Methodological suggestions for conducting linguistic fieldwork
in Amazonia

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[original English version]

Abstract

This paper proposes methodology and provides practical tips for conducting descriptive field research on little-known languages, based on the author’s research experience in western Amazonia. Topics include evaluation and use of available linguistic literature, preparation for the field, interaction with native-speaker consultants, data collection techniques, and writing up the description. The emphasis is on looking for ways to make language data collection practices more objective and grammatical descriptions more accountable.

1. Introduction

The problem: As disappointing as the lack of information on Amazonian languages is the poor quality and unreliability of most of the information that does exist. While some apparently good comprehensive descriptions of Amazonian languages have been written, much of the available material is clearly of such poor academic quality that it would be irresponsible to base typological, comparative, or historical work upon it without qualifying it as “tentative.” The most frustrating aspect of this Amazonian linguistic (mis)information is that it is not always possible to judge the reliability of even apparently good articles or
monographs without going to the locality where the language is spoken, a problem that will become even more serious when these languages become extinct.

The proposed solution: I call here for language description research standards in Amazonia to be raised, through the following suggestions: i) increasing the total amount of time field linguists spend in the field to one year or more; ii) consistent application of sound data collection and analysis methodology, as proposed in the present paper and elsewhere; iii) in all theses and monographs, explicit and precise description of methodology, nature of the database, and amount of time spent in the field (see Fleck 2003 and Fleck forthcoming for examples), and for articles, at least a reference to where this information has already been published or is otherwise readily accessible (see Fleck in press for an example); iv) making publicly available a significant proportion of the data upon which grammars and other linguistic descriptions are based, especially parsed text with accompanying audio recordings; and v) in the final publication or theses, explicit qualification of any questionable data or uncertain conclusions.

These suggestions, which will be discussed in the following sections, will not only increase the accuracy and quality of language descriptions, but will allow other linguists to judge their reliability.

I must make clear to the reader that I do not claim to have discovered the best way to conduct linguistic field research. Nobody has done that yet, and no objective conclusion will be reached upon this topic until methodologies are compared through controlled experimentation.¹ All publications on linguistic fieldwork methodology are essentially compendia of proposed techniques that the author has found useful for obtaining data (that

¹ This could be done, for example, by researchers unfamiliar with Chinese conducting research on a Chinese dialect as if it were undescribed, and only afterwards comparing their results with published descriptions and electronic corpora of Chinese.
they feel confident is correct) and warnings about practices found to be unreliable, learned from a combination of first-hand experience and second-hand information from teachers and colleagues.

This is just one more paper of this type, but unlike some other authors before me, I wish to make clear the fact that I am simply presenting some suggestions that my linguistic colleagues may consider when they conduct fieldwork, as opposed to making this an essay aimed at dictating how linguistic field research must be done by all. Rather than by dishonestly presenting methodologies as proven or universally accepted dogma, I will try to persuade the reader to consider my suggestions by providing the reasons why I find these to be sound practices. Each field research experience is unique, so knowing the reasoning for proposed methodology helps researcher tailor their own field practices.

My suggestions stem primarily from my own research experience. I have conducted extensive zoological field research in Amazonian Peru (a total of almost three years), and therefore I see linguistics from the perspective of a scientific discipline where researches strive to seek out objective means of data collection and analysis that will satisfy even their most skeptical colleagues. Subsequently, I spent a total of more than three years in the field working with the Matses language (Panoan family, spoken in remote villages in Amazonian Peru and Brazil), and therefore had a chance to discover many errors made during my first year, noting what practices resulted in those errors. Philip Davis and Spike Gildea, two experienced field linguists, introduced me to linguistic fieldwork as my teachers in intensive field methods courses at Rice University, and my knowledge of this topic has since augmented considerably through discussions with colleagues who have written or are writing grammatical descriptions in Amazonia and other parts of the world. Therefore, some information provided here is specific to western Amazonia, while much of it is relevant to any part of the globe. My shortcoming is that, while I have worked briefly on other Amazonian
languages, I have only conducted extended field research with only one group. I recommend that the reader consult other writings, especially Payne (1997) and Aikhenvald (2007), to get a greater range of perspectives on this topic.

2. Preparation for the field

The subsections of the present section offer tips on preparation for the field, including use of available literature on the language (§2.1), and issues concerning the contact language (§2.2), logistics (§2.3) and field equipment (§2.4). The most important general advice that I can give is to plan for as much time in the field as possible, and throughout this paper, it will repeatedly become evident that shortage of time in the field not only limits the size of the database and the opportunity to detect errors, but also compromises the ability to collect reliable data.

