2.1 Introduction

In Chapter One I have examined the reasons why an attempt should be made to write a set of phonological statements based solely on data gathered from naturally occurring talk, and what I consider to be the weaknesses of previous descriptions of non-citation form utterance.

The task of this chapter is to work out a set of procedures which make naturally occurring talk amenable to phonetic and phonological analysis. I will show that writing phonological statements from naturally occurring talk, without reference to material drawn from other linguistic activities, demands examination of areas ranging from the delimitative procedures analysts have typically employed in providing more conventional phonetic and phonological analyses, through to the sorts of analytical expectations that an analyst might have when s/he approaches new material. In this chapter I also describe the type of phonological analysis I am using, certain of the practical problems involved in handling a conversa-
tional corpus, and finally, I will explain my reasons for
the use and presentation of detailed impressionistic
records in this study.

2.2 Source and presentation of data

The corpus of naturally occurring talk used in this
study is approximately four hours of one speaker in
conversation with the author. The subject (the author's
sister) is a woman in her mid-thirties who lives in
Holbrook, a village six miles south-east of Ipswich,
Suffolk. She has lived and worked within a six mile
radius of this village all her life.

The tape-recordings were made at the subject's home
over a period of some two months. At no time during the
recordings was she aware that she was being recorded; I
therefore feel justified in describing the corpus as
naturally occurring talk.

The term 'naturally occurring talk' is preferred to
'conversation', because although the data is conversational
in the way this was defined in Chapter One, I am not
clear to what extent the talk of the other participant
(myself) was affected by the presence of the tape-record-
er. Furthermore, it is not my intention in this study to
look directly at the phonetic and phonological aspects of
the organisation of conversational interaction, but rather
to use the talk elicited from the subject as data for a
set of phonological statements of the variety of English spoken by the subject. However, as I will show in the empirical chapters of this study, it is not possible to provide an adequate phonological statement without taking certain interactional factors into account.

The source has also been limited to the talk of one speaker, as the addition of material from other speakers would have greatly increased the complexity of the task of analysis.

The impressionistic records presented throughout this study are taken directly from my notes. Certain parts of the records regarding pitch, rhythm and loudness have been omitted. Other parts of the records concerning vocalic and consonantal resonance, place and manner of articulation, and phonatory settings have been left as they were recorded, although they may not be relevant for the analysis being carried out. This has been done partly to allow for reanalysis by the reader. Other reasons for my presenting the phonetic data in this fashion will be discussed in more detail in section 2.7.

Certain notational conventions may not be familiar to the reader and a description of these is to be found in the Appendix.
2.3 External and internal delimitation and their inapplicability to naturally occurring talk

One of the first procedures which the investigator carries out when doing a phonological analysis of a known or unknown language is to make decisions about the nature of the material s/he wants to elicit from an informant. I will call this procedure 'external delimitation'. The delimitation is external because it is carried out by the analyst prior to the collection of any phonetic records.

External delimitation takes two forms. First, it may relate to writing. If the language has a writing system used in printing, this system will have conventions which delimit certain chunks of the written language. In English, for instance, a capital letter and a full stop can act as the boundary markers of a prose sentence. The placement of blank spaces serves to delimit prose words. In Chinese the character and the blank space by which it is bounded delimit syllable size chunks. The conventions of writing systems have been greatly exploited by linguists in the construction of word lists and other written materials for purposes of elicitation. This initial external delimitation can have important implications for the final shape of phonological statements. A phonemic type analysis casts its exponency statements

\footnote{Many older scripts, e.g. cuneiform, Greek, Roman uncial did not delimit word size chunks.}
about phonemes partly in terms of allophonic variations at particular places (e.g. initial, medial, final) in the structure of the word. Jones even claimed that phonemic analysis beyond the word might be impossible:

'The restriction "in a word" is important. To extend the definition to cover word-groups or sentences would greatly complicate matters. At the best it would increase the number of phonemes in some languages; it might even be found to render the elaboration of any consistent theory of phonemes impossible, since variations of sound at word junctions may take so many forms.'

(Jones 1967, 11)

Now although this may restrict phonemic analysis to words, it is clear from many analyses that the word itself is a unit which has been established on the basis of orthographic conventions. So, for instance, Mees and Collins (1982), in their analysis of the consonant system of Standard Dutch, talk of 'initial lenis plosives' (1982, 3), 'word-final clusters of /l/ followed by a non-homorganic obstruent or nasal' (1982, 8). Although not explicitly stated, it is clear that these places have been established on the basis of the written language, e.g.

'In initial clusters preceding /r/, /ɻ/ is realised as a fricative, e.g. wraak [vraːk] 'revenge'; wreker [vreːkər] 'avenger'.'

