

GRADING FOREIGN LANGUAGE LISTENING COMPREHENSION
MATERIALS: THE USE OF NATURALLY MODIFIED INTERACTION

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**I declare that this work is
of my own execution and authorship.**

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ABSTRACT

There have been two basic approaches to the construction of listening comprehension materials for elementary-level foreign language (L2) learners. The conventional method was to grade the text – by recording texts scripted to contain simple lexis and syntax. Recently, many materials writers have preferred to use recordings of 'authentic' speech (that is, speech by and for native speakers) and to balance the relative complexity of such language for foreign learners by grading the task – reducing the degree of difficulty of the comprehension exercises that the listeners are required to carry out.

This study investigates an alternative procedure for grading L2 listening materials. It draws principally on psycholinguistic research into L2 comprehension and on studies of native/non-native discourse. It explores the possibility of recording spoken texts under conditions where 'natural grading' might occur, namely where native speakers could be expected to adopt spontaneous modifications of discourse to enable a non-native interlocutor to understand.

A two-stage experiment was designed to test whether native speakers would produce differential modifications to individual listeners at four levels of proficiency in English (native, advanced, intermediate and elementary) and whether such modifications also benefit 'secondary' listeners watching a video-recording of the original conversation.

The results indicate that (1) native speakers do indeed adjust their level of language to suit the comprehension level of their interlocutor, and (2) versions produced for an interlocutor of the same level as the 'secondary' audience are more comprehensible than those told to native speakers. This supports the claim that, under specific conditions of interaction described in the study, the

proposed method of collecting unscripted conversation offers a means of creating, or eliciting, naturally graded listening materials for use in the foreign language classroom.

Introduction

This study sets a proposal for grading listening comprehension materials against the background of previous research into the complexity of listening and into methods and materials design for the foreign language classroom. The work can be divided into two parts. The first (Chapters 1–6) covers earlier research into the nature of listening from the point of view of psycholinguistics, discourse analysis and classroom research. The second (Chapters 7–10) comprises the core of the proposal for a method of creating naturally graded listening comprehension materials.

Chapters 1 and 2 survey work on the underlying processes of understanding language, dealing first with comprehension in general (Chapter 1) and then examining the similarities and differences between the processes of reading and listening (Chapter 2). These first two chapters are concerned primarily with the understanding of the native language (L1).

By contrast, Chapters 3–6 consider the characteristics of foreign or second language (L2) comprehension. Chapters 3 and 4 review the findings of research into the processes by which L2 listeners attempt to cope with the problems they encounter and by which native speakers modify what they say and the way that they say it, for the benefit of non-native interlocutors.

Chapters 5 and 6 deal with the twin roles that listening input may play in the L2 classroom context: 'input-for-learning' and 'input-for-comprehension'. First, we consider listening as the source of language data on the basis of which L2 learners may extend their current linguistic competence (Chapter 5). Second, we discuss ways in which the designers of listening comprehension courses have addressed – or failed to address – the issue of how to grade L2 learners' experience of complexity in comprehension materials.

Chapters 7–10 form the core of a proposal for a specific form of grading in L2 listening comprehension materials design. Chapter 7 contrasts that proposal with earlier suggestions for incorporating insights from native/non-native interaction research. Chapter 8 comprises a description of the first stage of the grading experiment – the collection and analysis of video-taped narratives told by native speakers interacting with listeners at different levels of English proficiency. Chapter 9 analyses and discusses the results of the second stage of the experiment, which tested elementary-level learners' comprehension of narratives recorded under the various conditions described in Chapter 8.

Chapter 10 presents the conclusions drawn from the results of the comprehension experiment. It is argued that the procedure adopted in the experiment offers a principled and practical method for foreign language teachers to follow in order to create their own classroom materials. It would make it possible for teachers to elicit material appropriate to the proficiency level of their own students, without the need to resort to the conventional means of scripted grading.

CHAPTER 1

VIEWS OF COMPREHENSION

1.1. Introduction

The purpose of this initial chapter is to outline the development, over the last four decades, of an increasingly complex model of language comprehension. The chapter takes the form of a review of those areas of research – information theory, psycholinguistics and discourse studies – that have made particular contributions to our understanding of comprehension.

Two principal strands can be discerned in the work on comprehension over the last 40 years. Firstly, there has been a shift of focus from reliance on experimentally observed comprehension of individual sentences towards an analysis of language used in real social and linguistic contexts. Secondly, the period has seen a marked change of general approach from what we will call comprehension as reception, which assigned a quasi-mechanical role to the human listener, to comprehension as interpretation, which highlights the part played by the listener/reader as an active processor of linguistic and other information.

1.2. Information Theory: comprehension as reception

“The Mathematical Theory of Communication” (Shannon and Weaver 1949) is regarded as the *locus classicus* of “information theory”, or “communication theory”, although Shannon himself acknowledged the earlier technical research of Nyquist (1924, 1928) Hartley (1928) and Wiener (1948). The aim of Shannon’s mathematical theory was to increase the information-bearing capacity of information systems¹. The fact that information theory was concerned with the physical efficiency of technical equipment, rather than with the behaviour

of its users, is clear in this representation of a communication system:

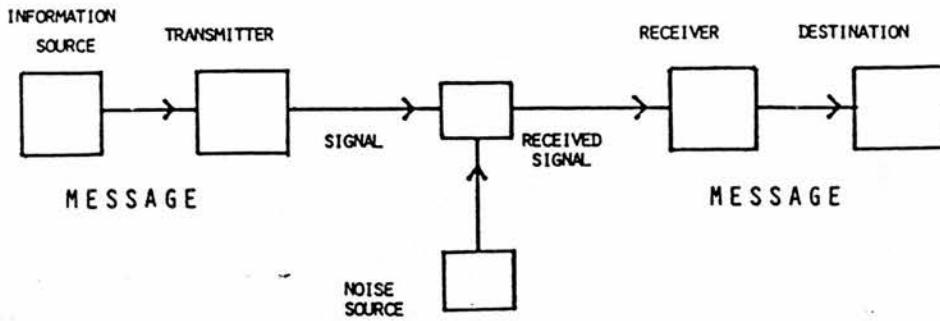


Figure 1. Model of a communication system

(Shannon 1949:5)

The "information source" is the originator of the message; the "destination" is the intended addressee. Human participation in the process of message transmission is peripheral, since it does not affect the efficiency of the transmission system itself:

the concern was with intelligibility rather than with perception, and the results were used to evaluate equipment rather than listeners.

(Licklider and Miller 1951:1040)

The scope of the engineering task can be restricted to that part of the diagram that shows the sequence from "transmitter" to "receiver".

Weaver warned of the semantic traps that the theory set through the use of terms such as "information" and "communication" in senses that could easily be confused with their conventional meanings. "Information", as used in information theory, was "a measure of one's degree of freedom of choice" (Weaver 1949:100) or "uncertainty" (ibid:109); Cherry defined it as a function of the "novelty or statistical rarity of signs" (Cherry 1957:14) or as "surprise

value" (ibid:50). His definition of communication – "the conversion of a prior distribution to a posterior distribution, measured logarithmically" (ibid:274) – points up the engineer's concern with the physical transfer of signs between transmitter and receiver.

Subsequent critics of the theory (e.g. Licklider and Miller 1951; Miller 1951a, 1951b; Cherry 1957) stressed the limitations of the objectives Shannon had set for the statistical theory and warned in particular against "extrapolation from its legitimate domain of applicability" (Cherry 1957:40), that is, against regarding it in any sense as a model for processes of communication between human language users. We might note the similarity between warnings of this sort and subsequent comments on the legitimacy, or otherwise, of claims that computer programmes provide a model for human language comprehension (see section 1.4).

Nevertheless, Weaver believed that Shannon's theoretical paper would assist the investigation of communication in a broader sense. He isolated three levels of engineering problem. The first, Level A, was the technical problem: "How accurately can the symbols of communication be transmitted?". The second, Level B, was the semantic problem: "How precisely do the transmitted symbols convey the desired meaning?". Level C comprised the effectiveness problem: "How effectively does the received meaning affect conduct in the desired way?" (Weaver 1949:95). We might point out that this tripartite division is similar to that proposed in the semiotic analysis of Morris (1938, 1946), who distinguished three types of rule operating on signs – syntactic, semantic and pragmatic. These concerned, respectively, the relations of signs to each other, the relations of signs to the objects to which they refer, and the relations of signs to interpreters (Morris 1938:6).

Although stressing that Shannon's paper dealt exclusively with Level A (the

technical problem), Weaver claimed that there was substantial overlap among the three levels:

the theory of Level A is, at least to a significant degree, also a theory of Levels B and C.

(Weaver 1949:97)

But the overall approach of information theory was syntactic, in the sense that it dealt with the combination and sequential patterns of signs. Even as conventionally semantic a term as 'message' was used in a formal sense – "a sequence of events (symbols) strung together in time according to a pattern" (Miller 1951b:793).

Sequence was central to the statistical concept of information. The amount of information carried by particular elements of a message depended on their predictability, which in turn was a function of the preceding verbal context and of the sign system as a whole. Let us take an example from Shannon (1951). In any sequence of signs, a point may be reached where the rest of the message becomes redundant. Once a reader has identified the first five letters of an English word such as EXCHE, the rest can only be QUER, since the language system contains no other candidate items.

The fact that information theory was essentially syntactic (in Morris's sense) and linear was the principal limitation on the generalizability of machine communication theory to "the more full-blooded problem of human communication" (Cherry 1957:243). Again, it has to be borne in mind that Shannon's interest was not with human information exchange but with mechanical transmission:

semantic aspects of communication are irrelevant to the engineering problem.

(Shannon 1949:3)

It was Weaver who expressed the hope that

this does not necessarily mean that the engineering problems are irrelevant to the semantic aspects

(Weaver 1949:100)

and the belief, as we have already noted, that the overlap between the three levels of communication problem would yield useful insights into communication in a general sense. The general view of information theory might be summarized in Miller's comment that

the terms of Communication Theory have limited value when we try to describe the behavior of a human being. They forced us to distort our picture of the human link in order to fit man into the rest of the system.

(Miller 1967:46)

The second constraint on the theory's wider relevance was that it was statistical; it did not attempt to relate to individual occasions of use or to individual users.

The real reason that Level A analysis deals with a concept of information which characterizes the whole statistical nature of the information source... is that from the point of view of engineering, a communication system must face the problem of handling any message the source can produce.

(Weaver 1949:104)

The term "handling" expresses the limited goal of the theory: to transmit a sequence of signs and recapture it in its original form. Miller (1951a) likened this statistical theory to a sketch map - useful for general orientation, but not at a detailed level of analysis. The physical and automatic nature of the

machine communication model in information theory stands in contrast to the subsequent psycholinguistic research into language production and reception, to which we turn in section 1.3.

1.3. Psycholinguistics

The aim of this section is to provide a brief review of psycholinguistic research relevant to comprehension. For the purpose of this review, the section has been divided into three chronological subsections. In the first, we consider work from the period 1950–60, which was strongly influenced by information theory. The second deals with the period 1960–75 and sketches the major foci of psycholinguistic studies informed by generative grammar. The third provides an overview of the principal concerns of recent research, which has drawn increasingly on insights from the wider field, e.g. from cognitive psychology, artificial intelligence and discourse analysis.

We should first explain our selection of the years 1960 and 1975 as points of division on the historical continuum. It is clearly not the case that either year marked a complete *volte-face* or a decisive break with psycholinguistics before that date. Indeed, the event that might be regarded as coming closest to being a watershed – the development of generative grammar – took place in 1957, with the publication of Chomsky's "Syntactic Structures". However, as both Greene (1972) and Stern (1983) point out in their historical surveys of psycholinguistics, the effects of generative grammar on psycholinguistics (as opposed to formal linguistics) were not immediate. Greene defines the era of transformational grammar psycholinguistics as dating from the publication of Miller, Galanter and Pribram (1960), which was the first major explanation for psycholinguists of transformational grammar theory.

Similarly, in choosing 1975 as the beginning of the contemporary period of

psycholinguistics, we have followed historical reviews (e.g. Flores d'Arcais and Jarvella 1983; Jarvella and Engelkamp 1983) which date the current era from the mid-seventies. Again, the division cannot be absolute; for example, the work of Marslen-Wilson, whose interactive model of language comprehension is widely regarded as the core of contemporary views of comprehension, straddles the middle of that decade (Marslen-Wilson 1973, 1975, 1976).

1.3.1. 1950-60: comprehension as decoding

Psycholinguistics in this period was strongly influenced by information theory. A review of early psycholinguistic research (Osgood and Sebeok 1965) explicitly characterized the new field as a combination of information theory, psychology and learning theory ². Later, Greene (1972) made a similar reference to the "state of tripartite coexistence between information theory, learning theory and linguistics" in the 1950s (Greene 1972:107).

Despite the importance attached to information theory in general and to Shannon's work in particular, it was not the psycholinguists' intention to apply the mathematical theory of communication, unadapted, as a model of human communication. Osgood and Sebeok underlined the insufficiency of engineering models in this regard:

they were not designed to take into account the meaning of signals, e.g. their significance when viewed from the decoding side and their intention when viewed from the encoding side.