2.1. Literature

In my opinion, a full-scale in-depth study of a language ideally should have original data as its foundation, rather than the work of others. Reading someone else’s work before doing one’s own research on the same language is like trying to finish a crossword puzzle that somebody else has started, with an undetermined number of mistakes in their answers: I would prefer to start from scratch and then identify the other person’s and my mistakes by comparing the solutions afterwards, rather than unwittingly being led to make the same mistakes. Those who think they are not subject to this source of bias may allow it to go on unchecked and are most affected by it. Descriptions of obvious poor quality are actually a less dangerous of a source of bias because the researcher will distrust them from the beginning. On the other hand, works that are internally consistent, conducted by a reputable linguist or otherwise appear to be reliable, may in fact contain gratuitous conclusions and/or
be based on erroneous data, and if a researcher reads these prior to starting his/her own field research, they will be less likely to discover these errors.

Similarly, looking at descriptions of related languages prior to analyzing one’s research language can have an effect similar to trying to walk due north across a cornfield with rows running NNW.

Realistically, in most cases it is actually not possible to go into the field without having had exposure to some material on the research language or closely related languages. My suggestion here is that to avoid this literature during early fieldwork if possible and, if one cannot, to at least be conscious that this information is a potential source of bias that can stifle fresh and possibly better analyses, leading one unconsciously in the wrong direction. I consulted a Matses pedagogical grammar written by a missionary prior to my research with the Matses, and the errors that this led to in my research took more than a year to weed out.

As a result, I conclude that starting one’s research on a language with second-hand data is a shortcut that can compromise the quality of the grammar, and one that need not be taken if an adequate amount of time is available. However, it seems like a good idea prior to the final research trip before graduation or publication, to acquire all material on one’s research language, comparative works on the family, and the more significant materials on sister languages, to check their data in the field, and to see if other authors’ analyses account for the observed linguistic patterns better.

One of the reasons why it is often not possible to avoid literature on one’s research language prior to the first field season is that many linguistics departments do not have the resources to fully fund extended field research, requiring students to apply for outside funding. For Amazonian languages, currently a main selling point of a linguistic

2 Dictionaries and word lists are a less problematic short cut, but one must remember that these often contain errors as well.
description project is that the language is undescribed or “underdescribed.” A literature search for Amazonia may begin with Fabre’s (1998) general bibliography of South American linguistics and anthropology, and there are also good annotated bibliographies for some language families or specific languages, such as Erikson et al.’s (1994) Panoan bibliography or the Yagua bibliographies by Chaumeil and Chaumeil (1976) and Chaumeil (1987). What one finds in these bibliographies, often to one’s surprise, is that there are several or even many linguistic sources listed for the intended research language. Many of these are unpublished Summer Institute of Linguistics (SIL) microfiche, SIL pedagogical grammars and perhaps also a Master’s thesis or Ph.D. dissertation from a South American university. These sources are often difficult to obtain, so it is worth noting their contents. Most SIL microfiche, especially those in unedited series like the Peruvian Informes de Campo, are actually photographs of field notebooks and of typed or handwritten word lists, morpheme lists, and transcriptions of myths, sometimes without translation.3 Pedagogical grammars are not written for the purpose of being used as linguistic references, as they evidently are not (nor do they claim to be) based entirely on data collected from native speakers. South American theses that I have looked at so far are based on minimal fieldwork, use inherently unreliable methodology, cover only a fraction of the relevant topics, and those I have checked in the field contain invalid data and readily disproved generalizations. Thus, all these give a false impression of a language being well described, and many are actually sources of misinformation. One should not be discouraged from writing a grammar on a language when seeing such lists in a bibliography. Rather, one could make the case that it is more of a priority to correct this linguistic misinformation than to describe a language that no one has ever worked on, just as there is more urgency to rebuild an unstable bridge than to build one

3 These microfiche can be ordered from the SIL International Bookstore in Dallas, though unfortunately some of these are missing from the archive or are illegible.
where no bridge exists. Unfortunately, the existence of these sources makes applying for grants a tricky process, as one can neither ignore them, nor objectively discredit them prior to verifying them in the field.