(Mees & Collins 1982,9)

There are, however, a number of analysts working in the framework of Firthian prosodic phonology who have been
careful to describe the external delimitation which they have chosen to make, together with the implications that this choice has for the final statement:

'The only kind of speech behaviour with which the present study is directly connected is the oral naming of Chinese characters... All that is here attempted is a systematic analysis of what a certain number of selected characters were called by Mr. K. H. Hu, of Changsha.'

(Firth and Rogers 1937, 1056)

'The statement is made with the syllable as unit: it is not an analysis of speech (contextualised utterance) but of the syllable spoken in isolation.'

(Halliday 1959, 193)

'The investigation was short and incomplete, but sufficient phonetic data were collected to enable certain principles governing the structure of the monosyllable in isolation to be stated.'

(Henderson 1948, 16)

'(i) the list of alphabetic symbols that appears on p.12 of the Apazhev dictionary;
(ii) Text No.29 'Winter', from the Kabardinskaya ashuka of 1906, as transcribed in modern spelling by M.
(iii) selected short words, uttered in isolation, exemplifying consonant contrasts of particular phonetic interest. The present paper is concerned with an examination of the third of the items listed above.'

(Henderson 1970, 93)

'The present paper is concerned with a detailed comparison of their pronunciations and with a systematic transcription adequate for both. For these purposes, the study is restricted to the monosyllable, which is to be understood as the phonetic form given by the speakers in reading aloud a single character.'

(Scott 1947, 197)

The second type of external delimitation is that which is made when the analyst is eliciting data from an informant via a second language which is common both to
the analyst and the informant. In this case, an analyst might carry out delimitation by deciding on a 'frame' in the second language, which could, for instance, be used to elicit nominal or verbal expressions in the informant's language. The frame might take the form, 'That's a ...' or 'She ...ed it'. This type of procedure and instructions on its execution are described in some detail by Nida (1947, 1962). In carrying out this second type of external delimitation, the analyst is making at least one important assumption: that impressionistic records of utterances representing versions of the translation of the expression into the language under analysis will ultimately expose patterns which allow the analyst to isolate certain syntactic chunks. These patterns, which the analyst observes and ultimately attempts to describe in the form of a phonological or syntactic analysis, lead me onto the second basic type of delimitation - internal.

I will give a simple illustration of internal delimitation from Malayalam, a Dravidian language of southern India. This sample was collected in face-to-face impressionistic recording sessions with one male informant.

(9) a. that's cream  
   a δ ɣ ʔ p’ ʌ ɾ ɾ ɛ ɾ a

b. that's a tin
   a δ ɣ ʔ p’ ɾ a: ɾ i ə

c. that's a head
   ɾ δ ə ɾ’ ə ˈ l ɛ ɾ a
d. that's a mother

In (9) there are a number of records of what I assume to be nominal expressions in Malayalam. The material presented is externally delimited by the nature of the second language (English) expressions which the informant was asked to translate.

One can see that each utterance begins with a disyllabic portion which has a stricture of varying degrees of approximation (close or open) at the dental place intersyllabically, bounded by two centralised vocalic portions. It is likely that this portion corresponds, in part at least, to the invariance in the English frame. This is an initial step in the internal delimitation of the material, that is delimitation carried out by the analyst on the basis of recurrent samenesses and differences observable in his/her phonetic records.
However, turning now to the portion of naturally occurring data in (10) below, I will show that the delimitative procedures described above soon meet with problems.

(10)

J. (0.2) well she got (0.4) a lump sum pension thingummy out of the (.) company he was working for (0.8) probably insurance and that (1.0) and uhm (0.7)

\[ \begin{align*}
\theta & \uparrow \eta \downarrow \, m \, \uparrow \downarrow \, l \, \uparrow \downarrow \, \varepsilon \, \downarrow \, \uparrow \end{align*} \]

The first problem which one is confronted with should be clear - the control which the analyst has on the elicitation of her/his material using the procedures of external delimitation described above is not available. Due to the nature of the material, the analyst has to make do with what the subject produces. The first delimitation I feel justified in making is in interactional terms. The talk by J. in (10) represents a turn - the other partici-
pant in the conversation has stopped talking, there is a period of silence and J. begins; the cessation of talk by J., the period of silence and the beginning of talk by the other participant\textsuperscript{23}. However my initial delimitation of the material in terms of the turn is already implementing a tactic which is not used in the traditional procedures I have described above, and in the example I have given in (10) the chunk which has been isolated is large.