(Osgood and Sebeok 1965:2)

Nevertheless, psycholinguistics was to adopt the terminology of information theory, if not the total substance of the approach. The terms in which the communication process was conceived were obviously defined by those appropriate to mechanical transmission:

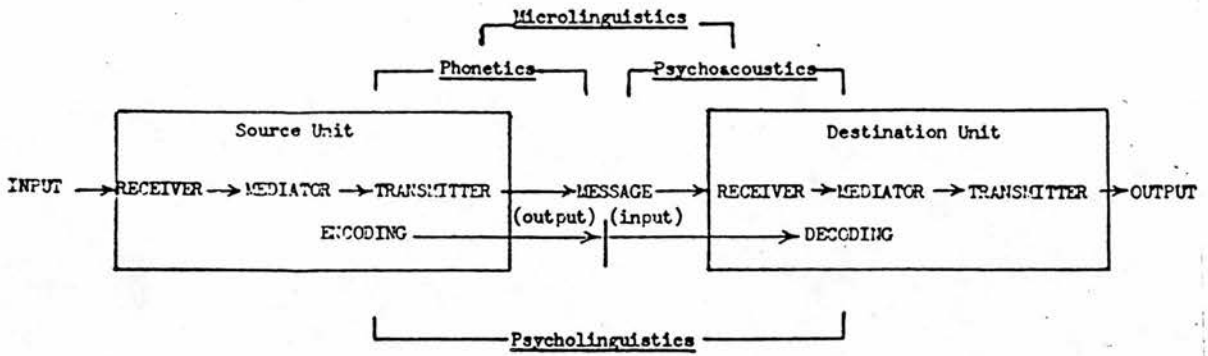


Figure 2. Model of the essential communication act (Osgood and Sebeok 1965:3)

In this model, production and reception were seen solely in terms of the language system or code, and as mirror images of each other. The "source unit" encoded messages by a process that was the reverse of that used by the "destination unit" to decode the signals. Communication was regarded as a linear process of left-right code operations; comprehension, or language reception, was an essentially passive process, the reconversion of a string of signals into discrete elements and the recognition of their meaning.

This underlying notion of linearity and sequence dominated the psycholinguistic research of the time. Many studies focussed on the effects of sequential probability on decoding and especially on the observed increase in intelligibility of words heard in context, as compared to those heard in isolation (e.g. Miller, Heise and Lichten 1951). However, the term 'context' was used to refer specifically to verbal context - "the connections between successive events (that) limit the range of possibilities" (Miller 1951b:789) - rather than to the non-linguistic setting or background knowledge.

The central importance of this sequential view of context, in which meaningfulness was seen as a function of predictability based on what had

preceded any given item in a message, reflected the current preoccupation with the language code rather than with the broader semantic and non-linguistic components of communication. But Miller defended this narrowness of focus on encoding and decoding as a necessary initial stage of what he predicted would be the gradual development of psycholinguistics:

Simpler types of psycholinguistic processes can be studied rather intensively; already we know much about hearing and matching. Accepting and interpreting are just now coming into scientific focus. Understanding is still over the horizon, and pragmatic questions involving belief systems are presently so vague as to be hardly worth asking. But the whole range of processes must be included in any adequate definition of psycholinguistics

(Miller 1965b:295, my emphasis)

Interestingly, these comments foreshadow the subsequent developments in research into language comprehension processes. In Miller's terms, the central concern of the psycholinguistic studies of the 1950s and early 1960s had been with "hearing and matching" portions of messages against code knowledge. The development of transformational grammar provided the framework for psycholinguistic research at Miller's second stage, the "accepting and interpreting" of language. As we will report, important steps towards his ultimate goal - "understanding" - have since been made through the attempts of researchers in such fields as artificial intelligence to model cognition and comprehension.

1.3.2. 1960-75: comprehension as an active process

Generative grammar offered a more powerful theory, enabling language production and comprehension to be described in terms of the linguistic structures underlying messages, rather than in terms of their linear surface

actualization. Comprehension could be characterized as the active recovery of these deep structures by the receiver and was no longer restricted to the automatic application of left-right decoding rules, as had been the case with psycholinguistic analysis influenced by information theory.

Although the concern of linguists working in generative grammar theory was to describe the language user's competence in both productive and receptive modes – "knowledge of the underlying system of rules that has been mastered by the speaker-hearer" (Chomsky 1965:4, my emphasis) – greater emphasis was placed on production than on comprehension. However, Chomsky made strong claims for the role of grammar in comprehension:

a perceptual model that does not incorporate a descriptively adequate generative grammar cannot be taken seriously.

(Chomsky 1964:113)

It was the task of psycholinguists to investigate the applicability of generative grammar theory to an overall view of how language is understood.

Like communication theory, transformational grammar allowed for a multi-dimensional view of language. Where Weaver, following Morris (1938), had set out syntactic, semantic and pragmatic levels of communication, transformational grammar envisaged phonological, syntactic and semantic rule systems. Again, like communication theory, transformational grammar analysis concentrated on syntax as the core of language. In their review of the psycholinguistic literature on sentence perception Fodor, Bever and Garrett (1974) describe the relationship between the syntactic theory and a model of comprehension:

If the grammar is to be an adequate theory of the language, each distinct sentence must receive precisely one representation, and that representation must provide whatever

grammatical information is relevant to understanding the sentence.

(Fodor, Bever and Garrett 1974:275)

We might note in passing that research since this period has tended to bear out the limitations – implicit in that comment – of the role played by syntactic knowledge in the comprehension process.

We should emphasize at this point that the psycholinguistic view of comprehension built on transformational grammar theory was essentially a model of the perception of sentences. Although it is true that studies such as that by Jarvella (1971) offered evidence based on listeners' comprehension of more extensive texts (short stories), even then the specific purpose of the experiments – the investigation of the hearers' use of the syntactic clause as the principal unit of perception – made it necessary for these longer texts to be frequently interrupted.

1.3.2.1. The derivational theory of complexity

One of the main contributions of psycholinguistic research with a transformational grammar orientation was to relate the syntactically based comprehension model to the behaviour of real listeners under experimental conditions. The most direct application of the syntactic theory to language comprehension took the form of the derivational theory of complexity. This predicted that the degree of ease or difficulty with which any given sentence is understood would be directly dependent on the number of transformations it had undergone between its deep structure and its surface realization. Difficulty would be a function of the sentence's derivational history.

Evidence for the derivational theory of complexity was produced by a number of experimenters (e.g. McMahon 1963; Miller and McKean 1964; Gough

1965; Savin and Perchonock 1965; Compton 1967). However, the results of other studies (e.g. Slobin 1966; Bever and Mehler 1967) suggested that some sentences could be more difficult – that is, could take a reader longer to understand – than others with a longer derivational history. We might take these examples:

(1) "The first shot fired by the tired soldier bitten by the mosquito missed"

(2) "The first shot the tired soldier the mosquito bit fired missed"

(Fodor and Garrett 1967)

In the case of these two versions of the same sentence, the relative ease of comprehension of sentence (1) appeared to stem from the additional passive transformation; this was in direct contrast to what the derivational theory of complexity would predict. Given the strength of the counter-evidence, the derivational theory of complexity gradually lost ground, in particular to the clausal hypothesis.

1.3.2.2 The clausal hypothesis

As an alternative to the derivational theory of complexity, a number of studies investigated hearers' use of clausal analysis as a comprehension procedure. The basic hypothesis was that hearers listened for groups of words in a sentence that belonged to the same 'deep sentoid'; this was a sub-tree of the base structure whose highest node is S and containing no embedded sentences. There was evidence for the use of the clause as the basic procedural unit both in comprehension and in recoding for memory.

In the case of comprehension research, the 'click studies' provided some evidence of hearers' exploitation of clause boundaries as processing spaces (e.g. Ladefoged and Broadbent 1960; Holmes and Forster 1970; Bever 1973).

The main finding of such research was that, when played a recorded sentence on which a click or tone had been superimposed, hearers tended to displace the sound from its actual position to the nearest clause boundary.

A number of objections were raised to the experimental procedures. The principal issue was the fact that subjects were asked to recall the position of the click or tone after hearing the complete sentence, rather than at the time of processing the incoming speech. This meant that the observed displacement might well have arisen at the response stage and not as part of the original, 'on-line' comprehension process (cf. Ladefoged 1967; Reber and Anderson 1970; Reber 1973).

A second criticism was that prosodic effects might be a strong influence on perception and this might be either additional to that of clause structure or predominant over it. However, when Abrams and Bever (1966) and Garrett, Bever and Fodor (1966) designed experiments that controlled for prosodic effects, their results still supported the view that the clause is the principal unit of perception.

In investigations of the effects of clausal structure on the process of recoding for memory, Jarvella (1971) and Caplan (1972) found evidence that a speaker's completion of a clause is a necessary condition for the hearer to shift the content of that clause from short-term to longer-term memory. Results also suggested that, in doing so, the hearer recodes what has been said into a semantic representation that includes a propositional core, rather than retaining a verbatim replica of the exact words spoken. This bears out the earlier research of Bartlett (1932) and subsequent work such as that of Kintsch (1977).

Assuming that clause structure did play a leading part in the hearer's internal processes of comprehension and memory, there remained the

question of what kind of information hearers used to assign language material to a particular sentoid. One hypothesis proposed was the "canonical sentoid" strategy (Bever 1968). According to this theory, hearers (of English) treat the syntactic sequence NP + VP (+ NP) as the principal or base form of the sentence; on encountering such a sequence, they assume that it represents Subj + Verb (+ Obj) of a base sentoid. This would explain, for example, listeners' difficulty in interpreting the sentence

(3) "The horse raced past the barn fell"

since we take the first six words "The horse raced past the barn" to be a canonical sentoid (Bever 1968; Walker 1969; Wanner and Maratsos 1971).

1.3.2.3. The relative priority of syntax in comprehension

Whatever the nature of the syntactic clues that hearers use in interpreting incoming speech, it became clear that they do not rely solely on grammatical information. Schlesinger (1968), considering doubly self-embedded sentences, suggested that ease of comprehension was increased by the listener's exploitation of semantic information. He compared the following sentences

(4) "The fly the fish the man saw ate died"

(5) "The water the fish the man caught swam in was polluted"

and pointed out that any strong semantic associations between members of the same sentoid, (such as "water" and "polluted", " fish" and "swam"), would tend to facilitate syntactic grouping and therefore comprehension. In addition to these semantic factors, situational context could be such a strong indicator of one of a set of potential readings of a sentence that ambiguities predicted by the syntax might not even be computed by the hearer – hence the deliberate exploitation of the 'garden path theory' in stories and puns, for

example.

This theory of language processing suggested that, faced with more than one possible interpretation of a language sequence, listeners/readers will compute a single interpretation and adhere to it, until and unless they encounter a clue that disproves it. An alternative view was the 'parallel' theory of processing: that each of the possible interpretations is computed and retained until all but one have been rejected. In their review of the research literature on ambiguity, Clark and Clark (1977) opted for a 'mixed' position, incorporating aspects of both theories. They cited evidence from Lackner and Garrett (1972) and Mackay (1973) that

listeners compute more than one reading for each ambiguity and resolve it immediately - if there is enough information.

(Clark and Clark 1977:83)

1.3.2.4. Summary

To sum up, psycholinguistic research in the transformational grammar-influenced period indicated some of the possible syntactically based comprehension procedures that might be deployed by listeners. However, hypotheses such as the derivational theory of complexity and the clausal hypothesis could not in themselves offer a full account of the mental processes that enable hearers to cope with the incoming stream of speech. Most of the experimental evidence from this period was based on the performances of listeners exposed to recorded, read-written speech in single sentence texts.

An essential restriction of psycholinguistic studies in comprehension

before the mid-seventies was, then, their level of abstraction: a focus on the role of syntax and on decontextualized language. The major development in the subsequent period has been the construction of a more comprehensive model that takes account of the processing of actual language in use, and above the level of the sentence, allowing the incorporation of the explicit semantic and pragmatic components that Miller (1965b) had described as "still over the horizon" a decade earlier.

1.3.3. 1975 to date: comprehension as an interactive process

Psycholinguistic studies of language comprehension since the mid-seventies have been characterized by their attention to a number of areas whose investigation marked a decisive shift from work over the previous 15 years. Research has focussed on four main questions:

(A) How do listeners perceive and interpret spoken language in natural use as opposed to texts delivered under experimental conditions?

(B) How do the constraints of real-time processing affect the processes of understanding speech?

(C) How does the interaction among the various linguistic and non-linguistic clues available to the listener contribute to successful comprehension?

(D) How do listeners process continuous discourse, as opposed to isolated and/or constructed sentences?

1.3.3.1. Natural use

We have already noted that a major limitation on the generalizability of earlier psycholinguistic research into comprehension was its concentration on

experimental subjects' recognition of decontextualized pieces of language. In a survey of psycholinguistic studies, Flores d'Arcais and Jarvella (1983) criticized earlier, transformational grammar-influenced psycholinguistics for being "too abstract and removed from ordinary language use" (Flores d'Arcais and Jarvella 1983:xi) and expressed the hope that, by shifting its collective attention to the ways in which people actually use language in the real world, linguistics and the philosophy of language would move "in a direction more useful to describing linguistic communication and language use as they are" (ibid:xii). Similarly, Jarvella and Engelkamp (1983) stressed the narrowness of the goals set in the 1960-75 period, where the pragmatic perspective played -virtually no part:

subjects have been rarely asked to do anything relevant to communication with sentences; almost never to respond to or to use them as messages, and frequently not even to... understand them.