2.2. Contact language

Research in Amazonia generally involves using either Spanish or Portuguese as the contact language (the Guianas being the exceptions). The less mastery the field researcher has of the contact language, the greater the level and frequency of misunderstandings. This is invariably true during the period before the fieldworker achieves the ability to converse in the research language. Once one attains this level of fluency, it is advisable to interact as much as possible with language consultants (and other villagers) in the research language. But most academic linguistics never master the research language to a level that allows them to unequivocally discuss complex topics (e.g., evidentiality, multifactorial events in a text, etc.). In my case, even though I eventually became fluent enough in Matses to discuss any topic, it was often desirable to revert to Spanish to confirm that I got the information correct. The level of misunderstanding will be compounded if the consultants themselves have only rudimentary skills in the national language. I have talked to several linguists who found their Spanish or Portuguese good enough to communicate effectively in Latin American or Iberian cities and non-tribal towns, but were surprised to find difficulty expressing complex ideas with their research consultants. This is because most native speakers of Spanish and Portuguese, in addition to being able to compensate for foreigners’ errors, generally have knowledge of the more standard/international varieties that foreigners are likely to have learned, while this is often not the case with members of native Amazonian cultures. There are helpful publications on the vocabulary and grammar of Amazonian varieties of Spanish and Portuguese, but the key to overcoming this communication barrier is to spend enough time at the field localities and nearby regions. It is possible to conduct fieldwork without
mastery of the contact language, as many linguists have done. But, in my view, time saved by not learning well the contact language well will have to be spent in extra replication and taking extra care to compensate for the communication gap; otherwise the linguist will invariably pass on many misunderstandings to his/her readers.

2.3. Logistics

Part of being a good field linguist is being able to solve logistical challenges in the field (the goal is to come back with data, not with excuses). Unfortunately field troubleshooting skills cannot be readily taught in print, but it is possible to give a number of tips to avoid some potential difficulties.

In most research situations, as one approaches the research locality, each leg of the trip becomes both shorter and more difficult. Similarly, as one gets closer, the places where one stops will have less access to shops, fewer means of communication, and, for those who are not acclimated to village life, fewer comforts. What this means, then, is that during extended travel to the research country, one will often need to pick an intermediate locality, usually a town or small city, to establish as a base, where one may return several times from the speech community to purchase equipment, communicate with supervisors and relatives, and, if possible, store books and other gear. The number of times that one returns to this base will depend on how expensive, time-consuming, or otherwise inconvenient it is to travel between the base and the research locality. If one has never been to the research locality before, the first trip could be more of a reconnaissance mission, planning for a relatively short stay and taking a minimal amount of equipment. This will give people a chance to know you before you show up with all you equipment, and will help one to know better how to prepare effectively for a longer stay on the next trip.

In addition to identification of phonological and grammatical patterns, a good description will include details on semantics and usage, which is best accomplished by
observing the language in the environmental and cultural context where it evolved and is still used as the everyday means of communication. However, I have found it very profitable, when traveling to the base, to invite one or two consultants along to continue to work on text analysis, to elicit data, and to continue practicing the language. This helps one make the most of one’s time in the research country and provides a chance to see how the language is used to describe non-traditional objects and situations.

Health is also an issue to be taken seriously. Of course, one should see a doctor to get the necessary vaccinations, antimalarial medication, etc., but one should keep in mind that there are many other illnesses that one will not be protected from (dengue fever, dysentery, colds, etc.), and that these illnesses tend to be more varied and common in South American cities and non-tribal towns than in Indian villages. Going to an Indian village with a contagious illness, even a common cold, is not only morally reproachable, but it is a sure way to win people’s dislike and to have a miserable time in the field.

2.4. Electronics and other field equipment

The most important electronic tool to take into the field is a good recording device, including a high-quality microphone and plenty of recording media and alkaline batteries. It is essential to take a back-up recorder into the field, in case the primary machine is damaged, and to back-up minidisks/sound files/tapes that may be damaged or accidentally erased during the transcription process. Although I have not done so yet, it could be worthwhile record some texts using a video recorder in addition to addition to a high-quality audio recording device to document facial expressions, non-verbal gestures, etc.

Another piece of equipment that one might consider taking into the field is a laptop computer. A laptop can be used to parse texts and put them into a searchable format right away, to organize vocabulary, and, especially if one will have long field seasons during the later stages, to begin writing chapters of the grammar. Because most remote villages do not
have electricity, a solar power system may be required to run a laptop. Solar power systems are surprisingly easy to set up and use, and a basic one will cost less than US$500. Solar power can also be used to run other electrical equipment, to recharge batteries, and even to run a small fan and worklight.