The periods of 'silence' contained within J.'s turn, whose presence and length are indicated by the bracketed figures, might also be candidates for delimitative boundaries. Pike (1947,67) advises the investigator to signify "the points where utterances begin and end, by marking the pauses or the places where the informant has begun to speak anew". These places are not difficult to mark in the Malayalam data presented in (9). Indeed, in the records resulting from face-to-face elicitation, silence is only negatively marked by the absence of any symbolisation. However, the periods of 'silence' recorded in the naturally occurring sample in (10) do not all represent periods of articulatory inactivity\textsuperscript{26}. At [A] there is a period of glottal closure lasting approximately four tenths of a second; at [B] there is a stricture of complete closure both at the glottis and the soft palate.

\textsuperscript{23}The talk of the other participant has not been shown in (10).

\textsuperscript{26}Cf. Local and Kelly (1986, 192): 'Although there are silences in these sequences it is not the case that these silences are periods of no activity.'
These periods of articulatory activity (following Local and Kelly 1986) are notated using a tie-bar over the bracketed figure. The careful description of the articulatory activity during these periods of 'silence' shows that I would be no more justified in using these periods of 'silence' for the purposes of delimitation, than I would were I to use the period of velar closure at [C]. The only difference between the periods of 'silence' at [A] and [B] and that at [C], from a phonetic point of view, is one of duration.

The blank spaces between words in the orthographic gloss cannot be used to delimit the material, as this would be using a method of external delimitation to carry out internal delimitation. However, this is a procedure which is commonly used in studies on naturally occurring talk and non-citation form utterance in general. Many of the works cited in Chapter One (e.g. Kohler 1977, Dressler et al. 1972) place blank spaces in their phonetic records approximating the orthographic boundaries of the words in the glosses of the utterances from which the records were made. Likewise, Capell (1979) has his informant's read an adapted version of the 'North Wind and the Sun'. The material which Capell gathered from this reading exercise must have been in the form of continuous text, however his 'narrow phonetic transcription' (1979, 7) of these texts immediately delimits chunks by placing blank spaces between them; these blank spaces presumably approximate those of the words in the written text which the infor-
mants were asked to read. The statements about the exponency of the posited phonemes are then made on the basis of the words delimited in this fashion:

\[(11)\]

\[
\begin{align*}
\text{Initially and medially} & & \text{Finally} \\
/p, \ t, \ k/ & \{p, \ t, \ k\} & [b, \ d, \ g] \\
/b, \ d, \ g/ & \{b, \ d, \ g\}
\end{align*}
\]

(Capell 1979, 7)

A potentially more serious example of this practice is given in Lodge (1978, 1983 & 1984). Lodge's material is conversational, however in his phonetic records he places blank spaces between certain portions which again correspond to those present in the gloss. This placement of spaces is even less justified than it was in the case of Capell, because Lodge's material is not elicited from the linguistic activity of reading, where one might want to claim that the word boundaries in a prose text had certain implications for utterance. The practice of delimiting portions of the phonetic material on the basis of the prose word boundaries in the gloss of the phonetic records persists in the majority of the non-citation form works which I have cited. The reason why this is the case seems to be that the gloss is no longer functioning purely as a gloss; instead the word boundaries in the prose gloss have
been incorporated into the technique of analysis as a delimitative aid, rather than acting as a purely mnemonic guide to the meaning of the utterances in question.

2.4 Delimiting naturally occurring talk

In the previous section I have described methods of delimitation which are suitable for analysing data gathered from certain types of linguistic activity. A systematic application of external and internal delimitation exposes patterns which the analyst ultimately describes in the form of phonological statements. However, I have shown that the procedures of external delimitation cannot be applied to material taken from naturally occurring talk. As the internal delimitation I have described relies on systematic external delimitation it too cannot proceed.

I will now give a solution to the problems presented above. This solution requires me to make two major assumptions which are not usually made at the outset of a phonological analysis, but ones which I consider necessary given the nature of naturally occurring talk.

All investigators make a number of assumptions about the language they are analysing and the speaker(s) of that language from which they are eliciting their data. They assume, unless they are otherwise informed, that the
informant from whom they are eliciting their material is a representative speaker of the tongue being analysed. They also assume that the data they are eliciting will expose patterns of various kinds which they can later describe in the form of statements about the syntax, morphology, phonology, etc. of that tongue. In this study I am going to make at least two other assumptions.

Assumption One

I will assume that I know and understand the variety of English under analysis. I would argue that analysis of naturally occurring talk cannot be carried out without the investigator having considerable competence in that language. This knowledge would include such things as the ability on my part to identify two tokens of the same item which may have very different phonetic shapes. A good example of this is the identification of prepositional 'to', an analysis of which is given in Chapter Three. The phonetic shape of this item in my records ranges from long glottal closure to alveolar plosion and a vocalic portion which has a stricture of open approximation at the soft palate and labial approximation extending throughout the syllable. These two sets of phonetic features are not similar with regard to their phonation type or the place and manner of articulation at any point, and it is only my knowledge of their sameness at another level which allows me to relate these two sets of features in analysis.
Assumption Two

My second assumption is connected with the type of phonological statement I will be implementing in this study, which I will describe in the next section (2.5). I assume that there are certain types of syntactic structures, the shape of which I will take from the analysis of prose English carried out by others. Although there are many different theoretical frameworks which attempt to account for syntactic structure, there is general agreement on at least two points:

(i) there are syntactic categories, e.g. verb, noun, preposition, adjective.
(ii) certain of these categories combine in various ways to form other categories termed 'phrases', e.g. verb phrase, noun phrase, adjectival phrase.