(Jarvella and Engelkamp 1983:250)

1.3.3.2 On-line comprehension

One of the overriding concerns of contemporary psycholinguistics is the investigation of the processes that take place 'on line', in other words, as comprehension occurs in response to incoming speech, as opposed to a state of understanding as estimated retrospectively. As we saw, it had been the norm in earlier work for the analysis and delineation of psychological processes to be achieved through off-line (retrospective) experimental procedures.

We might take the early click studies as an example. The fact that subjects had to write down the sentence they had heard and then mark in the position

of the superimposed noise meant that the task involved recall in addition to comprehension. It is true that the conclusions drawn from results on off-line tasks designed to tap on-line processes need not necessarily be wrong,

but to the extent that the results obtained do not directly reflect immediate perceptual processes, relating them to understanding required making a sizeable inferential step.

(Flores d'Arcais and Schreuder 1983:12)

One of the experimental tasks designed to demand and illuminate the hearer's on-line comprehension processes was 'speech shadowing', associated in particular with Marslen-Wilson (e.g. 1973, 1975, 1976). Subjects were asked to listen to a recording played through headphones and to repeat what they heard with minimal delay. Some listeners were able to repeat incoming speech with a time lag of as little as one syllable, or 300 milliseconds (Marslen-Wilson 1975). This indicated an ability to begin producing words of which they had heard only a small segment, i.e. to anticipate the incoming signal.

In later work, Marslen-Wilson and Tyler (1980) found that the speech shadowers substituted semantically or pragmatically appropriate words for items deliberately mispronounced or distorted, whose presence in the recording had not been revealed to them beforehand. Such correction is of significance for two reasons: firstly, it suggests that speech perception is sensitive to context effects very early in word recognition; secondly it provides evidence for what Marslen-Wilson terms the 'interactive' model of language comprehension (see section 1.3.3.3), since the listeners in the experiment were apparently drawing on available semantic or pragmatic information in order to construct a rapid and appropriate interpretation of what they had heard.

1.3.3.3. Interactive models of language comprehension

There is general agreement in the survey literature on recent psycholinguistic research into comprehension (e.g. Danks, Bohn and Fears 1983; Flores and d'Arcais and Jarvella 1983; Flores d'Arcais and Schreuder 1983; Garrod and Sanford 1983; Garrod 1986) that the notion of the interactive model of language processing is central to current work. The most explicit description of the model is found in the work of Marslen-Wilson and colleagues (Marslen-Wilson 1973, 1975, 1976; Marslen-Wilson and Welsh 1978; Marslen-Wilson and Tyler 1980). Essentially, the model assumes a flexible processing system in which different components or 'levels' - phonological, syntactic, semantic and pragmatic - actively communicate with each other, passing on appropriate information that may facilitate the comprehension process. Not only is there mutual sharing of information, but any results achieved at any of the four levels are made available to the others immediately and can affect the processing at any of the other levels.

In this way the interactive model stands in contrast to the previous assumptions made about language processing. Earlier psycholinguistic research into comprehension had led to the construction of "translation models" (Garrod and Sanford 1983:271) in which speech was translated into increasingly abstract levels of linguistic description, being subjected in turn to phonological, syntactic, semantic and pragmatic analysis.

The interactive model does not involve any obligatory sequence of stages. Instead, the various processing levels make available whatever type of information is most appropriate in the circumstances. Processing is, in this sense, parallel at all levels, rather than linear as in the earlier models. (Again, there is a similarity between work on a theory of human language processing and computer research, where current developments in parallel machine

information processing are leading to a significant increase in computational speed and capacity).

The fluent interpretation of incoming speech appears to be effected through a combination of processes, in which lower-level (phonological and syntactic) information is integrated with higher-level data from semantic and pragmatic sources. The route to successful comprehension may be initiated at either the 'bottom' or the 'top' in the interactive model, and for this reason the predominant direction of information processing is generally referred to as 'bottom-up' or 'top-down'. As Winograd has pointed out, these strategies are not restricted to language comprehension:

The distinction between top-down and bottom-up strategies applied in a very general way to any kind of processing. It can be characterized as the difference between goal-directed processing, which is guided by the goals it is trying to achieve,... and data-directed processing, which is guided by the availability of specific data.

(Winograd 1983:91, original emphasis)

A major research issue has been the question of how much low-level (phonological and/or syntactic) information is needed to drive the top-down mechanism (Flores d'Arcais and Schreuder 1983). Some studies (e.g. Marslen-Wilson and Tyler 1980) suggest that listeners are able to select - or guess - a correct word after hearing no more than its initial phonological segment, at a point when the stimulus information alone seems insufficient to indicate a single candidate.

An important difference between earlier and more recent psycholinguistic models of comprehension is the relative importance of the syntactic processing component. In transformational grammar-based studies, syntax was the primary source of information for interpretation and underlay such notions

as the derivational theory of complexity and the clausal hypothesis, discussed earlier. Current interactive theory reduces the role of syntax in comprehension processes, since the model proposes the listener's use of top-down processing - i.e. the application of appropriate higher level information - where possible. Nevertheless, bottom-up interpretation (working from phonological and syntactic levels) is still likely to be inevitable when the type or structure of the discourse, dictates it (Danks, Bohn and Fears 1983).

Flores d'Arcais and Schreuder (1983) reported evidence of hearers' use of syntactic processing as a fall-back position, when other processing levels failed to provide sufficient information. Flores d'Arcais (1978) found that children seemed not to use syntactic information if sentences were semantically integrated and pragmatically plausible, but did so when the texts contained semantic or pragmatic oddities. Flores d'Arcais (1982) presented adult subjects with sentences and content questions on them; in an incidental task he asked them whether they had detected any syntactic anomalies in the sentences. The results showed that comprehension was disrupted less by syntactic violations than by semantic and pragmatic infelicities.

This suggests that the most relevant cues for constructing a representation of the meaning of a sentence may be semantic and pragmatic; when analysis on these levels leaves room for uncertainty syntactic cues take on increasing importance. As a whole, this study (Flores d'Arcais 1982) indicates that while syntactic processing may be carried out automatically, the results of these computations are not necessarily used. The amount and the depth of such use is likely to be related to the difficulty of the linguistic task... When faced with more complex structures or content diverging from pragmatic expectations, the listener has to rely on several sources of information, and in this case syntactic cues become essential in uniquely specifying the correct interpretation.

(Flores d'Arcais and Schreuder 1983: 8-9, my emphasis)

For those working in L2 comprehension, the difficulty of the linguistic task is of particular importance in analysing processing routes open to or taken by

the foreign listener. As we will see in Chapter 3, there is some evidence (e.g. Conrad 1985) that at lower levels of linguistic proficiency, non-native listeners may be – or may perceive themselves to be – obliged to rely on bottom-up strategies, precisely because of the complexity they perceive in the incoming material.

1.3.3.4. Comprehension of connected discourse

In summarizing the current state of the art in language comprehension research in psycholinguistics, Flores d'Arcais and Schreuder (1983) comment that

research on the comprehension of connected discourse has been a point of convergence between several disciplines.

(Flores d'Arcais and Schreuder 1983:32)

There has been valuable cross-fertilization among such fields of linguistic investigation as text linguistics, discourse analysis, story grammar studies, cognitive psychology and artificial intelligence (cf. Brown and Yule 1983a; Richards 1983).

Taking the case of story grammars, various models (e.g. Thorndyke 1977; Kintsch and van Dijk 1975; Warren, Nicholas and Trabasso 1979) share an underlying emphasis on the notion that comprehension is neither linear nor simply additive. Understanding a story involves the listener's developing a rational, coherent account of the sequence of actions and events, constructing a mental plan that serves as a framework for interpreting and organizing the discourse. Flores d'Arcais and Schreuder noted what they termed the "congeniality" of some of the principal notions of text comprehension and story grammars, from the point of view of the psycholinguist:

- the concern with suprasentential processing;
- exploitation of knowledge of the world and of plausible schemata for specific story or discourse types;
- the necessity for inference and interpretation, rather than straightforward reception of speech signals.

Bearing in mind this convergence of research interest and insight, in the next section we consider some of the issues of language comprehension that have been illuminated by studies concerned, broadly, with the production and comprehension of extended discourse.

1.4. Discourse research

The psycholinguistic research referred to in section 1.3.2 was based on three principal simplifying assumptions, which limited its applicability to actual language use. Firstly, comprehension was equated with the formation of a mental representation of a stretch of language and excluded the interpretation of its content as a message. Secondly, the focus of most studies was the single-sentence text. Thirdly, the aim was to disregard the non-linguistic (contextual and more general) information that might be thought normally to support and inform the comprehension process. In this section we will consider the contribution of discourse research over the last decade to the development of a less abstract view of language comprehension, and one more relevant to our daily experience of language in use.

1.4.1. Comprehension: construction and utilization

In their survey of psycholinguistic studies of comprehension processes, Clark and Clark (1977) criticized the narrowness of research focussed on construction, "the building of meanings from sounds" (Clark and Clark 1977:43),

at the expense of sufficient attention to utilization, the procedures by which "under normal circumstances listeners figure out what they were meant to do with a sentence and do it" (ibid: 44). In other words, a listener fully understands a piece of language when he has recognized the speaker's communicative intention.

1.4.1.1. Purpose

A number of other writers have characterized the two complementary aspects of comprehension in terms that parallel Clark and Clark's "construction" and "utilization". Carroll described them as "apprehending" and "relating", respectively (Carroll 1972:13). Ruth Clark wrote of "narrow" and "broad" comprehension (Clark 1975:337). Freedle noted that

in addition to assigning semantic interpretations to individual sentences we are also attempting to understand a larger issue: what the speaker is driving at.

(Freedle 1972:182)

This larger issue of the recognition of speaker purpose has been expressed succinctly as "why that now and to me?" (Sacks 1968, quoted in Coulthard 1977).

But it should be emphasized that this division of comprehension into construction and utilization does not imply passive and active elements of comprehension, respectively. As Neisser points out, there are no given data in language understanding: "perception is inherently selective" (Neisser 1976:55). The sense that we make of language³ addressed to us or overheard by us will depend on our selective use of information from a wide range of sources (discussed in sections 1.4.2 and 1.4.3, below).

As Widdowson has pointed out, there is of course no guarantee that the

speaker's original purpose will necessarily be reflected in the purpose attributed to his words by the listener. Listeners have their own purposes, just as speakers do.

Apart from the fact that (the receiver) may miss or misinterpret certain clues, his purpose in processing the discourse may not require him to recover all the meaning that the producer intends.

(Widdowson 1978:32)

1.4.1.2 The Given–New contract

One of the ways in which the speaker is able to show how the listener should utilize the message is through the "Given–New contract" (Clark and Havilland 1972).

By this agreement, speakers attempt to judge what their listeners do and do not know, and they construct their sentences accordingly.

(Clark and Havilland 1972:30)

The other party to this normally tacit contract, the hearer, is able to take advantage of the linguistic structuring and topical staging of information in order to recognise and respond to the speaker's intentions; "he wants to integrate new information into what he already knows" (ibid:31).

The notions of the recognition of communicative purpose and the need for a contract of communication are both products of an analysis of language comprehension and use which extends well beyond the limits set in the pre-1975 period of psycholinguistics. They were made necessary by attempts to examine how people used language to convey messages, rather than how listeners understood (or in Clark and Clark's terms, constructed) experimental

single-sentence texts. The change of emphasis was bound up with the growth of discourse studies.

1.4.2. Interpretation of discourse

The concern of most of the psycholinguistic research referred to in sections 1.3.1 and 1.3.2 was to investigate the ways in which readers/listeners comprehended individual sentences. The exclusion of any analysis of what was involved in understanding language in continuous discourse represented a significant degree of abstraction from actual language use. Perhaps the most important effect of the isolation (or invention) of single sentences was decontextualization, both verbal and non-verbal.

1.4.2.1. Context

Listeners are not normally required to comprehend single sentences unaccompanied by any preceding or ensuing text and unrelated to an occasion of use. The norm in communication is that "a sentence is comprehended (or miscomprehended) relative to a context" (Olson 1972:148). As a great deal of the psycholinguistic literature from the 1960-75 period dealt with experiments that focussed on decontextualized language, there were obvious grounds for objection since the results obtained were necessarily artificial. This artificiality might be of two kinds. Firstly, the experimental language items were administered to subjects hearing them for test purposes, as medium rather than message. Secondly, the items themselves were predominantly short texts and as such were even further removed from the type of language that a reader/listener might encounter under normal circumstances.

Paradoxically, psycholinguistic researchers' attempts to control, restrict and decontextualize language input read/heard by experimental subjects in fact

served to highlight the fact that, no matter how improbable a sentence is made, human subjects exhibit a strong in-built tendency to want to find a plausible real-life context that will allow a sensible interpretation of the language sequence. We are always inclined to go beyond the sentence, so to speak, in the search for a reasonable interpretation.