The type and amount of electronic equipment one actually takes to the field will depend on several factors. One, of course, is funding. A second one is the accessibility of the research locality, whereby it may be too cumbersome to carry in a laptop and a solar power system. A disadvantage of this equipment is that one will be burdened by having to protect it from theft, animals, humidity, etc. at the research locality, during transport, and at the base city/town. The high and constant tropical humidity reduces the life expectancy of electronic equipment. Ideally electronic equipment that is not being used, such as back-up recorders and original recordings, should be stored in a water-proof case (e.g., Pelican cases) with desiccant (available at most photography shops). These cases will also protect equipment from insects and possible capsizing of watercraft.

Some have claimed that laptops and video recorders can create a psychological gap between researchers and the locals, so one should assess during the reconnaissance trip whether it will be a good idea to take these items. Curiously, however, I have never heard this claim made by anyone who has actually taken this equipment to the field. In contrast to these unsubstantiated assumptions, in my experience and those of others I have talked to, video cameras and computers (the latter also used for displaying photographs) actually draw people in, and allow one to meet and make friends with people who are otherwise uninterested in the linguist’s research. Mostly on account of the logistic complications of transporting and protecting computer equipment, one might consider leaving behind a computer on the first trip to a remote location.
Whether one takes a computer into the field or not, one should consider using parsing software, such as SIL’s Linguist’s Shoebox/Toolbox. It is a considerable investment in time to learn how to use the parsing program and to eliminate bugs that crop up while parsing, but it makes parsing texts easier and more consistent, and is an effective way to review one’s data and to learn the language. Once the time-consuming task of inputting and parsing the data is done, one will have a versatile and easily searchable database for the rest of his/her linguistic career, and one that can be readily archived or used to generate a text collection for publication. It is possible, for those who are not skilled with computers, to use simply paper and pencil, but everyone I have talked to who has learned to use Shoebox proficiently has found parsing programs to be highly efficient, particularly for the purpose parsing data consistently and for quickly searching texts without missing potentially crucial examples.

Another valuable piece of equipment, which can be purchased in most Amazonian towns, is a hammock, as Amazonian houses often do not have furniture. An additional hammock for consultants is also a good idea, as I have found that consultants get less antsy to leave when they are comfortable. Other valuable equipment includes a mosquito net (which can be fitted with sleeves for sleeping in the hammock), a headlamp for working at night, a light backpack, sunscreen (if extended river travel is necessary), running shoes (better than heavy boots for overland travel in rainforest), and a first-aid kit.

It might be worthwhile to take some books on general typology and language description into the field. This is especially helpful if one is planning to write some chapters in the field. I found useful Shopen (1985; all three volumes) and Payne (1997).

3. Language consultants

Perhaps as important as any step in the course of the field research is selecting with whom to work. There will not only be a marked difference in speakers’ ability to do consultant work, but typically different speakers will be better at certain tasks. I found that
Matses speakers with better Spanish or Portuguese skills were better at discussing complex constructions and meanings, and more willing to provide lengthy and detailed explanations. Other speakers were better able to distinguish between judging an elicited sentence based on grammar vs. semantics. Some speakers were more patient and better at helping with the sometimes tedious process of transcribing texts. Others spoke more clearly and were better for providing texts and/or elicitation for the purpose of phonological analysis. Meanwhile, others did not have the ability to do any of these tasks well, others were dishonest, and still others found it comical to provide disinformation. Again, my key was to spend as much time in the field as possible to get to know people’s abilities and personalities, and to establish friendships based on sincere mutual trust and respect.

Occasionally one is lucky enough to find a “star consultant,” who is a good all-round assistant/teacher, and who can provide insightful information that helps the linguist advance faster and deeper. But one should never rely too heavily on a single consultant no matter how good s/he is, especially because star consultants often speak the national language well as a result of having spent a considerable amount of time outside the community.

I suspect that exceptionally good and profound grammars of little-known languages only come about when both the linguist and the consultants are good, so if possible, it may be worthwhile traveling to another village if the speakers in one’s initial field site are mediocre consultants. Another possibility is to pay one or more people from other villages to come to your research village regularly (if close by) or for extended stays. I would speculate that a good linguist could write a reasonably good grammar with mediocre consultants, but it would require considerably more time in the field.

Cultural sensitivity is also an issue to consider when interacting with consultants. Sometimes it is not appropriate for linguists to work with speakers of the opposite sex, though it may be acceptable if the spouse is present. Compensation for language consultants and
others who provide other sorts of assistance or food may be in the form of money or trade items purchased back at the base. During the first trip, one can ask the consultants how they would prefer to be compensated during following trips. In my case with the Matses, I paid salaries in cash to 3-5 consultants that came to my house daily for 1-2 hours, and gave trade items (machetes, clothing, shotgun shells, etc.) to itinerant consultants, such as older people who provided texts and archaic or ceremonial language at their homes.