These two assumptions allow me to undertake a special kind of delimitation which overcomes the need for the external procedures described above. Assumption Two provides a number of syntactic frames, and Assumption One allows me to identify tokens of the chosen frame within my material. In (12) I present an example of this:

\[ \text{27The syntactic framework which I have chosen to implement in this study is my own interpretation of GPSG as proposed in Gazdar et al. (1985).} \]
In (12) I have chosen the prepositional phrase as my syntactic frame. My knowledge and understanding of the language has allowed me to identify two tokens of this frame which I have represented on paper in the form of impressionistic records.

Isolating chunks of the phonic material in this manner has advantages. Most importantly, the only 'cutting' I have to do in the impressionistic records themselves is one which is made somewhere before and somewhere after the portion which I know contains the token of the item I want. This delimitation may ultimately coincide crudely with word boundaries in the gloss, but unlike the works of Lodge and others cited above I am not using the word boundaries as a tool for delimitation. They have not provided any grounds for splitting up their phonetic material on the basis of the orthographic word boundaries and I can see no justification for this procedure.
However, the tactic I am adopting to get at material suitable for analysis, i.e. relatively small and, most importantly for phonological analysis, comparable chunks of data, does not require the word boundaries of written English, instead it uses the abstract categories provided by syntactic analyses as a static background against which phonetic observation and phonological analysis are able to proceed.

In Chapter Four I will also be making careful use of intuitions. However, unlike the works I criticised in Chapter One for their use of intuitions, I will be implementing them as a guide to finding data of a particular type, not as a provider of data.

2.5 The nature of the phonological statement

In this section I will show that the way I have chosen to isolate the phonetic material which I have described in the previous section requires a phonological statement different from those proposed for non-citation form utterance in Chapter One.

At the outset I would like to state what the phonological analysis of my data will not be. It should have become clear from my criticisms of certain arguments for assigning analytical priority to the citation form\[28\] in

\[28\]See in particular my criticism of Kohler's second argument on p. 41.
Chapter One that I will not be providing a phonological account which claims to be of psychological relevance. The phonological entities I will propose account solely for patterns I have observed in my impressionistic records and are purely descriptive.

In Chapter One I described a number of works whose treatment of non-citation form utterance had many common features. One of these was the way in which the phonetic shape of an item in the non-citation form utterance was derived from a relatively stable citation form. The relative stability of the citation form utterance was in the shape of a phonetic representation. The phonetic shape of the non-citation form item was derived via one or more phonological rules from the citation form representation. However, because I am denying myself access to citation form material, the stability which the phonetics of a citation form provide is absent. I could not therefore implement derivational rules of the type presented in Chapter One, even if they were not faulted in the ways I demonstrated.

The solution to the problem of an absence of stability resides in turning the whole enterprise around. As I said above, the conventional approach uses rules to derive many from one. In my case I have many different tokens

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29 The phonetics of the citation form only provide relative stability as speakers also exhibit a degree of variation in repetitions of the same item. This might involve differences in the length of vocalic portions, vocalic and consonantal quality, degree of aspiration, etc.
of, for example, a prepositional phrase headed by the same preposition. None of these tokens will be phonetically identical to any other, but I expect there to be similarities and differences across different tokens which can be abstracted out in the form of a phonological statement for the item concerned. The task of constructing phonological statements then, becomes, in part at least, one of creating stability at the phonological level of abstraction. This creation of stability has much in common with a particular type of historical reconstruction which proposes proto-forms on the basis of synchronic material from a number of related varieties\textsuperscript{30}.

The phonological statements I will be writing comprise two parts:

(i) a formula containing symbols.

(ii) descriptions in words of the subjective abstractions from the impressionistic records which the symbols in the formula represent.

The subjective abstractions are the result of observations of recurrent similarities and differences in the impressionistic phonetic records. The phonological statements which I will present then are very different from those of the other works I have described. The stable phonological formula represents a set of systemati-

\textsuperscript{30} A good example of this is Sprigg's (1972 & 1980) reconstruction of certain aspects of Proto-Tibetan.
cities which I have observed in a number of utterance
tokens of the *same* thing at the syntactic level, rather
than a description of a derivational base which is given
analytical priority over other tokens. Furthermore, my
approach relies only on phonetic material from one lin-
guistic activity, whereas the other approach I have
described relies on phonetic material from two vastly
different activities, and the phonological statement is no
more than a description of the phonetic difference between
the two activities.