As an example of this propensity - "our fundamental effort after meaning" (Bartlett 1932:227) - Collins and Quillian (1972b) reported an experimental finding that even as abstruse a sentence as "An almond has a fortune" was assigned a plausible context and meaning. Their American subjects assumed that the almond in question must be an almond fortune cookie (Collins and Quillian 1972b:128). Similarly, Weiner and Goodenough noted that

it has been demonstrated that listeners go beyond the discrete sentential input to integrate, infer and supply 'information' not explicitly found in the original input.

(Weiner and Goodenough 1977:215)

Apart from the apparent impossibility of hermetically sealing off single experimental sentences from the semantic associations that subjects bring to them, there were positive advantages to be derived from investigations of the way receivers interpret discourse above the level of the sentence.

If we broaden the scope of psycholinguistic inquiry from the sentence as an abstraction, to real language in use, relations and patterns that were previously concealed come into view.

(Oller 1973:47)

This was not a novel suggestion. Coulthard (1977) pointed out that nearly fifty years earlier Firth had stressed the need for linguists to investigate the normal procedures and systems of everyday conversation, believing that

it is here that we shall find the key to a better understanding of what language is and how it works.

(Firth 1935)

As we will see in Chapter 3, this focus on conversation as the seat of insights into language processes is a feature of recent SLA research developments.

1.4.2.2. Product v. process

The crucial point about the move away from an experimental concentration on the hermetic sentence was that it also led to attempts to investigate language in use, as opposed to language as medium.

It is now fairly clear that we cannot treat texts simply as units larger than sentences, or as sequences of sentences. The prime characteristic of texts is rather their occurrence in communication.

(de Beaugrande 1980:xi)

This shift of perspective inherent in the change to a view of language use as part of social behaviour, on Firthian lines, might be encapsulated in the contrast between language as product and language as process (Widdowson 1979b).

The move to an analysis of processes and problems of comprehension based on texts above the sentence level is not simply a question of scale (Crothers 1972; de Beaugrande 1980). A text is a sequence of language used to communicate a message or set of messages to the reader/listener, and both discourse participants play an important role in the construction of discourse. This give-and-take between producer and receiver has been described in various ways. Candlin writes of "negotiation of meaning and interpretation" (Candlin 1977:xi). In the case of face-to-face conversation, such

negotiation is overt and active: Brown and Yule emphasize the need for partners in discourse to reach a "tolerable degree of mutual comprehension" (Brown and Yule 1983b:60); Widdowson stresses that "meanings do not exist, ready made, in the language itself: they are worked out" (Widdowson 1978:31). In short, both (or all) participants play their part in the process of creating meanings in discourse.

1.4.2.3. Rules of interpretation

Under normal circumstances, the negotiation and development of discourse proceeds according to rules of interpretation that relate words to actions (Labov 1970). It has been the concern of discourse analysts, in particular those working on more marked or structured types of spoken interaction ⁴, to define what those rules may be. It is clear that participants are able to impose a coherent interpretation on discourse that may exhibit little formal syntactic cohesion, as in the following example:

A: "I want you to write down the answer in your exercise book"

B: "My pen is broken"

(Criper and Widdowson 1975:207)

On this point, Coulthard notes that we are so used to interpreting language in discourse that we may not notice that the structure of constraints on the next speaker cannot be expressed in syntactic terms:

Sequences which from a grammatical viewpoint are a random succession of clauses of different types can be seen from a functional viewpoint to be highly structured.

(Coulthard 1977: 77)

We are even able to make sense of an exchange that involves no language at

all and relies on the participants' shared access to some underlying system of interpretation, as in this case:

(Domestic evening scene – husband and wife watching television)

A: indicates by pointing and tapping his ear that he can hear the telephone

B: points to the cat asleep on her lap

A: shrugs and gets up

(Brown and Yule 1983a:228)

The thread of discourse can therefore be identified and manipulated without recourse to language under certain – presumably restricted – circumstances.

1.4.2.4. 'State of play' in discourse

The fact that most conversation is to some extent open-ended and relatively undirected means that participants have a responsibility to let each other know what they believe to be the 'state of play' of the discourse (Brazil 1975). This may involve explicit linguistic formulae such as "Where was I?" or "To get back to what I was saying...", or it may require implicit assumptions about what a speaker or writer thinks is shared information. Freedle and Carroll (1972) noted the impracticality of a speaker/writer supplying all the necessary background information and context necessary for a message to be understood; the alternative would be to create unmanageably extended and uninteresting discourse. The implications of just such a strategy in the case of native/non-native interaction will be discussed in Chapter 8.

1.4.2.5. Refinement of interpretation

On the part of the receiver, there has to be continual adjustment to

incoming language. Just as the creation of discourse is a process, so the receiver's representation of what the message is remains in constant flux and evolution. This view of comprehension as dynamic rather than static was developed by a number of researchers working in the fields of L1 use (e.g. Carroll 1972; Frederiksen 1972; Schlesinger 1977) and of L2 learning (e.g. Rivers 1968, 1971; Brown 1977, 1978, 1981). Common to these writers' descriptions of the process of language understanding is the notion of gradual refinement or fine-tuning of comprehension. Initially, the hearer understands the overall message in rather approximate terms, but increasing familiarity with the discourse topic, speaker and so on contributes to a sharpening of understanding. We work from a provisional to a sufficient interpretation, which is related to our purpose in listening.

Working in the L1 educational context, Schlesinger (1977) emphasized that this gradual refinement of comprehension applies not only within ongoing discourse but also between successive instances of particular types of discourse. As children gain experience of interpreting language in use, they become more proficient processors of discourse. The development of such abilities – whether in the L1 or L2 context – is closely linked with three main factors: experience of discourse, linguistic knowledge and knowledge of the world (cf. Brown 1986a, Garrod 1986). The role of the third of these types of knowledge is crucial in any analysis of what it is that language users do in order to comprehend discourse and of how speakers assess their interlocutor's state of knowledge relevant to the current interaction. We will turn to this in section 1.4.3.

1.4.3. The role of background knowledge in comprehension

The terms 'background knowledge', 'knowledge of the world' and 'general sociocultural knowledge' are used interchangeably in the discourse research

literature. Such knowledge is non-linguistic, in the sense that it does not include knowledge of a given language. Carton (1971) refers to it as 'extralingual' - "knowledge of occurrences in the real world" (Carton 1971:55). A number of writers (e.g. Winograd 1972; Neisser 1976; de Beaugrande 1980) have taken the view that the way we deploy our background knowledge when attempting to interpret discourse is not essentially different from the way we try to make sense of anything else in life:

Not only reading but also listening, feeling and looking are skillful activities that occur over time. All of them depend upon pre-existing structures called schemata, which direct perceptual activity and are modified as it occurs.

(Neisser 1976:14)

The term 'schema' originates in the work of Bartlett (1932). It has been influential in a number of academic fields, including research into human comprehension and also computer-based modelling of language understanding. One definition of a schema is

a mental structure, consisting of relevant individual knowledge, memory and experience, which allows us to incorporate what we hear into what we know.

(Anderson and Lynch 1988:139)

As Bartlett showed experimentally, the individual schemata available to listeners/readers can distort as well as support comprehension and memory; our interpretation of an original text is often (unconsciously) modified - both at the time of hearing/reading and of subsequent recall - by the cognitive scaffolding that schemata provide.

Widdowson (1983) proposed the terminological distinction of "schematic" and 'systemic' types of knowledge, to refer to the complementary databases of

real-world knowledge and linguistic knowledge. This distinction is helpful in that it underlines the fact that the latter is the more systematic, i.e. comprises shared knowledge of rules. As soon as we examine specific instances of the way people interpret what has been said or written, it becomes clear that we cannot assume that any group of listeners or readers will display homogeneous knowledge of the world. This holds true for both native and non-native users (cf. Collins and Quillian 1972a; Gatherer 1980; Brown and Yule 1983a). The very terms 'general knowledge' and 'background knowledge' beg the questions "General to whom?" and "Whose background?"⁵.

1.4.3.1. Top-down processing

Particular attention has been paid to the relationship between the linguistic and non-linguistic elements in the comprehension of speech (cf. section 1.3.3) to see whether these determine the implementation of bottom-up (phonologically and syntactically based) processing or top-down (semantically and pragmatically based) processing. Clark and Clark's (1977) review of current psycholinguistic research concluded that listeners probably rely on a flexible opportunistic combination of these two global strategies. Schlesinger, too, reviewing work in artificial intelligence, commented that it seemed likely that the syntactic and conceptual components "talk together" (1977:176).

We might summarize the various strands discussed in this chapter by setting them out in diagrammatic form:

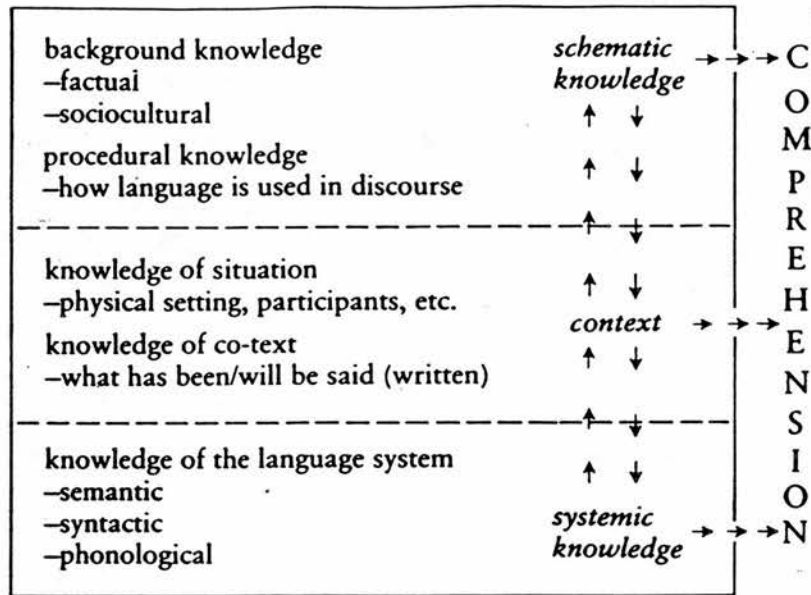


Figure 3. Information sources in comprehension (from Anderson and Lynch 1988:13)

It is likely that a listener will normally exploit semantic clues in discourse where possible and that these will invoke 'local' knowledge - of speaker, topic, setting, etc. - as well as 'global' knowledge of the world relevant to the current discourse. We should note in passing that it has been suggested that top-down processing may have particular implications and advantages as a general strategy for L2 comprehension, especially for adult learners whose knowledge of the world and of L1 discourse is a potentially powerful support for comprehension (cf. Goodman 1971; Rivers 1971; Clark 1975). We will be examining this point in Chapter 3 on foreign language comprehension.

1.4.3.2. Modelling knowledge: artificial intelligence

Important insights into the complexity of the individual's knowledge of the world have come from research in artificial intelligence over the last 10–15 years. It became obvious that to create a computer programme with sufficient data to simulate even highly restricted sets of human language understanding would involve enormous amounts of information. Some researchers therefore concentrated on creating and storing knowledge of highly specialized worlds, examples being the travel agent computer programme GUS (Bobrow et al. 1977) and the SHRDLU programme to manipulate blocks (Winograd 1972).

One of the results of this work and similar studies in text-based psycholinguistic research, (e.g. Anderson 1977; Tannen 1980; Sanford and Garrod 1981), has been the invention of various metaphors to describe the organization of knowledge in human memory and its exploitation in the interpretation of discourse. 'Frames' (Minsky 1975) were defined as static data structures about one stereotyped topic; 'scripts' were intended to deal with event sequences (Abelson 1976; Schank and Abelson 1977). Related studies into the processing of written texts offered 'scenarios' – "knowledge of settings and situations" (Sanford and Garrod 1981:110).

In their critical survey of the literature on the representation of knowledge for language processing, Brown and Yule (1983a) concluded that the various metaphors currently available offered no more than a partial account of memory organisation and fail to provide any

principled way of constraining the expansion of any analysis which incorporates extra-linguistic knowledge in its account of the understanding of linguistic data.

(Brown and Yule 1983a:245)

In other words, the various constructs do not explain how it is we are able to select some information, but not all, from our mental store on any particular occasion of need.

There have been more explicit warnings against the adoption of computer-influenced analogies in the investigation of human discourse interpretation. Collins and Quillian (1972a) stressed that the information encoded in the brain to represent concepts should not be thought of as a listing, or even as a hierarchically structured set:

going from one concept to another does not involve scanning a list but rather activating a path via some property from one to another.

(Collins and Quillian 1972a:314)

Similarly, Schlesinger (1977) wrote that

unlike the computer systems developed so far, human hearers do not check for all available clues. We do not invariably consider all the alternatives, but often only the more likely ones. Understanding an utterance involves taking shortcuts.

(Schlesinger 1977:114)

The procedures that individuals use for selecting these paths and shortcuts have not yet been uncovered, but we might permit ourselves a final comparison with computing research. In the area of database management the current interest in a shift from hierarchical to relational databases could be seen as a move towards a model that would offer significant insights into the activation and deployment of real-world knowledge in language comprehension processes, by offering paths through networks of information, rather than linear or hierarchical routes.

1.5. Summary

This section began with comments on the simplifying assumptions made by earlier psycholinguistic research influenced by transformational grammar theory:

- (a) the emphasis on the construction of meaning, rather than its utilization;
- (b) the use of system sentences as experimental objects, rather than of texts above sentence level;
- (c) the exclusion of semantic and contextual influences on understanding.