4. Data collection

Let us begin this section with an analogy. Witnesses in legal trials have been known to give false evidence, sometimes intentionally and sometimes unwittingly, that has resulted in the unjust imprisonment of innocent defendants. Rather than eliminating witness evidence from the courtroom, judges and juries use hearsay evidence cautiously, taking into account the nature of the witness, compatibility with other witnesses’ accounts, and considering other types of evidence to judge the case and evaluate witnesses’ statements. In linguistics, some linguists have overreacted by stating that elicitation, or some types of elicitation should be done away with altogether due to the fact that this type of data can easily lead one to false conclusions if one is not careful. In my opinion, even though text data requires less cautious treatment, no category of linguistic data is unproblematic. The type of grammar that I would trust is not one where the author decides offhand to ignore one type of evidence, but one where he/she has amassed as many types of different evidence as possible and before reaching a conclusion, considering all the evidence and weighing each type according to its reliability.

It is unrealistic to believe that one can be 100% objective in linguistic description, but this is not an excuse to be sloppy. I believe grammar writing should not be a completely creative process like poetry or abstract painting, but rather I believe that two good linguists, both following sound methodologies, should come up with fairly similar conclusions. For
me, a grammar where the linguist relies to heavily on his/her “intuition” will not be replicable, and therefore akin to a work of art, rather than an attempt at objective description.

4.1. Texts

There is a reason, I suspect, why some linguists work on texts only at later stages of fieldwork or not at all: because transcription and especially parsing texts and glossing the morphemes is very difficult when one is unfamiliar with the research language. Even those who intend to begin with texts early on may become frustrated and put aside this important task. Furthermore, when one does work on texts while still being unfamiliar with the language, the number of errors tends to be high. In light of this, I suggest several steps that one could take to make their first text analyses as easy as possible, to make this a manageable task and to obtain a useful end product.

One such step is to begin with texts about a subject matter with which one is already familiar. Otherwise, one finds oneself having to learn about the matter (e.g., how to make an arrow, animal natural history, kinship relations, etc.) through the text and the translation process, rather than the other way around. For example, the first Matses texts that I collected were on mammalian natural history, a topic with which I was already very familiar, and this prior knowledge helped me understand more quickly and more precisely the narrator’s message and facilitated dialog with translation assistants. In the absence of this type of prior knowledge, one can record a text about how to make some artifact such as an arrow or a clay pot, and then ask to be taught to make one, before transcribing the text. Or one can participate in some activity like building a house or felling a swidden, and then record and transcribe a text describing this task. Consider that even in our own native language we can have difficulty understanding lectures or writings on unfamiliar topics.

Rather than beginning transcription with the first text one records, an option is to record multiple texts from several speakers, and then choose one based on topic, clarity of the
speaker, and length. In the Amazonian cultures I have worked with, I have found that the first type of text that speakers want to have recorded is mythology. Unfortunately, myths often have archaic vocabulary and grammar, which is better studied after learning the everyday language. Another problem is that narrators often tell the myth in a style that assumes that the audience is familiar with the main story line, leaving out information that is crucial to someone trying to understand the myth for the first time. Upon learning (the hard way) the difficulty of working on myths, in order not to appear to be devaluing their mythology, I simply recorded myths when people wanted to tell them, without the intention of transcribing them until much later. The larger the final text database and the more varied the subject matter, the more grammatical morphemes and types of constructions will likely be represented in the corpus. Therefore, it is advisable to schedule enough time for compiling a large and varied text database in the field.

All texts contain performance errors, including false starts, repetition of words, and grammar mistakes (agreement errors, etc.), which the person helping with the transcription and translation can usually readily pick out. Furthermore, speakers will often judge certain elements of the text as stylistically odd, a sociolinguistic variant, or provide other insights that help the linguist understand the construction found in the text. Therefore, part of the process of transcribing and translating a text is to ask about the grammaticality of every sentence with the translation assistant. Furthermore, the researcher will identify sentences that appear wrong according to his/her current understanding of the language, and must inquire about these especially carefully. However, it is arrogant for the field linguist to substitute his/her own intuitions about the research language for native speakers’ judgments. Those who overestimate their intuitions in this way will forgo double-checking a large number of sentences from texts, and will then be likely to use these sentences, which fit in well with their initial view of how the language works, as pivotal examples in their analyses. Although
it may seem tedious, the objective procedure is to completely double-check completed texts with additional speakers. Only then would I consider a text to have the status of valid linguistic data, with the errors (and corrections) excluded as data points for grammatical analysis (though for discourse analysis, even the erroneous sentences may need to be taken into consideration). On a personal note, after becoming fluent in Matses and working many months with texts in the field, I became proficient at detecting speech errors; but upon completely double-checking completed texts, I was always surprised to find that I had missed a few sentences that speakers judged as completely unacceptable.