The differences in my approach to the construction
of phonological statements to those of the works I have
described in Chapter One are summarised pictorially in
(13).

(13)

a. Approach of works cited.

```
Citation form
   (phonetic/phonological representation
    of derivational base)
    ↓
Phonological rules
    ↓  ↓  ↓  ↓
T1    T2    T3    T4    etc.
```

non-citation form tokens
(phonetic representations)
b. The approach here.

Phonological statement capturing and generalising over observed systematicities

Observed similarities and differences

Naturally occurring tokens (phonetic representations)

The approach displayed in (13b), together with many other aspects of the phonological analysis in this study, is essentially Firthian prosodic. These aspects range from the visual appearance of the phonological formulae through to the way in which the phonology relates to other levels of linguistic and non-linguistic abstraction. I will leave the explication of these aspects to the empirical chapters\(^{31}\) where I can show how I have applied this

\(^{31}\)See in particular 3.5, p. 115 and 4.7, p. 149 below.
2.6 Practical considerations

Up to this point I have discussed some of the theoretical problems of writing a set of phonological statements from naturally occurring talk. In this section I will discuss some of the practical problems involved and the ways in which I intend to overcome them.

2.6.1 The size of the corpus

In traditional approaches to phonetic/phonological descriptions of languages, the investigator, using the procedures of external delimitation described in section 2.3, can access a large amount of language data in a relatively small period of time, and has considerable control over the data which s/he is collecting. I have a corpus comprising some four hours of tape-recorded conversation in which the elicited material was uncontrollable. Having no control over the elicitation has influenced the

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\(^{32}\)Hill (1966) provides a description of the main features which characterise Firthian prosodic phonology. Palmer (1970) provides a cross-section of works in which prosodic phonology is applied to data from a number of languages. For a brief overview and critique of London School phonology from the 'outside', see Sampson (1980, 212-223).
way of analysing the material which I have chosen to undertake and the set of syntactic fragments which I will be analysing. I will be restricting my analysis primarily to the closed set of grammatical items, although at times it will be necessarily to provide at least partial analyses of certain lexical items. Fragments such as the prepositional phrase or pronominal noun phrases have a high frequency of occurrence in even a small corpus of naturally occurring talk, whereas any adequate description of the phonology in the nominal or verbal system would require a much larger corpus.

2.6.2 Phonic data and impressionistic recording

There is no doubt that that the most effective way of carrying out detailed phonetic observation of a language is for the analyst to have face-to-face contact with the informant. In this situation one can note down details about the dynamics of lip, jaw and larynx movement, and to a lesser extent, movements of the tongue.

Video recordings are the next best alternative, and they have the advantage over the face-to-face situation in that they allow the examination of a single utterance more than once.

High quality tape recordings made in the soundproofed environment of the studio, like video recordings, have the advantage of utterance reexamination, but here
visual cues are lost.

In order to get a reasonable corpus of naturally occurring talk from one subject one has to sacrifice many of the advantages of the recording techniques outlined above. The tape-recordings were made primarily in the subject's kitchen, as this room is small and therefore the subject was never far from the microphone. I could also guarantee acquiring fairly long periods of conversation with the subject in this room. The noise produced in the environment of a kitchen, together with the use of a field tape-recorder (Marantz CP230 with a Senheiser reporter's microphone) mean that the recordings lack a good deal of the quality that a recording made under studio conditions would have.

I have overcome the problems of making detailed impressionistic phonetic records from relatively poor quality tape-recordings in three ways:

(i) as a speaker of this tongue I can imitate the talk of the subject fairly well, and can therefore make relatively accurate judgements about articulation on the basis of my own production.

(ii) the absence of visual cues in tape-recordings is counteracted by my observations of the subject, both during the making of the recordings and at other times. From this I can make judgements about lip movement, etc.

(iii) a particular way of listening and recording phonetic material. Kelly and Local (1989) have termed this
'relativistic listening'(1989, 32). So, for instance, rather than making judgements purely in terms of the reference categories provided by the I.P.A.\textsuperscript{33}, it is equally important to make judgements about vocalic and consonantal qualities in relative terms within the data itself. Given two vocalic portions in different tokens of the same item, the notation of these represents a combination both of their quality in terms of the reference categories provided by the Cardinal Vowel diagram, and their qualities relative to each other. An example of this combination is shown in (14).