Research over the last decade or so has tended to reduce the degree of idealization in the data under investigation. As a result, comprehension studies are confronting the complexity of describing and explaining the processes we engage in daily to understand actual discourse.

CHAPTER 2

THE RELATIONSHIP BETWEEN LISTENING AND READING COMPREHENSION

So far we have considered language comprehension in general terms, rather than separating reading and listening. There is a clear assumption in much of the literature that what is true of the processing of print or writing is true of speech processing as well. The conflation of terms from the two modes of comprehension is common; for example, in a comment on the role of background knowledge in the understanding of discourse, Freedle and Carroll wrote:

it is impossible for the speaker or writer to supply all the necessary context required for understanding a message; he must assume that the hearer or reader already possesses an appreciation of a large part of the required context.

(Freedle and Carroll 1972:360, my emphasis)

Given that there is general consensus that reading and listening are at least overlapping modes of comprehension, the question that arises is: How different or how related are they? In section 2.1 we examine the main differences between listening and reading and then in 2.2 and 2.3 we consider evidence for the relatedness of listening and reading, from research into L1 and L2 processes, respectively.

2.1. Distinctions between reading and listening

As we will see in sections 2.2 and 2.3, a reasonable claim can be made for a degree of overlap between the basic processes of interpreting writing and speech. However, important differences do exist between the perceptual activities of reading and listening; these are connected primarily with the different physical forms and social functions of written and spoken language.

Before considering the variations between the two receptive modes, it should be stressed that writing and speaking – and therefore reading and listening – are not monolithic and totally discrete language activities, even though the conventional use of the terminology of ‘the four language skills’ in the language teaching literature certainly implies just such a division. The co-extensiveness of written and spoken language has been expressed in diagrammatic form:

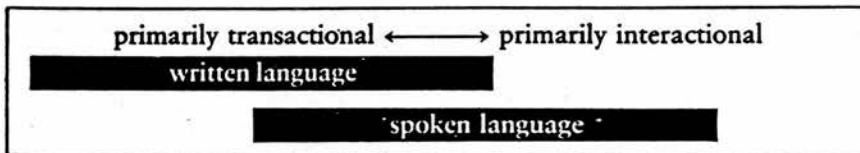


Figure 4. Functions of written and spoken language (Brown and Yule 1983b:23)

Although the original purpose of the diagram was to highlight the functional common ground between speech and writing, inferences may be drawn as to the formal characteristics of written and spoken language, related as they are to the overall function of a particular discourse. The more formal and transactional the spoken language, the more marked its resemblance to writing. It may even be ‘written language read aloud’, such as might be found in a radio talk; conversely, a written message may be intended to be primarily interactional and reader-oriented, with appropriate spelling and punctuation to suggest approximation to spoken forms, as in the following example from a ‘get well’ card:

Hope you're feeling better.

*It's not the same without you.
(Thank goodness!)*

So it is important not to think of the forms of language employed in writing and speech as totally independent language varieties; it is more helpful to think in terms of general tendencies in their use as opposed to rigid categories.

2.1.1. Formal differences

2.1.1.1. Simplification

Speech confronts listeners with special problems which they learn to cope with in their native language but which can make listening to a foreign language particularly frustrating. Their interpretation has to rely on what Palmer called "rough hints", since it is a normal characteristic of conversational speech that the acoustic signal is simplified in various ways. At the syntactic and lexical level, Bygate (1987) lists four main categories of what he terms "facilitation" in English (as seen from the speaker's point of view):

- structural simplification
- ellipsis
- formulaic expressions
- fillers and hesitation markers.

At the phonological level, Brown (1977) points out that, even in the relatively circumspect delivery of television and radio news-readers, one typically encounters

- assimilation
- elision
- consonant weakening
- vowel reduction.

The comparative indistinctness of spoken language in most contexts can make listening something of an exercise in creative reconstruction of what must have been said, rather than simple recognition of what has been said. This process is, for the most part, an unconscious one in the L1 case, whereas it is relatively conscious in L2 listening, especially in the early stages of language learning.

There is no such need to reconstruct the original signal in reading, except in exceptional circumstances where the printed or written symbols are illegible. The printed word is analogous to the citation form of the spoken word. It is perhaps important to add in passing that English may be considered to present foreign listeners with comparatively severe problems, since the difference between the ideal citation form of any word and its natural realization in speech is considerable, certainly by comparison with a language such as Finnish, where vowel values remain relatively constant, even in informal speech.

2.1.1.2. Process versus product

When listening to spontaneous speech we are observers of (or participants in) an ongoing process of creation, rather than recipients of a polished product. A great deal of primarily interactional spoken language could be thought of as the spoken equivalent of a hurriedly scrawled note. The data recorded by conversational analysts (e.g. Sacks, Schlegloff and Jefferson 1974; Duncan 1973, 1974) illustrate the various phenomena of on-line repair that speakers produce. The following is a fairly typical example of an unscripted conversational turn:

"the environment I was living in was Berkeley + which is purely academic + no it wasn't purely academic it was em + it was basically academic I mean most of Berkeley is the university + it's like a town + in which the university dominates the city +

like Cambridge + or Oxford + the university is the hub of the city"

(Brown and Yule 1983a:142)

By contrast, the reader is presented with a finished and often heavily edited form of language product. The re-drafting and editing that the writer has carried out remain unseen under normal circumstances.

A reader may be confused or put off by a text full of corrections. Consequently, the writer carefully rewrites sections so that they can be read clearly, as though no correction had been made. In speech, however, corrections are tolerated and indeed necessary.

(Bygate 1987:18)

In short, the listener is obliged to deal with potentially confusing and relatively degenerate data.

2.1.1.3. Transience

Most spoken language is intended to be transitory, of "a fleeting, immaterial nature" (Rivers 1968:136). The opportunity to hear something repeated or clarified is a luxury – usually dispensable as far as the native listener is concerned. It is desirable but often unavailable to the foreign listener – as a number of writers have pointed out (e.g. Rivers 1968; Brown 1977; McDonough 1981). Rivers (1971) also noted that often even the speaker is unable to recall his precise wording, let alone the segmental and suprasegmental features of the utterance, even a few moments after saying something. In contrast to the process of reading, where the reader sets his own pace, listening involves real-time language processing. This would put an intolerable load even on L1 listeners, if the sole purpose of all spoken language were to convey transactional information.

2.1.1.4. Accessibility of 'chunking'

Listening requires the segmentation of the spoken signal into its constituents, both at syntactic and semantic levels. In written language the words normally appear as separate items on the page. The writer follows conventions of punctuation, spacing and layout that indicate how the information should be parcelled into meaningful chunks. The reader might therefore be said to receive language in ready-made packages.

By contrast, the listener has to engage in

an active search for intrinsic structure, rather than the passive registration of extrinsic structure.

(Johnson-Laird 1970:262)

He has to rely on a combination of his internalized grammar and any available and relevant semantic expectations, to establish order and sense from the incoming stream of speech. The constituents of a stretch of speech are not 'given' in the way that a written text is.

2.1.1.5. Speed

In addition to the fact that spoken language is relatively continuous and seamless, there is the speed factor. No absolute correlation can be made between speed of speaking and comprehensibility, since - as suggested in Chapter 1 - understanding depends on so many factors in addition to language itself. But it is usually the case that listening to L1 speech conveys less impression of speed than listening to a foreign language, other things being equal. In an L1 study Garvey (1953) found that native listeners were able to comprehend as much as 80% of a message delivered at two-and-a-half times normal speed; this would probably be unattainable by most L2 learners.

Indeed, the various metaphors coined to describe the familiar frustrating experience of listening to a foreign language in which one has limited proficiency emphasize the confusing pace of spoken delivery, at least as perceived by the listener: "torrent" (Cross 1980); "sheer flow of words" (Pimsleur, Hancock and Furey 1977); "stream of undifferentiated noises" (Rivers 1968).

Research has been carried out into the possibility of varying the speech rate of recorded materials, both for L1 and L2 purposes (Orr, Friedman and Williams 1965; Orr and Friedman 1967, 1968; Orr, Friedman and Graae 1969). The principal method used to increase the speech rate is speech compression, produced without pitch distortion. Conversely, speech rate can be decreased either by speech expansion (the opposite of speech compression) or by temporal spacing, i.e. the insertion of pauses.

The results reported in Johnson and Friedman (1970) of temporal spacing experiments can be seen to parallel the conclusions drawn in the 'click' studies reported in Chapter 1, namely, the primary importance of the clause as the basic unit of comprehension. Johnson and Friedman reported that when pauses were inserted 'structurally', (that is, at syntactic boundaries), in speech-compressed sentences, this resulted in subjects' better recall than when pauses were interspersed at other points in a sentence or when the sentence was produced in a single breath-group. The same held for subsequent experiments comparing performances in L1 (English) and L2 (Russian), reported in Friedman and Johnson (1971).

The results of these spacing studies could have considerable significance for L2 teaching, particularly in view of the dominant perceived difficulties associated with the sheer speed of the foreign language, when listened to in the initial stage of language learning. The alternative method of slowing the

overall pace of delivery – speech expansion – seems to offer less pedagogic applicability, especially in view of the incidental finding that slowed speech acts as a soporific (Johnson and Friedman 1970).

2.1.2. Functional differences

To return to the diagrammatic representation of the relationship between written and spoken language (Figure 4), an essential aspect is the overall tendency to complementary functions. Written language tends to be transactional and message-oriented, and speech to be associated with interactional, listener-oriented purposes. However, we should reiterate that in terms of Brown and Yule's diagram, spoken language extends further into the transactional domain than written language does into the interactional.

2.1.2.1. Breadth of information

The overall function of discourse affects the structure of information it contains. Written transactional language tends to contain tightly packed information, but the processing load on readers is lessened by their opportunity to pre-view, annotate, re-read and so on, at their own pace, in order to reach what they regard as an adequate interpretation of the writer's intended meaning.

The listener is not in this privileged position and is normally obliged to attempt to comprehend speech as it is being produced. To compensate for the demands made on him by the once-only nature of most listening, the listener has at least potential access to a broader, richer range of information than the reader, who has only the printed text to rely on. In face-to-face interaction the listener is able to exploit paralinguistic and non-linguistic cues that are unavailable to the reader (cf. Laver and Hutcheson 1972; Kendon 1973; Riley

1981). These cues may clarify the precise information focus (through placement of tonic stresses and pauses) and reveal affective and attitudinal dimensions that cannot easily be brought out in the written language.

In this sense, one might say that spoken transactional language compensates for its relative diseconomy by offering a wider variety of information, including the affective dimension that Stevick has termed "depth" (Stevick 1976). We may write something in fewer words but the spoken version invests the message with a broader range of meaning and nuance, beyond the purely referential. As stressed earlier, the potential for breadth of interpretation is greater in the spoken language; whether listeners – especially the L2 learners that are our concern – can easily learn to exploit that potential is another matter.

2.1.2.2. Reciprocity

Widdowson (1978) has argued that reading and listening depend on the same basic discourse interpretation procedures, mediated through different types of language text. The essential distinction is in the reciprocity of face-to-face spoken interaction. However, not all oral communication actually builds in genuine reciprocity, even face to face; it may remain potential. In educational settings, for example, the possibilities for interaction may not in fact be taken up; even when the language in use is the mother tongue, pupils or students are often inhibited by their social role of inferior to the teacher or lecturer, and may simply let the speech flow over them, as it were, without asking for repetition or clarification when the need arises. In this case, listeners to what is effectively a transactional monologue are at a double disadvantage in comparison with someone reading a written version of the information: firstly because of the impermanence of the text and secondly due to their lack of control over the rate at which the text is delivered.

2.1.3. Summary

To sum up, we might consider this question: How could reading be made more like listening? In order to make the demands on the reader more equal to those on the listener, the characteristics of the reading text and the reading task would have to be altered in a number of ways. Firstly, the print would have to be made only partially legible, with some of the symbols faint, and others missing altogether. Secondly, the text would need to include all the changes, crossings out and additions from successive drafts. Thirdly, the text would need to be presented at a speed over which the reader had no control, for example by using screen projection, with each segment of text – shown as a linear string, not in the familiar paragraph block – displayed for a few seconds at a time. Fourthly, the spaces between the words would be reduced to the point that some words were run together. Lastly, the presentation would be run at a rate that reduced the viewer's reflection time to a minimum.

2.2. Listening and reading: their relationship in L1

Since listening and reading are both comprehension skills, it would be perverse to consider the possibility that they derived from completely distinct areas of language competence. But precisely how the two skills are related – and whether that relationship holds true in L1 and L2 contexts – are basic research questions. Although expertise in listening has generally been considered something that is acquired by all (physically unimpaired) native speakers in infancy, the skill of reading is acquired neither automatically nor fully by many individuals ¹.

One area of L1 research interest has been to investigate how learning to read might develop from, or build on, the existing listening skill. The traditional view of the relative complexity of the two comprehension abilities was that

the native child successfully mastered listening before starting school and therefore before starting reading instruction. Yet, as we will see, recent studies have produced evidence that contradicts the conventional view.

