses guarantees that what's interesting in the language under investigation will emerge. The sudden appearance of a noun classifier when a noun and an adjective combine in a language like Thai is usually unanticipated by students, but they must be prepared to pursue the issue once it's discovered. And the unexpected appearance of certain inexplicable morphemes on attributive adjectives in a language like Korean<sup>10</sup> requires modification of the original plan to pursue the problem until it is ultimately discovered that the morphemes are tense markers.

Perhaps the best way to promote the idea that a plan of investigation is needed but that it must be a flexible one is to openly discuss what sorts of things happen in human languages that might surface as data are elicited. Before eliciting noun phrases, students might be asked to compile a list of the things one should look for in

noun phrases: gender, classifiers, definiteness, number, and the like. This is not of course the same thing as knowing how to identify a phenomenon when it appears; and this must be dealt with for each language as it comes up. Imagine how interesting things might get in Temne, which has obligatory, prefixed determiners and at least seventeen genders, based on cooccurrence relations between nouns and determiners. It could take students many class hours, depending on which nouns they happen to elicit, just to realize they are encountering bimorphemic words, let alone tangling with a gender system. In a problem for a syntax class, the instructor would of course select several nouns for each gender and present the data to force the morpheme cuts and proper semantic analysis. In the field, no one is there to present such a corpus.

3.2.3 Progressing from simpler to more complex constructions involves not only knowing where one is going but carefully controlling variables. It may seem obvious that one should hold everything constant and manipulate one variable at a time, but again, students have to be taught this. Suppose a linguist wanted to see if there were alternations in the language under investigation parallel to those in English which have been described by the transformation Dative Movement. Suppose further that this linguist begins by eliciting, as students commonly do, such pairs as 'I gave him the book' and 'I gave it to him'. Notice that in the second sentence, two variables have been changed, the word order and the form of the direct object (from noun to pronoun). But, given the naturalness of discourse anaphora, this fact may well be overlooked. Consider now what the outcome would be in a language like Irish.<sup>11</sup> The Irish sentences which would be elicited by the English sentences above are as follows:

'I gave him the book.'	Thug	mé	an leabhar	dó.
	gave	I	the book	to-him
'I gave it to him.'	Thug	mé	dó	é.
	gave	I	to-him	it

In Irish, as in English, the relative order of the direct and indirect object is changed in the second sentence. But with only pairs such as these in the corpus, there is no way to tell if the change in Irish word order is due to an optional rule like Dative Movement or to the fact that the direct object is a pronoun in the second sentence. In actuality it is the latter; a direct object pronoun in Irish OBLIGATORILY follows an indirect object, but the unsuspecting student, who may not even realize he has changed two variables at once, may well conclude that Irish has a rule of Dative Movement. Only if additional sentences are elicited, with all possible combinations of pronouns and full NP's, will the facts become clear. The data must include sentences like the following, which show that a change in English word order does

not always correlate with a change of word order in the Irish sentences:

'I gave it to the man'	Thug mé don fhear é. gave I to-the man it
'I gave the book to the man.'	Thug mé an leabhar don fhear. gave I the book to-the man
'I gave the man the book.'	Thug mé an leabhar don fhear. gave I the book to-the man

Manipulating the Irish sentences themselves will further show that the remaining logical possibilities are not acceptable:

*Thug mé é don fhear. gave I it to-the man
?*Thug mé don fhear an leabhar. gave I to-the man the book
*Thug mé é dó. gave I it to-him
?*Thug mé dó an leabhar. gave I to-him the book

The full set of data, grammatical and ungrammatical, shows clearly that there is no optional movement rule in Irish parallel to Dative Movement.

3.2.4 On the other hand, not changing enough variables can be a problem as well. A good example of this is the case of the student who was investigating demonstratives in Temne. Unfortunately, she stressed the English demonstrative in asking for these translations and induced the informant to provide a Temne cleft sentence every time a demonstrative was sought. Rather than 'that man left', which is correctly translated as

ɔ-langba    ɔwe    ɔ    kɔɛ  
the-man    that-one    he    left

what she was really getting was the Temne equivalent of 'It was the man himself who left', correctly rendered as