(14) a. Reference listening

\begin{center}
\begin{tikzpicture}
\node at (0,0) {Vocalic portion A};
\node at (2,0) {Vocalic portion B};
\node at (1,-2) {Cardinal Vowel reference category};
\draw[dashdotted, thick] (0.5,-1.5) -- (1.5,-1.5);
\draw[thick] (0.5,-2) -- (1.5,-2);
\end{tikzpicture}
\end{center}

b. Relativistic listening

\begin{center}
\begin{tikzpicture}
\node at (0,0) {Vocalic portion A};
\node at (2,0) {Vocalic portion B};
\node at (1,-2) {Key};
\draw[dashdotted, thick] (0.5,-1.5) -- (1.5,-1.5);
\draw[thick] (0.5,-2) -- (1.5,-2);
\end{tikzpicture}
\end{center}

Key

\begin{center}
\begin{tabular}{ll}
--- & backer than \\
\ldots & more rounded than \\
\ldots & more open than \\
\end{tabular}
\end{center}

\begin{center}
\begin{tabular}{l}
V vocalic portion \\
subscribed diacritics: \\
as IPA.
\end{tabular}
\end{center}

\textsuperscript{33}Kelly and Local's (1989, 31) 'reference listening'.

80
Because relativistic listening requires the analyst to compare two or more portions rather than referring one portion to a category s/he must ultimately be able to produce (e.g. a Cardinal Vowel quality), the task of relativistic listening is easier and more accurate, indeed the merits of this technique have long been recognised:

'The difference between vowel sounds separately pronounced, will sometimes appear so slight that the ear may be perplexed to discriminate them; but in the compounds of speech the minutest shades of elementary variety create unmistakable distinctions.'

(Bell 1881,35)

2.7 Analytical expectations

In the previous sections I have described many of the theoretical and practical difficulties which arise when one tries to implement the tried and tested methods of traditional phonological analysis in connection with data from naturally occurring talk. Solutions to the problems have been arrived at, both by considering in some detail what the traditional procedures entail, and by making certain assumptions about my own data which are not usually made (explicitly at least) prior to the phonological analysis. In this section I will examine some of the expectations which analysts have about the language material being analysed, looking at the way these expectations are shaped and how they can, in turn, affect the
form of the final analysis.

When analysing part of a new or known language an investigator will already have a number of expectations about what that language is like and the sorts of things s/he will be looking for. These expectations are formed by several different factors:

(i) prior analyses of the language under investigation, if any already exist.
(ii) the investigator's knowledge of the analyses of other languages in general, together with his/her experience of other languages.
(iii) statements by others about what to expect and what not to expect.
(iv) the linguistic activities from which the data has been gathered and on which the analysis relies.

I will consider each of these factors in turn. Factor (i) affects the sort of phenomena the analyst feels s/he is likely to be confronted with in the language. If s/he is analysing a language such as Turkish, knowledge of analyses previously carried out by others will inform him/her that this language has a system of vowel harmony which operates in the native lexis\(^{34}\).

If the analyst knows little or nothing about the language and there are no, or few, prior analyses, then

\(^{34}\text{e.g. Waterson (1956), Clements and Sezer (1984).}\)
factor (ii) will come to bear heavily on the investigations—having read analyses of other languages and having worked on other languages, the analyst will have ideas about what to expect. So, for instance, analyses of many languages have descriptions of assimilation. On the basis of material from English alone the analyst has examples of both progressive and regressive assimilation, examples of which are given in (15).

(15) Progressive

\[\text{open}'\]
\[\text{seven}'\]

Regressive

\[\text{I'm coming}'\]
\[\text{I'm not}'\]

(adapted from Lass 1984, 171)

On the basis of such analyses and those of similar phenomena in other languages the analyst will be unlikely to expect the examples in (16) which I have invented for the purposes of illustration.

(16)

\[\text{an pota\ tata}\]
\[\text{am potapa}\]
\[\text{an potaka}\]

\[\text{an potada}\]
\[\text{an potaba}\]
\[\text{an potaga}\]

83
The invented example in (16) represents possible records of six utterances where the nasal portion at the end of the first syllable only harmonises with the place of articulation of the onset of the final syllable if that onset is voiceless. Although rather extreme, this example does illustrate well the sorts of expectations an analyst might not have when approaching material from a new language.

Factor (iii) is the result of the experience and knowledge which others have about languages in general, and a good example of a statement of expectations is given by Cruttenden:

"This is not the place to get into detailed arguments about the merits of one phonological theory as opposed to another; but one thing which should be pointed out is that all the features which have traditionally been regarded as suprasegmental and prosodic, e.g. intonation, rhythm, tempo and voice quality, are potentially mapped onto units larger than a single word, whereas features like vowel-harmony and nasalisation, even though they extend over more than one segment, rarely extend beyond word-boundaries."