Sticht (1972) set out to examine the evidence for what he claimed was the "common sense notion" of language development, formulated in an early study by Huey:

The child comes to his first reader with his habits of spoken language well formed, and these habits grow more deeply set with every year. His meanings inhere in the spoken language and belong but secondarily to the printed symbols

(Huey 1908:123)

The assumption here was that listening is the primary language ability, in two senses. First, it is the initial linguistic skill acquired by the infant. Second, the degree of listening ability developed by the child determines eventual reading competence. In other words, Huey's hypothesis was that one must understand speech well to be able to read well.

Basing his research on the work of Huey and its subsequent development by Brown (1954), Sticht set up two hypotheses about the learning ability of adult native speakers with below-average reading competence:

(1) that, if given the option of performing a listening task using either spoken or printed instructional material, poorer readers would prefer to learn by listening;

(2) that they would learn more effectively from listening than from reading.

The research subjects were divided into three groups of low, average and high mental aptitude ². The results offered clear evidence for the first hypothesis; a substantial majority of the low aptitude group opted for the

listening-based task. However, despite their preference for listening, they did not score significantly better on their tasks than on comparable reading-based tasks. Sticht commented

The (low mental aptitude group) may learn equally poorly by listening as by reading. This suggests that much of their reading difficulty may result from reduced ability to comprehend language rather than... lack of ability in decoding written symbols into the language of speech.

(Sticht 1972:288)

He proposed an extension of Huey's developmental model of reading acquisition, to one in which the listening skill was not the determiner of subsequent reading ability but was itself determined by

a number of prelinguistic, preliterate, cognitive abilities, collectively referred to as 'intelligence'.

(ibid:291)

The relationship that Sticht suggests is therefore hierarchical:

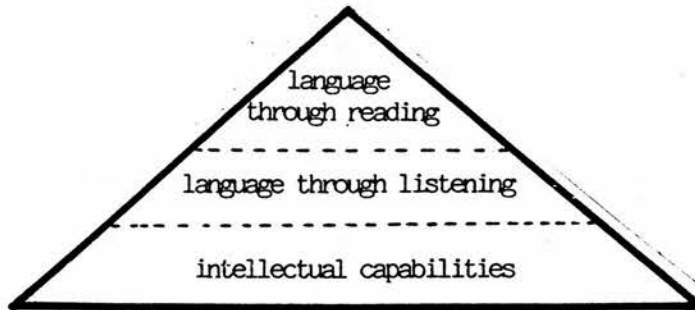


Figure 5. Relationship between L1 reading and listening (after Sticht 1972:291)

One of the inferences that might be drawn from this model is that an individual's reading and listening ability should remain relatively constant and



impervious to training. Sticht claimed this was the reason for the disappointingly limited improvement in school pupils' reading comprehension even after intensive training programmes. However, as he pointed out, there was evidence from research by Devine (1969) that pupils trained in listening comprehension had achieved substantial progress. Sticht reconciled this result with his own model by arguing that the reason for this improvement was the type of listening skill trained: teachers concentrated on helping pupils to listen with greater purpose and attention (recognizing sequence and argument etc.), which is taught as a matter of course in reading programmes but normally ignored as far as aural comprehension is concerned.

A similar point was made by Carroll, commenting on various "apparently successful" attempts to teach certain kinds of listening (e.g. Lundsteen 1969). He pointed out that

the teaching of 'listening ability' is a matter of training processes that lead the individual to pay closer attention to what he hears and to organize meanings for better retention, comparison and reference.

(Carroll 1971:130)

His position, stated in a later article (Carroll 1972), was that "basic linguistic competence" might be relatively immutable, even after concentrated training. This notion seems very like Sticht's "underlying pre-linguistic competence".

The position taken in these studies is, then, that reading and listening draw on essentially the same processes; Sticht expressed this explicitly as "there is but one basic kind kind of comprehension, not two" (Sticht 1972:312). The comprehension apex of the hierarchy in Figure 5 rests on an underlying ability, or set of abilities, that Sticht termed 'intelligence'; his use of quotation marks might be taken to indicate some reservations about the associations of that particular word, but he offers no further definition ³.

2.3. Components of language processing

More recently, researchers have provided some insights into what this underlying competence might consist of, especially by concentrating on the performances of less successful (or less mature) listeners/readers. Carr, Brown and Vavrus (1985) investigated the various skills contributing to reading performances of 8- to 15-year-old native readers undergoing remedial reading tuition. Their results suggested that one of the skills most highly correlated with overall reading success was listening comprehension; the poorest readers were also the least effective listeners. They concluded that poor readers may be hampered by deficiency in a more general processing skill, in addition to any specific print-decoding problems.

Curtis (1980) found that the relationship between listening and reading increased with maturity - a result that contradicts the view of listening as the primary linguistic ability. After the age of 9, the correlation between reading scores and listening scores was higher than that between two reading measures - one involving comprehension of meaning and the other, recognition of form. This also suggests the importance of a general processing ability, rather than a specific ability with the written language, once the basic decoding problems have been mastered. Research into this general processing ability point to two possible components: (1) the ability to monitor comprehension and (2) the ability to relate parts of a message to an evolving whole.

2.3.1. Comprehension monitoring

A skilled listener/reader is able to monitor their understanding of a message, in other words, to recognize when they have not achieved a sufficient degree of comprehension - whether due to inattention or to an

ambiguity or problem in the text. When a difficulty arises, the reader/listener needs to take some remedial action, such as re-reading the problematic section of text or asking the speaker for clarification. This is a skill that is acquired with maturity. Markman's studies with young native listeners (Markman 1977) and with readers (Markman 1979) suggest that in this age-range - 11 years and below - children often have problems in identifying ambiguous or contradictory information, even when they have specifically been warned of the possible presence of such difficulties.

In a study of 7- and 11-year-old native listeners, Asher (1976) found that the younger subjects judged two-thirds of communicatively adequate messages correctly but recognized only one-third of the inadequate ones. By contrast, the older group were able to assess all adequate messages correctly but still failed to detect one-third of the ambiguous items. Adolescent native listeners (age 13/14) have been found to allow contradictory or unclear instructions to pass unchallenged, even when the comprehension task in hand encouraged them to stop the recorded text as problems arose (Brown, Anderson, Shadbolt and Lynch 1987).

Why is it that some listeners/readers fail to detect such ambiguities or inconsistencies? Markman hypothesized that it was an inability to compare information within a text as a whole; in other words, it might be due to a tendency not to construct an incremental interpretation but to treat each phrase or sentence as a discrete entity.

2.3.2. Relating parts to the whole

There is a potential conflict between the way in which information is presented to the listener/reader and the strategies they need to deploy in order to cope with its interpretation:

A basic constraint on language processing, whether it be written or spoken language, is that we normally sample an utterance only sequentially, taking it in one word at a time, yet interpretation at the end of the day depends upon analysis of whole segments of the input (i.e. phrases, sentences, paragraphs, and so on)

(Garrod 1986:235)

The main finding of Garrod's (1986) experiment, in which adult native readers were asked to identify misspelt words in continuous prose, was that errors were detected more quickly in appropriate than inappropriate contexts. Since the appropriacy of the context for a current sentence was dependent on information presented earlier in the text, it seems likely that readers were engaged in the construction of a network of meaning associations and then making helpful comparisons between chunks of text in order to detect errors.

Similar results had been found in earlier studies with adult native listeners (Cole and Jakimik 1979, 1980). In this case the errors that subjects were asked to detect were mispronunciations in continuous speech. Again, the listeners achieved more rapid recognition of mispronunciations when these occurred in contextually appropriate words. So competent L1 readers and listeners appear to build an overall interpretation of incoming messages, exploiting information from earlier parts of the text in order to make sense of what they encounter subsequently.

In a survey of the listening and reading performances of Scottish schoolchildren, Neville (1985) found that for all the age groups investigated in her study (8-, 11- and 13-year-olds) there was a wide range of scores, with progressively smaller numbers of children performing poorly at each stage. This finding would seem to be further evidence against the conventional view: listening is not a primary or foundation skill, mastered once and for all, but in fact continues to develop over a considerably longer period than was formerly

believed. It suggests that inadequacies in either comprehension skill may be due to the lack of a general processing ability, rather than that poor reading is a direct consequence of poor listening.

2.4. Listening and reading: their relationship in L2

Sticht's (1972) choice of the term 'intelligence' to describe the basic competence underlying both comprehension skills provides an interesting link with the views of some researchers who have examined listening and reading in L2 learners, in particular Oller (Oller 1974, 1976; Oller and Streif 1975). Oller found evidence for what he termed a "general language proficiency factor", influencing both receptive and productive language skills. This general factor consists of the individual L2 learner's internalized grammar of the target language. It is this foundation that, in Oller's view, enables the learner to send and understand L2 messages:

A person speaking or writing is planning what to say next and monitoring the output to see whether or not it matches the intended meaning. A person listening or reading on the other hand is constantly generating hypotheses about what will come next in the sequence in terms of what the writer or speaker is intending to say. These hypotheses of the receiver are quite analogous to the plans of the sender... In both cases the planning ahead or the hypothesizing what will come next can be conceptualized in terms of grammar based expectancies.

(Oller 1976:167)

Criticism of Oller's grammar-based general proficiency factor (e.g. Cummins 1979, 1980) has focussed on his use of the results of formal language tests as the empirical evidence for his theory. Cummins claimed that language tests, as opposed to other types of language learning data, have a built-in academic or cognitive bias, in particular the university-entry language test that Oller had used in his 1976 study. Cummins suggested that such

sampling reveals only one side of an individual learner's L2 competence, which he termed "cognitive/academic language proficiency" (CALP) (Cummins 1979). The other dimension of language use, "basic interpersonal and communication skills" (BICS) is not captured, according to Cummins, by procedures that rely essentially on pen-and-paper sampling of a learner's ability ⁴.

Although it is true that Oller did use test data as one source of evidence for the general proficiency factor, he also cited another major type of empirical data

the data learners themselves generate when performing language based tasks such as reading aloud, speaking spontaneously, translating, repeating, etc.

(Oller 1976:166)

In particular, he referred to evidence from Swain, Dumas and Naiman (1974) that errors made by L2 learners under three conditions of oral production (spontaneous speech, attempted imitation and translation) were essentially the same. Oller concluded that all three activities seemed to rely on the same underlying grammar (Oller 1976:168).

One study specifically designed to explore the relationship between the development of listening and reading in L2 users is that of Brown and Hayes (1985), who analysed various component skills in the two comprehension modes by learners of English with Spanish, Arabic or Japanese as their mother tongue. As in the case of the L1 studies mentioned earlier, they found a generally strong correlation between reading and listening performances, when their subjects were treated as a single group.

However, when the results of the three different mother-tongue sub-groups were considered separately, the strength of the listening/reading relationship was found to vary. Although it held for the speakers of Arabic and

Spanish, it was negligible for the Japanese learners. Brown and Hayes discuss three possible explanations for this result. Firstly, it might be due to learner differences; for some reason, competence in one skill might be relatively independent of competence in the other, for Japanese students; but, given the weight of other research, this appears improbable. Secondly, it could be a result of instructional differences; the teaching of English in Japan might emphasize written-medium skills over spoken-medium skills. Thirdly, there might be some relationship with the characteristics of Japanese script, where many characters are pronounced differently in different environments. This might mean that in reading their own language, Japanese people make comparatively little use of oral language skills. Whatever the actual reasons may be, the results of this particular experimental group remain, for the moment, exceptional in the pattern of comprehension they demonstrate.

2.5. The relationship between L1 and L2 comprehension

We will briefly mention work intended to throw light on the relationship between L1 and L2 comprehension skills, rather than within L1 or L2. As an extension of his earlier studies on a general L2 proficiency factor, Oller investigated the relationship across native and foreign language performance (e.g. Oller and Perkins 1978; Oller 1981). Oller and Perkins cite a number of empirical studies that indicate a substantial correlation between performances in L1 and L2 ⁵. Favreau and Segalowitz (1982) studied the listening and reading skills of French-English bilinguals, in an experiment where the subjects were able to control the speed of listening/ reading. The results showed that in both languages they read more quickly than they listened; there were also significant correlations between speeds of listening and reading across the two languages.

If L2 proficiency is largely determined by L1 competence, then what is it

that determines ability in the native language? Oller's conclusion was this:

There is no doubt that what linguists are in the habit of referring to as a 'grammar' must form an important part of the total system. If the grammar is to incorporate the sorts of pragmatic principles and constraints that many theorists are speaking of these days, it becomes difficult indeed to see clearly how such a system is to be distinguished from what Piaget calls 'intelligence'.

(Oller 1981:467)

Here, Oller seems to reach very much the same conclusion as Sticht had done; Sticht suggested that L1 reading and listening tap the same underlying cognitive ability; Oller argues that the same is true for both L1 and L2 and in both productive and receptive language modes.

2.6. Summary

One need not go as far as Oller to accept that, in general, the picture that emerges from the observed performances in listening and reading of native, non-native and bilingual users strongly suggests an important general information processing skill. This includes such elements as the ability to assess the adequacy of comprehension and the ability to treat incoming messages as coherent entities, rather than a linear sequence of separate sentences.

Clearly, the sampling of language data is different in the two modes, especially in the L2 case where the speed and transience of the auditory signals make listening a more demanding perceptual experience than reading. But the two activities are governed by the same overall ground rules of interpretation. Successful listeners/readers flexibly combine schematic, contextual and systemic information:

we look for as much information of various types as we

can get and integrate the strands.