ɔ-langba    kɔɔ    kɔɛ  
the-man    himself    left

What she thought was a demonstrative was a reflexive emphatic pronoun. She not only completely misanalyzed the construction but failed to

discover true demonstratives and even the existence of constructions such as

ɔ-lanɡ̃ba    ɔwe    kɔɔ    kɔɛ 'It was that man himself who left'  
 the-man    that-one    himself    left

Any linguist might have made the initial error of stressing demonstratives, but this student failed to detect her error because she elicited demonstratives only in subject position. If she had tried to elicit a demonstrative in a direct object, the unexpected OSV word order corresponding to

ɔ-lanɡ̃ba    kɔɔ    i    nɛŋk    'It was the man himself who I saw'  
 the-man    himself    I    saw

would have indicated that much more was involved here than simple demonstratives. A decent syntax problem focussing on these facts in Temne would have included NP's in both grammatical functions, but this would not teach students how to control variables. We constantly see novice field workers failing to realize that they have not investigated the full range of variables.

This problem of manipulating variables illustrates once again the very general point that problem solving, whether in syntax classes or in phonology classes, involves a 'handcrafted corpus' and not real data acquisition. Data acquisition requires knowledge and skills not covered outside of field methods courses.

3.3 Part of the difficulty encountered in doing field work in syntax stems from the process of elicitation through translation. The translation process itself is an inexact one, which invites misunderstandings between linguist and informant, as the Temne example cited just above illustrates. In that case, the informant was translating the changes in number but not the deictic changes, and he was also providing a more complex construction than the student was looking for since he was concentrating on the contrastive stress of the subject NP's rather than the demonstratives. The student, unaware of the miscommunication, misanalyzed the construction and concluded that Temne does not distinguish formally between 'this' and 'that'. There is considerable opportunity for error of this sort, especially if one assumes a one-to-one relation between sentences of the object language and the language of elicitation.

In actuality, the relationship is not always one-to-one. Just to take one instance, a number of different constructions may crop up in the object language data as plausible translations of a single English sentence. Diegueño has a series of verbal auxiliaries which vary

according to the physical position of the referent of the subject NP. When, on the first day, a field methods class was given /məmju təmwa:/ as a translation of 'how are you?', it naturally occurred to no one that this form depended in part on the fact that the sentence was addressed to someone sitting across the table from the speaker. Only later, when the same English sentence appeared by chance in another context, as /məmju təmjaq/, (addressed to an invalid lying in bed), was the difference investigated and further insight into the auxiliary system of Diegueño gained. The practical difficulties involved in relating the language of investigator and informant through meaning and the techniques for overcoming these difficulties are not covered in standard semantics courses, by the way; these courses typically deal only with abstract theories of meaning and particular semantic phenomena within individual languages.

Yet another danger of uncritical reliance on translations is that the sentences used for elicitation may affect the result in unexpected ways and skew the data. In the class working on Rapa Nui, a VSO language with SVO as an alternate minority word order, direct translation of the SVO order of English resulted initially in a disproportionate number of SVO sentences in the elicited data.<sup>12</sup> This led at least one student to hypothesize (some weeks into the course) that Rapa Nui had dominant SVO order and to try to account for the VSO order by rule. Only after the student was encouraged to examine some texts and some spontaneous, unelicited utterances did the actual dominance of VSO order become apparent to him.

3.3.1 Translation is not the only way to elicit data of course; it is absolutely necessary to manipulate the object language material directly, as well. Checking for ungrammaticality and alternate word orders, for example, cannot be done through translation. A final Temne example can illustrate this point. Suppose the following simple paradigm were elicited:

'I came.'	i der
'You(sg) came.'	n der
'He came.'	ɔ der
'The chief came.'	ɔbɔi ɔ der

The last sentence appears to contain both a noun subject and a pronoun subject. It would be important to determine if the presence of the pronoun is obligatory or not, but trying to elicit the specific form ɔbɔi der through translation alone is clearly silly. One would present the informant with the string ɔbɔi der directly, and, in point of fact, it would be flatly rejected. Now suppose the paradigm below were

elicited next:

'The chief saw me.'      ɔbɔi ɔ nəŋk mi

'The chief saw you(sg).' ɔbɔi ɔ nəŋk ŋa

'The chief saw him.'      ɔbɔi ɔ nəŋk kɔ

'I saw the chief.'              i nəŋk ɔbɔi

To determine whether the absence of a direct object pronoun in the last sentence is optional or obligatory one has to construct and present to the informant both

i nəŋk ɔbɔi kɔ

and

i nəŋk kɔ ɔbɔi

That these strings are ungrammatical won't be discovered by asking the informant to think of some ways he CAN'T say 'I saw the chief' in Temne.