There are some things to keep in mind when double-checking grammaticality of text sentences. If the narrator is an elder or otherwise prestigious person, the translation assistant may be hesitant to say it is wrong (even though they may be all too ready to say that you, a language learner, got it wrong when you say the same utterance). This can be overcome by double-checking the texts after transcription with the narrator, who, depending on his/her nature, may point out his/her own speech errors, especially if you explain that everyone misspeaks in all languages. A second possible problem, biased in the opposite direction, is that someone may be all too eager to discredit the narrator to put himself/herself forward as a better speaker. My solution is to check many times, especially if it is a pivotal example in an argument in the grammar. A third issue is distinguishing between speech errors and the use of disfavored constructions. In a text published for an academic linguistic audience, I feel it is useful for sentences judged incorrect by other speakers to be at least be flagged with a footnote saying that it was judged wrong, odd, or disfavored by others, if one is not ready to make an outright claim that it is wrong. A fourth issue is that when the linguist reads back transcribed sentences, they may be judged as wrong due to the linguist’s errors in intonation or pronunciation. Therefore, it is a good idea to play back sentences to the evaluators.
I feel strongly that it is not enough simply to transcribe and translate texts in the field, but parsing as well is profitably done in the field. This is because even if one understands exactly what a sentence means, it is seldom possible to know what all the morphemes mean or even where to segment the words. For example, pairs of morphemes may come to have non-additive meanings, and some phrases may have “idiomatic” usages. Some elicitation will need to be performed while parsing texts in order to understand where to segment words and to elucidate the meanings grammatical morphemes.

The next section will introduce elicitation methodology, and will compare the strengths and weaknesses of these two complementary means of obtaining data.

4.2. Elicitation (of grammatical data)

Elicitation can be relied on less when one has a very large text corpus to consult, as is available for languages like English, French, etc. However, for little-known languages, the only texts that will be available at the time of the initial description may be those transcribed by oneself. These relatively small text databases represent only a minute fraction of the research language, and therefore, for making certain generalizations, are only a source of hypotheses. Elicitation is not just a way to fill gaps in the text database, but also the only practical means of testing these hypothesized generalizations. For example, one may find in the text database 50 instances of noun-adjective noun phrases, with all these having the noun preceding the adjective. One may then induce the hypothesis that nouns always precede

\[\text{In my opinion, translated material, especially Bible translations, can never be used responsibly as pivotal language data. The latter are not even in a context that speakers understand clearly. Likewise, published text collections that are intended for the indigenous community or for non-linguists are of questionable validity as sources of data. It may be worth reading these as sources of hypotheses and elicitation topics, but not to make any claims about the research language in the absence of more reliable types of data.}\]
adjectives in noun phrases, and then go on to test this with all the adjectives in the lexical
database, checking with multiple consultants whether it is possible to have the noun following
the adjective. This hypothesis formation-testing methodology is part of the justification for
working on texts before doing extensive elicitation.

In linguistic publications and theses, elicited examples, especially those in the form of
minimal pairs, can be much more illustrative than examples from texts. For example, some
authors use a long, complex sentence, isolated from the context of the text in which it occurs,
to supposedly illustrate the meaning of some morpheme. I find that these examples serve
little more than to show what sort of situation the morpheme may appear in, requiring the
reader to take the author’s word on the actual meaning and function of the morpheme.

Ideally, space permitting and the data being available, certain morphemes or other
grammatical phenomena will be illustrated by both a text example and (a minimal pair of)
elicited examples. In some cases, I elicited examples exclusively for the purpose of
illustration.

A second reason for recommending working with texts before doing elicitation (and
why some linguists exaggerate and suggest doing away with elicitation altogether) is that
elicitation has many “pitfalls,” that is, it puts one in a situation where great care must be taken
to avoid ending up with erroneous data. While text analysis does not provide entirely
problem-free data, as discussed in the preceding section, with elicitation it is not just possible,
but easy to end up with completely incorrect data if poor methodology is followed. The worst
part is that, unlike with real pitfall traps, one may not be aware of a misstep until much later—or
never. The key points for successful elicitation are: i) following sound methodology, ii)
replicating elicitation with multiple consultants (occasionally with more than one consultant
present, always noting the date and name of consultant), iii) achieving some competence
speaking the research language, and iv) being aware of the pitfalls. In the remainder of this
section, I briefly describe three types of grammatical elicitation and pitfalls specific to each type, along with some tips for avoiding falling into these traps.