(Neisser 1976:29)

While we learn to cope in our native language, the strains are much more severe in listening to a foreign language. For the foreign listener, probably the most difficult aspect of speech is the time factor. Even if the general procedures for listening and reading are the same, it is the fact that we have to interpret the "rough hints" of speech at the time they are produced - or soon afterwards - that makes listening, potentially or actually, the more problematic of the L2 receptive skills.

One issue of particular concern to us is what happens in the case of L2 listening where, especially at lower levels of overall proficiency, the learners may find that their freedom to search for potentially helpful information - whether schematic, contextual or systemic - is more limited than in their native language. In Chapter 3 we discuss the characteristics of the process of listening in a foreign language and the ways in which L2 listeners have been shown to respond to problems in listening input.

CHAPTER 3

PROBLEMS AND PROCESSES IN L2 LISTENING

3.1. Introduction

So far we have devoted most of our attention to characterizing the skills and abilities involved in the process of L1 comprehension. We have in passing pointed out that although the native listener/reader often referred to in research is assumed to be a cognitively mature and well-informed individual, recent studies have pointed up the degree of variability of receptive competence among native users of English. We turn now to consider the question of whether there are significant differences between L1 and L2 listening. Is an L2 listener, so to speak, a disadvantaged L1 listener? Can an L2 listener reach the point of competence where he is as proficient as, or even more proficient than, some native speakers?

Before discussing the principal issues involved in the investigation of L2 comprehension, we will summarize the framework of Faerch and Kasper (1986), which draws together the strands of research discussed in our previous two chapters. Faerch and Kasper encapsulate current views of L1 comprehension in what they term "seven fairly uncontroversial hypotheses".

(1) Comprehension involves the use of three kinds of information: linguistic and other communicative input; the listener/reader's knowledge (of language and of the world); and contextual data, including that derived from the co-text (cf. Figure 3 in Chapter 1).

(2) The listener/reader is required to match input against available knowledge. This matching may proceed from input to knowledge (bottom-up) or vice versa (top-down) ¹. In either case, the general context is used to support comprehension.

(3) Different comprehension tasks may demand processing primarily in one direction or the other. The activity of turning on and listening to the radio, for example, is likely to proceed in bottom-up mode, at least until the current topic has been sufficiently well established. On the other hand, a stereotypical service encounter, such as making a cash deposit at a bank, will normally take place 'on automatic pilot', as it were, with customer and bank clerk paying little attention to details of language input.

(4) Typically, the listener/reader achieves an imperfect match of input and knowledge. Gaps are a normal feature of spoken interaction and can occur in the input (e.g. perceptual difficulty, ellipsis or referential ambiguity) or in the recipient's knowledge of language or topic.

(5) To bridge these inevitable gaps, the efficient listener/reader deploys inferencing procedures, educated guesses based on all and any relevant available information.

(6) Comprehension is an inherently selective activity; the perfection aimed at by artificial intelligence researchers for their computational programmes is unattainable by human processors in all but trivial or unrealistically simple cases.

(7) Given the presence and frequency of the gaps referred to at (4) and the inbuilt selectivity of processing at (6), the listener/reader is thrown back on a "reasonable interpretation" (Brown and Yule 1983a:57).

Given this basic descriptive framework for native language comprehension, to what extent can it be said to apply to the processes of listening to a foreign language? Anderson and Lynch (1988) have suggested that, in considering the relationship between L1 and L2 listening, it would be logically possible to hold any one of three basic positions:

(1) that the processes of understanding L1 and L2 speech are quite separate;

(2) that they share a certain, restricted degree of common ground;

(3) that they are fundamentally the same, apart from specific additional problems which the L2 listener experiences and the native speaker does not – or at least remains unaware of.

These three positions can be expressed in the following diagrammatic form:

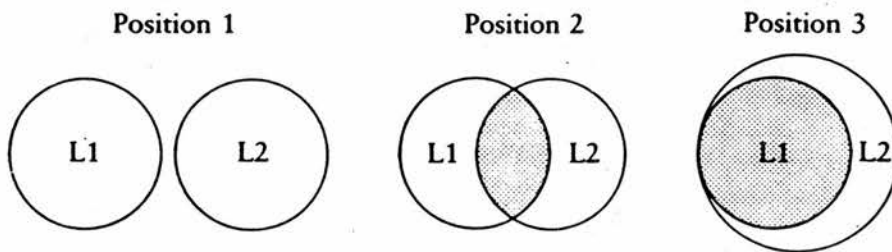


Figure 6. Three views of the relationship between L1 and L2 listening skills (Anderson and Lynch 1988:21)

Faerch and Kasper suggest that the third view is the one with strongest support from research. They go so far as to claim that it is necessary to make only minor adjustments to the seven L1 hypotheses in order to achieve a description that would cover the processes of understanding a foreign language. The modifications they suggest are these:

(a) that L2 learners will experience more comprehension problems than native users, due both to their restricted L2 knowledge and also to their often

unrealistic expectations. (We will return to the nature of L2 listeners' expectations later in this chapter);

(b) that L2 learners may be able to apply linguistic knowledge – to the extent that such knowledge in fact helps them to comprehend particular input – not only of the target language but also of their native and other languages. “Consequently, L2 comprehension models need to incorporate some notion of receptive linguistic transfer” (Faerch and Kasper 1986:266). This second point is explained in more detail in the following comment:

the L2 learner is endowed not only with the ability to use contextual cues but also the ability to utilize his general socio-interactive knowledge, originating from communicating in the first language (L1), as well as his specific linguistic knowledge of L1 (and probably other languages).

(Faerch 1981:2)

It should be noted that, interestingly, neither of these additions or adjustments to the seven hypotheses of the L1 comprehension model amounts to a ‘problem’ specifically related to L2 use. Adjustment (a) takes into account that the foreign listener will experience more difficulties, but not necessarily different ones. In other words, differences between L1 and L2 listening are seen as being of degree, not type. Adjustment (b) could even be interpreted to mean that L2 learners are actually in a relatively advantageous position *vis-a-vis* some (monolingual) L1 listeners, since they may have privileged access to other potential sources of helpful linguistic information. However, it should be noted that Faerch and Kasper’s comment on the role of receptive linguistic transfer implies that such use of non-target language information sources would always be positive. It is not difficult, on the other hand, to imagine comprehension situations in which the L2 listener will be negatively influenced, i.e. misled by available information from other languages (including

their L1) into misunderstanding a target language utterance.

In due course we will be examining evidence from research into L2 listening comprehension; in summary, though, the general message conveyed by comparative studies of L1 and L2 processes – whether in non-reciprocal contexts such as listening to recorded spoken material, or reciprocal contexts such as face-to-face conversation – is that understanding a foreign language demands fundamentally the same kinds of skill as are involved in native language comprehension.

However, assuming that basic processes are similar, we would clearly expect to observe some differences in performance by L1 and L2 listeners, at least in the case of lower-level learners. Here, then, the important questions about L2 listening will include the following:

(1) What differences – in reacting to problems – have been observed between L1 and L2 processing? This is discussed in section 3.2.

(2) What are the influential factors in such variation – (a) individual listener characteristics, (b) level of general L2 competence, (c) level of text complexity? We take up these points in section 3.3.

3.2. Problems

3.2.1. Language problems

Although it has been suggested (e.g. Garrod 1986) that the L2 language system may not always be the principal cause of L2 comprehension difficulty, there will presumably be specific occasions on which the L2 learner experiences problems that are primarily linguistic. We would assume that the foreign listener will have particular problems when the language input itself is

in some way 'difficult'. The questions arises: What do we actually mean by difficult input?

For the learner, the likely expectation is that the level of difficulty they encounter trying to understand a spoken L2 text will be related to syntax and lexis; experience suggests that foreign learners often respond to listening comprehension problems with comments such as "I don't know the grammar properly" and "I don't have enough vocabulary" ². Although one might guess that the greater perceived problem is that of poverty of lexis, it was the syntactic aspect of language comprehension that was the subject of psycholinguistic research in the 1960s and early 1970s, in studies which tested a range of grammatical structures within single sentences, to compare their ease of comprehension for L1 and L2 listeners.

In particular, researchers investigated the difficulties experienced by young L1 listeners and adult L2 learners in understanding specific syntactic forms. For example, Cook (1973) compared the performance of adult EFL students with those of young native speakers, on sentence pairs like those below:

(1) The dog is easy to bite

(2) The dog is eager to bite.

His results suggested that in sentences like (1), where the noun in normal subject position is not the agent but the object of the action, both young natives and elementary-level adult L2 learners appeared to progress through a stage of language development where they tend to misinterpret "the dog" as the agent. More advanced L2 learners and older L1 listeners correctly distinguished the role of the dog in the two sentences.

In another comparison study, d'Anglejan and Tucker (1975) also found similarities in the performances of adult L2 and child L1 speakers, presented

with sentences of the type shown below:

(3) Jane asked Susan to read the letter

(4) Jane promised Susan to read the letter

Both groups had problems with sentence (4), which they interpreted as indicating that Susan was the person who was going to read the letter, since "Susan" was the noun nearer to the relevant verb. Again, this study suggested that young L1 listeners' experience of problems caused by syntactic complexity may be paralleled by those of L2 students, who may tend to revert to less mature processing habits than they habitually employ in their native language.

So there is some evidence that language input which is syntactically difficult for young children also causes comparable comprehension problems for older foreign learners, who - in the initial stages of L2 learning - appear not to benefit from their L1 experience of similarly difficult surface structures.

Although this type of research has produced interesting data, it is open to the same criticism as the L1 psycholinguistic experiments discussed earlier (Chapter 1.3), namely that it does not deal with listening/reading in a natural context. The problems experienced by learners when coping with single sentences without a meaningful context may not throw much light on the difficulties the listener faces outside the laboratory.

As we saw in Chapters 1 and 2, researchers studying the listening or reading behaviour of adult native speakers now generally accept that a whole range of information sources are used interactively and simultaneously: linguistic (phonological, syntactic or lexical) analysis is supplemented by semantic and pragmatic analyses. There has therefore been a shift of focus from the investigation of syntax in isolation. Rather than analysing which L2

structures caused problems for listeners, the approach has been to look at the issue of whether the L2 learner is in fact likely to encounter particular syntactic complexities in the early stages of (informal) language learning. This will be discussed in more detail in this and the next chapter, but we will briefly illustrate the type of research that has been conducted into the characteristics of input available to the L2 learner and into his degree of success in coping with it.

In their review of studies of informal conversation between native speakers of English and child L2 learners, Hatch, Peck and Wagner-Gough (1979) noted three principal features of the input described in the studies they surveyed. Firstly, L2 learners were exposed to a restricted set of grammatical structures. Secondly, the conversations offered the listeners repeated exposure to relatively large chunks of language. Thirdly - particularly during episodes of play - the child learners received input that was both highly contextualized and predictable.

Hatch analysed interaction between older L2 learners and native English speakers (Hatch 1978). In addition to showing the importance of learners' signalling their current comprehension problems, Hatch considered the ways in which such 'distress signals' influenced the input they received from their native partners. She observed a variety of types of clarification on the part of the native speakers. They sometimes produced a syntactic remodelling that involved shifting the topic either to the beginning or to the end of the utterance, where - presumably - it might become more salient. Alternatively, the native speaker might adopt a lexical modification, using more specific or more common vocabulary than that in the problematic original utterance.

This kind of interaction research suggests that in real-life L2 conversation, foreign learners can to some extent persuade their native interlocutors to

modify the syntactic or lexical form of the spoken message, by indicating when they cannot understand what has been said. In this way, they may succeed in eliciting a simpler – that is, more comprehensible – tailor-made version of the utterance which caused the problem.

3.2.2. Background problems

To adopt the view that 'the language problem' is what defines the differences in level of comprehension difficulty experienced by native and foreign listeners is to make two assumptions: firstly, that what L2 learners learn is the language, and no more; secondly, that native speakers do not experience comprehension problems comparable with those of L2 listeners. Both assumptions need to be questioned.

Let us take the first assumption, about the scope of L2 learning. Learning a foreign language to any reasonable degree of proficiency normally involves more than the development of a new linguistic system; we acquire some degree of familiarity with the foreign cultural system. As language is the means used by a community to express facts, ideas, beliefs, rules and so on – in short, to express its culture – it is inevitable that gaps in learners' knowledge of the L2 culture will lead to difficulties of interpretation.

Moreover, it is an oversimplification to think of a language community as a single cultural group. Any individual native speaker will be a member of various sub-cultures, defined according to any of a range of factors: education, employment, leisure interests, region, age, sex, and so on. Differences in (sub-)cultural values – or in the assumptions associated with different (sub-)cultural groups – can be, as we will shortly see, as great an obstacle to understanding as language.

Secondly, L2 learners may underestimate the extent to which the native

user, too, experiences problems in understanding messages in his L1. Naturally, foreign learners are particularly aware of the extent of their own misunderstandings of the L2, but it is not uncommon for native users of the same language to fail, totally or partly, to understand each other.