The Temne sentences presented thus far are all SVO; shuffling the words about is the quickest way to discover that SOV and VSO are not grammatical patterns in this language, i.e., we acquire the data

\* i            ɔbɔi            nəŋk  
I        the-chief        saw

\* nəŋk        i        ɔbɔi  
saw            I        the-chief

Testing an OSV order, a topicalization pattern common in SVO languages, entails presenting the informant with the string

ɔbɔi            i        nəŋk  
the-chief    I        saw

This direct testing of grammaticality is much surer than working via translation of topicalized English sentences. Since some informants speak English better than others, and some are more obtuse than others, asking for translations of *The chief I saw* or *It was the chief who I saw* or *I saw THE CHIEF* may well lead nowhere. Of course, only if the sentence to be tested really is both grammatical and a proper translation of the English probe sentence would there even be a possibility of the translation technique leading to the test sentence. As it happens, ɔbɔi i nəŋk is ungrammatical.

3.3.2 Another advantage of presenting constructed forms to the informant is that doing so often provokes other forms not anticipated by the investigator. Several Temne informants, when asked whether ɔbɔi nɛŋk was a good sentence, said that it was not, but that ɔbɔi, i nɛŋk kɔ was. Others offered ɔbɔi kɔŋɔ i nɛŋk (without a 'comma intonation') as a way of getting ɔbɔi at the front of the sentence. Only by extensive testing of constructed forms was it discovered that the first of these two proffered sentences involves a topicalized NP with an obligatory comma intonation and an obligatory resumptive pronoun, whereas the second is a cleft sentence involving an obligatory emphatic pronoun following the front NP, no resumptive pronoun, no comma intonation, and severe constraints on the form of the verb, which is in fact part of what turns out to be a subordinate clause.

3.3.3 The importance of text collection as a technique of data acquisition must also be pointed out to students, for text analysis frequently provides information about a language which could hardly be gained from elicitation of single sentences. Variations of major constituent order, for example, are generally conditioned by discourse considerations such as topic-comment relations. The factors governing choice of word order are unlikely to emerge through eliciting sentences in isolation; variations of this kind are usually given simply as paraphrases, if they are given at all. In addition, anytime there are more syntactic distinctions in a certain area of the object language than in the language of elicitation, these distinctions may not become apparent through elicitation alone; many complexities of syntax frequently come to the linguist's attention for the first time in texts. Consider the complex deixis system of Havasupai<sup>13</sup>, which includes seven distinct stems indicating relative distance from the speaker in time and space:

closest:	ya
second closest:	va
somewhat far:	ha/θa
Far, but recently near:	vu
farther:	nyu
farthest:	wa
'right over there' (near, but out- side the discourse)	wi

Moreover, these stems may combine with a prefix *nyi-* and sometimes with each other, for still further distinctions. The likelihood of eliciting all of these items through translation of English 'this' and 'that' is minimal. It would of course be possible to establish the relative distances expressed by each item through manipulation of context if it were known in advance that the distinctions exist. But it is clearly impractical to continue testing indefinitely for ever-finer distinctions which may or may not exist. Such distinctions come up naturally in texts. In this instance the situation is more complex still. Three of the stems above are also used in marking person agreement in inalienable possession, a fact which might well surface through elicitation, and they play a major role in marking definiteness and specificity within discourse, which probably would not. Analysis of texts is a much more natural approach to take to establish the range of usage of forms such as these.

There are even specific items and grammatical forms which are likely to appear ONLY in texts. In the Cakchiquel class the second person singular pronoun was elicited early and repeatedly as [rit] in both subject and object position, and its optionality was established through manipulation of Cakchiquel sentences. Only in examining a tape from the informant's brother did we find another morpheme, [ala], which was also translated as 'you':

nukutu:x	a	raso:n	ala	'She asked about you'
she-asked	about		you	

The informant had difficulty explaining the difference between [rit] and [ala], and the variation remained puzzling until it later appeared in texts in contexts where no one would have thought to elicit it:

ink'o	pa	xaj	ala	'I'm at home, you'
I-am	at	house	you	
awe	asiete	ri	kafe, ala	'Here coffee is 7¢, you'
here	7	det	coffee you	

This appears to be a kind of vocative usage, which further investigation established as limited to informal contexts in which interlocutors 'know and trust each other' well. It would be unlikely to occur in the relatively formal setting of field work elicitation.