**i) Grammaticality judgments.** In this type of elicitation, the linguist constructs a sentence and asks the consultant if it is grammatically correct.

**Pitfalls:**
- It is possible to ask question in a leading manner that can result in a consultant making poor grammaticality judgments.
- Some speakers are too restrictive and others are too liberal.
- Consultants may accept or reject the sentence based on the semantic content, rather than its grammar.

**Tips:**
- Base constructed sentences on overheard or text sentences (though in a few cases this will not be possible).
- Avoid culturally or naturally improbable sentences (such as “the deer ate the jaguar”).
- Provide a plausible context in which the elicited sentence might be uttered, and record this context in the notebook along with the elicited sentence.
- Require the consultant to repeat the sentences and explain their meanings.
- Let the consultant know that “I’m not sure” is an acceptable response, and that some sentences may be “kind of bad” or “marginally acceptable.”
- If rejected or judged as questionable, ask how the sentence could be fixed (some responses will be completely different, and others may be slight modifications of the original: both can be insightful in different ways).
- Use a consistent system for scoring elicited sentences with respect to whether they were accepted, rejected, questionable, or corrections for a preceding rejected/questionable sentence.

**ii) Translation requests.** In this type of elicitation, the linguist asks the consultant to
translate a sentence from the contact language into the research language. This type of elicitation can provide useful data, such as: “no intra-phrasal conjunction exists in the texts, and in elicitation speakers translated this with comitative constructions or multi-clause constructions.”

Pitfalls:

- Translation effects: the reply may be a calque from the contact language.
- The translation may have a different meaning than the original sentence.

Tips:

- First try to get the construction with elicitation of type (i), and use translation requests only after all type (i) elicitation attempts are rejected.
- Clearly mark this sentence type as a translation request.
- Follow up the translation request with further elicitation of type (i) and come back to the translated sentence and ask the consultant to say it again (and, as usual, replicate the elicitation with others).

iii) Evaluation of minimal pairs. In this type of elicitation, the linguist constructs a minimal pair involving sentences that differ with respect to only one variable, and then asks the consultant: “What’s the difference between these two?” A frequent answer is: “They are the same.” Other times a consultant, especially a good consultant, will have a more interesting answer, such as reference to sociolinguistic variation (e.g., “old people use one form and young people the other”) or will provide a different extra-linguistic situation for each.

Pitfalls:

- A linguist might take the consultant at his/her word (e.g., with respect to one word being archaic or used only by a subset of speakers), and not check if it is actually so.
- Occasionally the two forms really are identical in meaning and pragmatics, but the
consultant nevertheless provides different extra-linguistic scenarios for them.

• One option might simply be preferred over the other in some discourse contexts, but the consultant may imagine a meaning difference that does not really exist.

Tips:

• Consider the responses as clues from which one can make an inference based on the different types of answers.

• Treat this inference as a hypothesis and devise a way to test it, such as by analyzing discourse patterns in texts and conducting further elicitation.

A final note on elicitation: In my opinion, everything is “fair game” for coming up with hypotheses, while only material that was collected carefully using sound methodology and double-checked several times can be a source of valid data points for testing a hypothesis, and for arguing for and illustrating a generalization. Many of my own elicited sentences were never written down because they were aimed more toward getting a feel for how the form/construction was used, prior to trying to pin down the grammatical properties.

4.3. Vocabulary

Elicitation of vocabulary is important for researching a language for the purpose of writing a grammar. In the beginning of fieldwork, vocabulary should be transcribed with as much phonetic detail as possible, and I recommend that vocabulary collection precede or be done in tandem with work on texts for the following reason: This lexicon will be the basis for phonological description, for arriving at a practical orthography for transcribing texts, as a resource for translating texts, for becoming familiar with the sounds of the language, for learning to speak the language, and for beginning to evaluate consultants’ abilities, consistency, patience, honesty, etc.

Just as unsound collection methods for grammatical data will yield invalid data, improper methodology for matching terms in the research language with scientific names will
result in a dictionary full of misinformation. The worst thing one can do is to rely solely on vernacular names in the national language to arrive at scientific designations. I have suggested methods for obtaining scientific identification for plants and animals with or without the aid of biologists elsewhere (Fleck 2007).