(Crutteneden 1986, 178)

I would argue that the relatively strong claims which Cruttenden is making here have been shaped, in part at least, by factor (iv). As I have argued in this chapter and in Chapter One, the greater part of phonological analysis has been carried out on data gathered from speakers performing particular linguistic activities such as reading aloud (word lists, sentences, etc.), or trans-
lating expressions from one language to another. Although difficult to attest, it seems to be the case that those who have analysed non-citation form utterance not only have used the procedures prescribed for the analysis of other linguistic activities, but also have similar expectations about the material of non-citation form utterance.

In section 2.5 I presented the sort of phonological statement which I require for naturally occurring talk. I will now show, on the basis of my own data, that naturally occurring talk requires the analyst to suspend certain expectations, which s/he has acquired from analyses of other linguistic activities, and at the same time I shall refute the claims being made by Cruttenden.

(17)

a. hang about, hang about

\[ ? \acute{\iota} \eta \acute{\iota} \acute{\iota} \varepsilon \upsilon \upsilon ? \acute{\iota} \eta \acute{\iota} \acute{\iota} \varepsilon \upsilon \upsilon ? \]

b. hang on, hang on

\[ \acute{\iota} \acute{\iota} \acute{\iota} \eta \acute{\iota} \acute{\iota} \acute{\iota} \eta \]

From the assumptions I am making about my material I know that the initial vocalic and nasal portions in (17a & b) form a large part of the exponency of the same lexical item. I also know that portions (17a & b) represent reduplicated verb phrases. The most striking observation about these two portions is that the vocalic

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portions in (17a) are closer than those in (17b). A possible phonological analysis on the basis of this observation is one which sets up some sort of harmony system. Although harmony systems have been proposed in certain varieties of Scots English, the domain of the harmony is mostly confined to the orthographic word and in a small number of cases to an adjacent grammatical item. In my case the domain of the harmony is three syllables in (17a), and in Cruttenden's terms the harmony extends across a word boundary. Having discovered the two utterance portions in (17) by chance, I looked for other comparable examples, two of which are given in (18).

(18)

a. you're getting a lot of small ones'

\[
\begin{array}{c}
\begin{array}{cccccccc}
\text{i} & \hat{\text{s}} & \hat{\text{g}} & \text{f} & \text{z} & \text{I} & \text{n} & \text{e} & \text{f} \\
\text{ə} & \text{ɹ} & \text{ə} & \text{ɹ} & \text{ə} & \text{ɹ} & \text{ə} & \text{ɹ} & \text{ə}
\end{array}
\end{array}
\]

rounded

---

35 The reader should be able to make similar observations of long-domain phonetic differences in the production of the two expressions I'm a pig and I'm a guinea pig. For me, all the same parts of these sentences are different in vocalic and consonantal quality. In the second expression the vocalic portions are noticeably fronter and closer, the bilabial nasal and plosive are clearer and the place of contact of the final plosive is post-palatal, as opposed to velar in the first.

36 e.g. Hill (1963), Lass (1984, 303).

37 'the same dialect shows similar variation in a weak form, e.g. in \( \text{ʌ} \ \text{p} \ \text{i} \ \text{s} \ \text{ɛ} \ \text{k} \ \text{ɛ} \ \text{k} \) and \( \text{ʌ} \ \text{k} \ \text{ʌ} \ \text{p} \ \text{ʌ} \ \text{m} \ \text{ʌ} \ \text{t} \ \text{k} \) (a piece of cake, a cup of milk).' (Hill 1963, 453).
b. 'you’re getting a lot of uneven'

\[ \text{spread} \]

Although the greater part of the utterance portions in (18) are the same grammatically and lexically, the phonetic records show articulatory differences at all points from the onset of the second syllable:

(i) in (18a) the vocalic portions are more open than those in (18b).

(ii) the secondary cavity resonance of the consonantal portions is darker in (18a) than in (18b).

(iii) the records in (18a) show a portion which is lip-rounded; the comparable portion in (18b) has markedly less rounding.

The account I offer for the articulatory differences observable in (18a & b) has to do with the phonetic shape of the two syllables at [A]. On the basis of the phonetic features of pitch, duration and loudness, these syllables are the most prominent in each utterance portion. What seems to be happening here is that the preceding syllables are harmonising with regard to both tongue and lip configurations to these prominent syllables. Because of the size of the corpus, I have insufficient data to provide an adequate analysis, but the preliminary observations which I have made above about the portions in (17) and (18) make three points clear. First, whatever phonological state-
ment I were to propose to deal with these phonetic observations it will have implications for utterance extending over a number of words - this alone refutes Cruttenden's expectations about the domain of such phonological phenomena as vowel harmony. Second, phonetic and phonological analyses of English, together with more general statements like the one Cruttenden makes, could lead to a set of expectations which blinker the analyst to such an extent that s/he might never 'see' the type of long domain patterns which I have observed in my data. Third, the chance discovery of the portions in (17) and the subsequent isolation of portions like those in (18) has led me to have wider expectations about the nature of naturally occurring talk.