Thus, text analysis often uncovers grammatical distinctions and intersentential phenomena not previously suspected. Manipulation and experimentation with individual sentences after the discovery can lead to further understanding of the phenomena, but may not be sufficient to reveal their existence in the first place.<sup>14</sup>

4.0 By using real examples from field work situations we have attempted to demonstrate that actually working with a language, as opposed to mere problem solving, involves skills, techniques, and knowledge not dealt with outside of field methods classes. Courses in syntax and phonology, in particular, are designed to teach students how to construct analyses and argue their merits, but the analyses are of carefully selected data, presented directly to those students. Where the data come from is not even considered, and students often get the impression that data acquisition is a simple process, similar, perhaps, to gathering acorns. Even the term 'data collection' invites this analogy. We hope to have shown that data acquisition, far from being a trivial process of 'collection', is a very active process of experimentation, manipulation, and interpretation. The skill and sensitivity required in this process must be instilled in students if the discipline is to remain capable of testing linguistic theories against a full range of empirical data. We must avoid turning out an entire generation of linguists unskilled in field work, restricted to working with a handful of well-known languages and to rehashing small previously published corpora of a few others.

APPENDIX

The reestablishment of field methods courses faces two difficulties at the outset. The first is that some linguistics departments may already lack the expertise to teach such courses. The second is that no adequate text book exists, in our opinion. We are working on a book ourselves, but since that is not likely to be ready for some time we feel it might be useful to comment very briefly here on a few of the practical issues involved in setting up a course in field methods.

The exact form such a course takes will depend on a number of factors, including the size of the class, the length of time allotted to it, and at what point in the students' programs it is taken. The class at Minnesota is taken in the second year of study after a number of prerequisites have been fulfilled, thus assuring a solid grounding in grammar construction before the students begin to work with raw data. The entire course can thus be devoted exclusively to field methods. Students still need close supervision in writing term papers, however, since problem solving courses do not prepare them to write grammatical descriptions (as opposed to solutions to exercises). Another approach, one with merits of its own, is to offer the course very early in the students' program of study, in which case it functions as an introduction to linguistic variety and analysis.

The course should be at least a semester long, we have found, though at Minnesota financial and other constraints currently limit it to a single quarter. The techniques can be covered in that short a time, but the depth of analysis of the language under investigation cannot be very great. This tends to frustrate students, most of whom become genuinely interested in the language itself. More ground can be covered if the instructor is already familiar with the language under investigation, since the class can then be steered away from dead ends and into more profitable avenues of research. This steering must be extremely covert, however, or the class ceases to be field methods and becomes instead a structures course, with the instructor telling the students what the language is like, using the informant as a mouthpiece. Unless the instructor is thoroughly experienced in teaching field methods, we strongly advise against using a familiar language. Besides, one of the rewards in teaching field methods is getting to work on a new language every time. We are currently investigating the use of microcomputers as another way to increase the depth of analysis attainable in a single quarter. The use of micros needs to be taught in field methods classes anyway, since the machines are becoming an important tool in actual field work.

Elicitation time needs to be carefully budgeted in a field methods course: the instructor should do some elicitation, especially in the

early stages, to show how it is done; the students should each do some in class so that the instructor can observe them and suggest improvements; and, finally, each student should work outside of class with the informant, at least one hour a week. Students need to be taught to plan this time with the informant very carefully in advance so that maximum efficiency is obtained. They should be required to present other people in the class with a written synopsis of what was actually learned so that others can make use of it as well as evaluate the success of the effort and the line of investigation undertaken.

A minimum of three one-hour class sessions with the informant each week is essential; more would be desirable, but this is often not possible. Informant sessions must be kept short, since informants and investigators tire quickly and long sessions definitely become counterproductive. It is also important for the class to have time to meet without the informant present at least once a week. This time is necessary to discuss elicitation strategies and techniques, to compare analyses of the data acquired thus far, and to talk about the way the work is progressing. Informants are usually bored by these sessions, and, moreover, much embarrassment ensues if it is necessary to discuss any problems students have in dealing with them.