4.4. Other sources of data

An additional source of lexical and grammatical data is utterances that one hears in the village and jots down in one’s field notebook. Utterances overheard from others’ conversations are more reliable than those from conversations involving the linguist, since the former are less likely to be “foreigner talk” (speech simplified or otherwise adapted to be more readily understood by non-native speakers). Nevertheless, all notes on overheard utterances can be made into more reliable data if they are verified with consultants to make sure they were heard and understood correctly. Often, overheard utterances in natural interpersonal interactions in the villages will contain forms that have not been attested in texts, they are good sources of elicitation topics, and they are the best type of linguistic material to master for practical communication in the village. If one is not pressed for time, one can participate in a wide range of village activities, such as building houses, hunting, harvesting crops, sports, watching children play, etc., and thereby be exposed to a larger variety of natural speech.

5. Analyzing the data and writing up the description

A traditional format (phonology, then morphology, then syntax) is a good default format. Of course, if this presents problems for the language in question, a better suited format should be sought. It may be useful to use another grammar as a model, both for organization of a grammar and for considering what points should be researched and discussed. To write valid language descriptions, I believe that it is essential to follow the
three steps below for any phonological, morphological, or syntactic pattern in the language.

i) Prior to writing a draft, consider multiple possible analyses based on initial data. Ideally, the first hypotheses should originate from the author’s induction from inspection of transcribed texts and growing familiarity with the study language. Later, sources of inspiration for competing hypotheses may include linguistic literature (any previous work on the language, descriptions of sister languages, typological publications, etc.), comments from advisors or others that read early stages of the grammar, analyses of other parts of the grammar that might be inconsistent with the analysis at hand, and even analogies to other academic fields. Diachronic explanations should not be considered competing hypotheses for synchronic analyses, but they may inspire additional synchronic hypotheses (in my view, diachronic studies, which are always speculative to some level for languages without a written tradition, should be based on good, detailed synchronic descriptions, not vice-versa).

ii) Treat the analyses in (i) as competing hypotheses to be discarded one by one through thorough text analyses and additional elicitation until only one is left. If it is not possible to do this step for some part of the description, due to lack of time or because there are no remaining field seasons before the end of the dissertation, the author should still do (i) and confess that at this point that there still exist multiple viable analyses, even if one of these analyses “looks” or “feels” like the right one. To present an analysis without having done (i) and (ii) and without mentioning this overtly is not only sloppy, but a potential source of misinformation.

iii) When writing up the results, if the single remaining analysis, as compared to a discarded hypothesis, is less obvious from superficial inspection of the language, typologically less common, contradicts previous descriptions of the language, differs from sister languages, or is otherwise unexpected or controversial, it is important to discuss both
competing analyses, presenting the arguments for and against each (this is where ungrammatical sentences from elicitation are especially important).

Likewise, when two analyses “tie for first place.” In this case the author picks one based more on personal preference than on grammatical criteria, so here it is important to present both analyses and admit that the decision was somewhat arbitrary, rather than trying to justify one’s choice by ignoring or downplaying the arguments for the analysis that was not chosen. These “ties” are often a result of a part of the grammar being in the middle of a diachronic change where one system is being reanalyzed as a different system. I would be suspicious of a grammar with no cases where more than one possible analysis accounted for a phenomenon equally well.

6. Conclusions

Many of the suggestions I have given above, such as waiting until the later stages of research to study other writings on the language/family, double-checking data, participating in the culture, etc., could be seen as inefficient, and a field linguist may be forced to simply ignore these “less essential” suggestions. However, efficiency is not such a critical matter with long field seasons. The more time the researcher spends in the field, the better they will understand the language, the more reliable their data will be, the more hypothesized analyses they will be able to test, the more errors they will correct, and the fewer unsound shortcuts they will find it necessary to take. When I read a grammatical description, such as a Ph.D. dissertation, the first thing I do is check what type of methodology was used and how long the author spent in the field. If the author spent less than 6 months in the field (or is obscure about the length of time spent in the field), I will be very skeptical about the contents. Therefore, a significant investment of time for doing field research is required if one wishes to produce a work that he/she can feel proud of and that discerning colleagues will take seriously. Linguistic programs and funding organizations might consider extending the time
granted for writing a grammar, given that the extension is realized as time in the field. A legitimate postdoctoral fellowship project can be to conduct additional fieldwork to improve a grammar for publication, if the author ran short on time while writing a dissertation.

References


Fleck, David W. in press. “Evidentiality and double tense in Matses.” *Language*, 83(3).