2.8 The detail of impressionistic records

In section 2.2 I described the way in which I intend to present my phonetic records. Examples of this presentation have already been given in previous sections of this chapter. The implications for phonological analysis of attending to, recording and carefully interpreting the details of articulatory and phonatory activity are ex-

38It must be said that Cruttenden's use of 'rarely' (1986, 178) shows his claims to be rather non-committal, and a number of works show that this claim is untenable, e.g. Berry 1957 shows how vowel harmony in Twi can extend over considerable stretches of utterance, and in Cruttenden's terms, two word boundaries.
explored in great detail in Kelly & Local (1989). In this section I will give my own justification for this practice, as several works in the past have argued against both the presentation of detailed phonetic material, and the making of such records in the first place:

'A phonetic writing, on the other hand, is lacking in the following ways:
1. It does not indicate the phonetic units that are significant for the given language.
2. It is overly microscopic, complex, and hard to handle.
3. It does not distinguish errors and distortions from normal forms.
4. It is likely to be phonetically inaccurate.'

(Swadesh 1934, 126)

'An impressionistic transcription may be a necessary first stage, but it is essentially a hit-and-miss affair and must be replaced as soon as possible by some kind of systematic transcription. The shortcomings of impressionistic transcription can be illustrated in the astonishing virtuosity sometimes found in dialect surveys, giving details far beyond what any phonetician could give with any confidence, accuracy or consistency.'

(Knowles 1978, 81)

'There were three good reasons for not attempting a phonetic transcription: ... (2) the transcriptions would have been very much less reliable...'

(Carterette & Jones 1974, 17)

'It is because of this personal, idiosyncratic character of impressionistic records that I believe they are not suitable for the publication of dialect material...'

(Abercrombie 1965c, 111)

It is clear from these quotes that the main criticisms against the making and presentation of impressionistic records are that it is an unreliable, cumbersome or
unnecessary exercise. There is an assumption, although it is not made explicit, that there is a procedure for arriving at a phonological statement without the need for impressionistic records. So, for instance, although Knowles criticises impressionistic recording as being 'a hit-and-miss affair' (1978, 81), he gives no indication as to how one should replace it with the 'systematic transcription' (1978, 81), which is supposedly more 'reliable'.

My justification for making and presenting detailed impressionistic records is as follows. First, I know of no way of arriving at an immediate systematic transcription of my material. However, I can imagine that one of the steps involved would be to transcribe different tokens of the same lexical items with the same vowel symbols even though the phonetic qualities might be noticeably different. Such a practice would run the risk of further obscuring the types of patterns which I observed in my own data in the previous section.

Second, the examples given in the previous section leave me with wider expectations about the sorts of phonetic observations which need to be captured at the phonological level. Following on from these two points I cannot know from the phonetic observations which I make what is 'relevant' or 'irrelevant', or to quote Swadesh, at what points I am being 'overly microscopic'. I am therefore bound to notate all the differences which I can perceive using the arbitrary set of observational catego-
ries provided by the alphabet of the I.P.A. The phonological statements which I arrive at as the result of observing patterns within the phonetic records, abstract those features which I subjectively deem relevant for the analysis at hand.

A further reason for leaving my impressionistic records in the form in which they were collected is illustrative. The main object of this study is to work out and test a set of procedures for writing phonological statements from naturally occurring talk. An important part of this is to be as explicit as possible about each stage in the process: describing the patterns which I can observe in the records as they were collected is one of those stages.

From this justification it should be clear that my claims for the approach to phonological description which I am advocating are explicitly weaker than the comments made in the works cited above. What I am arguing is that the making of impressionistic phonetic records, and the writing of phonological statements, which are based on these records, is a purely subjective exercise. The strength of my arguments lies in the admission of the weaknesses which the enterprise entails.
2.9 Summary

In this chapter I have assessed a number of the procedures, assumptions and expectations which the traditional methods of phonological analysis involve. I have shown to what extent it is necessary to modify, and in many cases rethink completely, particular aspects of these traditional methods, when one attempts to implement them in connection with naturally occurring talk. These changes are necessary for two main reasons. First, the way in which the raw phonetic data is gathered, and the situations in which it occurs makes the data of naturally occurring talk less controllable in the elicitation process, and therefore less amenable to analysis. Second, the preliminary observations which I have made about the examples in 2.7 demonstrate that phonological statements of naturally occurring talk must accommodate phenomena which have implications for long stretches of utterance and so differ in kind from the sorts of phenomena which one has to account for in analyses of citation form utterance. The following chapters represent a number of case studies, which implement the set of working procedures which I have described above.