Informants must be chosen with some care. They should be interviewed in advance by the instructor, and particular attention should be paid to their English ability and their general intelligence level. Intelligent informants with a good command of English can greatly speed up research, an important factor to consider if there are indeed time constraints on the course. Dependability is an important trait as well; informants who frequently fail to show up for sessions can ruin everything. One may have to cope with such informants in actual field work, but they should be avoided in a course that lasts only a few months. One possibility is to use foreign students who are just beginning a major in linguistics. This would give some departmental control over them and might tend to enhance their dependability, and it would also be a good way to provide some financial support to students who are not yet qualified to serve as teaching assistants. It is important to insist on beginning students, since what is needed are linguistically naive informants who do not attempt to provide descriptions instead of data.

FOOTNOTES

\*We are grateful to Dan Dinnsen for the conversation which initially led us to write this paper and to Dan Dinnsen, Walt Olson, and Jerry Sanders for reading and commenting on various drafts of it.

<sup>1</sup>By field work we mean not only work conducted 'in the field', i.e., in the setting where the language is actually spoken, but any research conducted with the assistance of a native speaker who is not a linguist.

<sup>2</sup>There is a deeper issue here. In phonetics classes, the instructor selects a contrast and trains students to perceive it. In field work, one does not even know initially if there IS a contrast to perceive.

<sup>3</sup>Temne is a West Atlantic language spoken in Sierra Leone. Hutchinson has worked on the language over a period of years both in-country and in the United States, and has also taught a field methods class using a Temne informant.

<sup>4</sup>Hutchinson spent nine months working on Thai during his senior year at the University of Kansas. Such field work was required of all undergraduate linguistics majors and had to result in a B.A. thesis. It was extremely valuable training.

<sup>5</sup>Rapa Nui is the Polynesian language spoken on Easter Island. It was the language used in a field methods class and a later linguistic structures course taught by Stenson.

<sup>6</sup>Diegueño is a Yuman language spoken in Southern California and Northern Baja California. Stenson studied Diegueño first in a field methods course at UCSD and continued to do field work with several speakers of the language between 1970 and 1975.

<sup>7</sup>Of course, factors other than lack of attention can contribute to obscuring valuable visual information. Cakchiquel (a Mayan language used by Stenson in a 1981 field methods class) has a contrast between glottalized and plain obstruents, and the glottalized consonants are accompanied by movement of the larynx which is not found in production of the non-glottalized ones. However, in the class working on this language, though the participants had become attentive to visual cues IN GENERAL, no one noticed the larynx movement until another linguist experienced in Mayan languages pointed it out. The correlation of larynx movement and glottalization would probably have become apparent rather quickly, and would have been a valuable aid in distinguishing the two obstruent types in early stages of investigation, but the class took

place in Minnesota during the winter and the informant was usually wearing a turtleneck.

<sup>8</sup>Taught by Hutchinson in 1978.

<sup>9</sup>This is as true for work on one's native language as for any other kind of research--the only difference is that the data are sometimes more accessible if the language is one's own.

<sup>10</sup>Hutchinson studied Korean for a year at Indiana University in a language course which included field work to supplement the meager published teaching materials.

<sup>11</sup>Irish, a Celtic language, has been studied by Stenson since 1970 through formal study and field work both in Ireland and in the United States.

<sup>12</sup>In similar cases there might be no VSO sentences produced at all.

<sup>13</sup>Havasupai is a Yuman language spoken in Arizona, in and around the Grand Canyon. Havasupai deixis data were provided by Leanne Hinton in a seminar on comparative Yuman at UCSD in the spring of 1975. Stenson did field work on the Havasupai reservation in 1975 in connection with a bilingual education and alphabet project.

<sup>14</sup>The texts themselves may be of several types. Formal storytelling is a traditional source of text material, but not the only one (and may in some cases produce a more formal style than other kinds of elicitation). It is also possible to elicit short texts of a more casual sort by asking the informant to describe his home and family, tell what he did the preceding weekend, and so forth. Sometimes tapes sent by friends of family in lieu of letters may be available, providing the most informal style of all. In some languages written texts can also be found for syntactic analysis. All are valuable, though the details one finds in each may vary and this must be kept in mind.