Lynch (1987b) reported the results of an informal study comparing the routes to comprehension taken by native and non-native listeners, when faced with an apparently idiosyncratic spoken text. The degree to which each listener might regard the text as aberrant or nonsensical was assumed to be dependent on their knowledge of the conversational topic. The focus of the study was the way in which the individual (L1 or L2) listener attempted to cope with and make sense of the input. The text used in the study, based on an actual conversation, is shown below. The interlocutors A and B are professional colleagues and the exchange took place at their place of work.

A: What's it like, then?

B: Not bad. It's got a good short menu, which saves quite a bit of time.

A: It doesn't have a mouse, does it?

B: No, not at that price, no.

A: Anything else special?

B: Well, it's got a thing to stop you having to worry about widows and orphans.

A: So you're happy with it, then?

B: So far, yes.

A: Did you get the 512 in the end?

B: No, the 256.

The listeners in the experiment heard the conversation divided into five segments, each consisting of two speaking turns (i.e. one turn by A and one

by B). After each segment they were asked to write down (1) what they believed to be the topic of conversation and (2) which word or phrase caused them to think so. At each subsequent turn they were allowed to modify, abandon or retain their topical interpretation. Each listener therefore produced an interpretative protocol consisting of up to five different choices of topic, together with a rationalization for their selection. Below are examples of three listeners' protocols.

Table 1
Introspective protocols of on-line interpretation

Stop point	Listener A	Listener B	Listener F
1	COMPUTERS menu	RESTAURANT menu	FAST-FOOD RESTAURANT
2	COMPUTERS mouse	RESTAURANT(?) but why mouse	I don't understand this!
3	COMPUTERS widows and orphans	CHARITY/CHURCH COFFEE BAR widows and orphans	Still cannot make sense of it
4	COMPUTERS happy with it	SOMETHING 'A' HAS BOUGHT	SOMETHING THAT HAS BEEN BOUGHT - HOUSE? BOAT?
5	DEFINITELY COMPUTERS	COMPUTERS numbers and menu the numbers	COMPUTER? By elimination -

Source: Lynch (1987b).
Capital letters = topic.
Lower case letters = stated reason (if any).

The main point of interest is the fact that it may not be immediately obvious, from the protocols presented here, whether the three listeners were natives or non-natives. In fact, listener A was an adult intermediate learner of English and listeners B and F were native EFL teachers. Clearly, listener A appears to have had no doubt at any stage that the conversation was about computers; it emerged subsequently that she had completed a degree in artificial intelligence and was consequently able to deploy interactive use of systemic and schematic knowledge to interpret context correctly. Listeners B

and F, with native command of the language, seem to have been misled or confused by the linguistic items in the text over the first three pairs of speaking turns. Both then decided, on the basis of language, at stop point 4 (i.e. after "So far, yes") that the conversation must concern a recent purchase. Finally, they reached the same (correct) conclusion, but for different reasons: F relied solely on the fact that the numbers seemed to suggest a model or type of computer; B recalled, in addition, that "menu" was a term she had heard in connection with computers.

In that conversation, the key lexical clues to topic - "menu", "mouse", "widows" and "orphans" - were known to all the subjects who participated in the experiment, but in their everyday sense, rather than in their specialized meanings, namely, features of a word processor that A knew B had bought. One source of misunderstanding or non-comprehension, then, for both native and foreign listeners may be the unfamiliar use of a familiar word or phrase.

Many of the problems that non-native outsiders face in understanding a foreign language may therefore be caused not by the language *per se*, but by the difficulty of interpreting the associations and references in what a native speaker has said or written. As we saw in Chapter 1, it is now recognized that background knowledge plays a crucial role in the way we understand language. It is often the absence or incompleteness of such information that results in the sort of non-comprehension that the foreign listener experiences: where the language element in fact presents no obstacle, but where it is the lack of shared schematic information - factual, sociocultural, procedural - that makes comprehension difficult or impossible.

We ought not to dismiss the non-linguistic aspects (real-world knowledge etc.) as 'noise in the channel' but rather as aspects that are potentially highly facilitative.

(Sharwood Smith 1986:242)

In the final section of this chapter we will return to this issue, when considering the implications for L2 comprehension teaching.

3.3. Processes

Although there are relatively few studies that directly compare native and foreign language comprehension processes, we will now discuss three types of research that provide some insight into the way listeners cope with L1 and L2 spoken messages. Firstly, speech perception studies have enabled us to compare ways in which native and foreign listeners perform in terms of the extent of the correspondence between their perceived version of a text and the original. Secondly, there has been recent research into L2 message recall, designed to throw light on listening processes at different levels of complexity and foreign language proficiency. Both these types of study deal with listening as a one-way process, that is, under non-reciprocal conditions. The third, discourse analysis, has indicated some of the effective tactics that foreign language users have been observed to deploy in the context of two-way or reciprocal interaction with an interlocutor.

3.3.1. Speech perception

Among the issues we raised earlier in this chapter were the degree to which L2 listening success or failure might be influenced by factors such as individual L2 listening tactics and the level of proficiency in the foreign language. Two principal studies of speech perception (Voss 1984, Conrad 1985) have investigated these two issues and pointed to similar learner tendencies.

3.3.1.1. Comparison between L1 and L2

Voss (1984) examined the L1 and L2 listening comprehension skills of a group of German undergraduate students of English who had studied English for about ten years. They were asked to produce a word-for-word transcription of two recordings of natural conversation, one in English and the other in German, with unlimited time and opportunity to replay the tape.

Voss referred to an earlier study (Fishman 1980) that compared the comprehension of the same text by different groups of listeners – again through a transcription procedure. Fishman's main finding had been that similar sorts of deviations from the original recorded text occurred in both L1 and L2 listeners' transcripts.

In his own experiment, Voss adopted the converse procedure, by presenting the same listeners with different (i.e. L1 and L2) recordings and studying the transcripts they produced. Such a method obviously raises the question of the comparability of difficulty of the two spoken texts, in terms of language and topic. As far as the issue of formal difficulty is concerned, Voss's solution was to choose recordings from interviews which both involved spontaneous speech, including natural speech features such as hesitation phenomena and self-repair. On the question of content complexity, he selected an L2 (English) text that dealt with youth work, a topic that could be assumed to be reasonably accessible to the undergraduate listeners, while the L1 (German) text featured an absurdist artist discussing how he hoped to sell his suit – and its surrounding "personal space" – to an art gallery.

In this way, Voss attempted to balance the listeners' natural relative ease with the form of the German text against their presumed unfamiliarity with its thematic content, and *vice versa* for the English text. The general framework

for the study was a tripartite view of comprehension similar to that discussed in Chapter 1, in which the successful listener achieves understanding through the harmonization of data made available from acoustic, linguistic and content components.

For all three variables the competent listener has developed context-based expectancies that are able to exert some compensatory influence on each other.

(Voss 1984:131)

Voss found that the number, type and distribution of transcription errors were similar for the native and foreign texts. The errors fell into five categories:

(1) those related to hesitation phenomena, e.g. treating a filled pause as a word or part of a word;

(2) changes of word order that left meaning unaffected;

(3) semantically acceptable additions and omissions;

(4) versions that were acoustically faithful to the original, but meaningless;

(5) substitutions, some of which changed the meaning and others not.

It should be noted that Voss was using the term 'error' in a neutral sense, to refer to discrepancies between the original text and the transcript produced by the listener, rather than exclusively to instances of miscomprehension. Indeed, of the five categories of error mentioned, it is only type (4) that invariably indicates failure at the level of message interpretation.

The evidence from listeners' semantically successful 'errors' supported the view that they perceived incoming text - whether in L1 or L2 - in

comparatively large chunks, and not by serial minimal segmentation (cf. the L1 studies of Marslen-Wilson reported in Chapter 1). Interestingly, this seems to have been the case for Voss's subjects, even though their specifically assigned purpose in listening was to transcribe every word, which might have been expected to encourage word-by-word processing.

Although there was a striking overall similarity observed in the processes of L1 and L2 speech perception, there was one category of error that occurred only in the case of L2 listening: type (4) above. This seems to have resulted from occasional failures to process the language in extended chunks, that is,

to take the larger context into consideration, thus basing the hypothesis on too short a stretch of acoustic information.

(Voss 1984:140)

For example, listeners transcribed "for them" as "form" (a contraction) and wrote "it's our job" as "it's now a job" (an expansion). In both cases, the errors are acoustically similar to the original but do not fit the wider grammatical or semantic context. These types of error were not found in the students' L1 transcripts.

The instances of Voss's final category of error (substitution) are particularly note-worthy, since they may offer insight into the degree to which the behaviour of L1 listeners and L2 learners - at least, in the case of these advanced undergraduate students - is essentially the same. The substitution category comprises four subtypes:

(i) Paraphrase

L2: "choir singing" for "choral singing"

L1: "wenn ich sie haben will"
for "wenn ich die haben will"

Here, the meaning is preserved by a reformulation; this was found to occur more frequently in L2 transcripts.

(ii) Word-group errors

L2: "that they're aboard" for "that they are bored"

L1: "ja das giess ich in Milch"
for "ja ich signier ich"

Each individual phrase is meaningful in itself, but not as a sequence in context. Voss suggests that they result from the listener jumping to premature conclusions – overusing top-down processing, in other words. These occurred with comparable frequency in the L1 and L2 data.

(iii) Bizarre errors

L2: "call theme" for "choral singing"

L1: "Innereien Dingen" for "immateriellen Dingen"

These are cases in which the incoming text appears to have been reduced to single-word level, with apparently unrelated lexical items based on acoustic shape. It is interesting that they seem to indicate that misperceptions do not necessarily involve substitutions of a more predictable item, even in the native language.

(iv) Coinages

L2: "the anxellor"/"the accelor"
for "a youngster"

L1: "dieser Plopp"/"dieser Blop"
for "dieser Block"

These are instances where the listener's acoustically based search fails to retrieve any appropriate language item. Here, the tendency was stronger in L2 than in L1; nevertheless, the error type did also occur in native text transcripts, as illustrated above.

The broad conclusion that Voss drew from his experiment was that L1 and L2 listening share essentially similar processes – perhaps surprisingly so, in the case of ‘bizarre errors’ and ‘coinages’. Such differences as did emerge in the students’ L1 and L2 transcripts appeared to be ones of degree rather than type, which tends to support Faerch and Kasper’s view of the nature of the relationship between native and foreign language comprehension (cf. Figure 6 in this chapter). Unsuccessful perception appeared to be characterized by the absence or misapplication of holistic or top-down strategies and by the listener’s resorting to serial, acoustic and lexical interpretation.

Voss’s work offers intriguing evidence for a close relationship between L1 and L2 listening but, although its general conclusion is consonant with data from subsequent classroom-based research with native and foreign learners of English (e.g. Anderson and Lynch 1988), we would wish to enter a number of caveats.

Firstly, Voss’s experimental procedure allowed his subjects unlimited opportunity to replay the recorded texts. Given the nature of the task, this was inevitable, since they were required to transcribe spontaneously delivered speech. However, this resulted in their being set what was in fact an off-line comprehension task, which provides no record of their successive attempts to understand the text. Consequently, it is impossible to gauge the extent to which any listener’s final version was different from, and/or more complete than, their initial on-line interpretation. This means that to some extent the picture that emerges from the study as a whole may not be generalizable to speech perception under normal conditions; it may apply only to the process by which listeners tackle dictation exercises, as opposed to showing how they cope with on-line comprehension in situations where there is no natural requirement to replicate the spoken text.

Secondly, although the experiment was designed to allow comparison among listeners as they operated in L1 and L2, Voss provides no data showing how individual listeners performed on the two transcription tasks. We are not told whether specific individuals appeared to adopt similar tactics in both languages, merely that as a group they behaved in a broadly similar manner in German and English.

Thirdly, some L1 'errors' could well have been the result of the idiosyncratic theme of the German text. Given that the speaker was an absurdist talking about the sale of his art in a way that was – seen from a conventional point of view – nonsensical, it is perhaps less surprising that listeners coined items such as "Plopp" and "Blop", when they encountered the highly normal "Block".

Finally, there is the important issue of level. The students who took part in the experiment were second or third year undergraduates specializing in English and can therefore be assumed to have been relatively advanced L2 learners³. So it could be that there was a circular effect at work in the study: the reason for the striking similarities between the group's performances in the two languages was that, in terms of L2 proficiency, these students were native-like.

Nevertheless, the fact remains that the principal point of interest is not that L1 and L2 listeners both tend to get everything right, but how they react when things become difficult from a perceptual point of view. They appear to remedy the situation in a variety of ways; in most cases – given sufficient L2 proficiency, perhaps – they reach an adequate solution. Returning to the notion, mentioned earlier, that the competent listener is able to compensate for difficulties in any one of the acoustic, linguistic and content components of comprehension by drawing on information from the other two, Voss

commented that

(the) compensatory effect is lost – and perception made impossible – if any of the three factors falls below a certain threshold level and approaches zero.

(Voss 1984:131)

3.3.1.2. Comparison among competence levels

Voss's study leaves open the important question of how the less competent L2 listener copes with comprehension problems, and we now turn to Conrad (1985) for comparative evidence on the listening processes of native users and of foreign learners at varying levels of competence.

Conrad's interest was in investigating the possible differences in text processing by listeners at different levels of target language competence. Her starting point was the finding from L2 reading studies (e.g. Clarke 1973) that less fluent non-native readers cannot make full use of semantic-level cues – that their processing system is in some sense 'short-circuited' when confronted with a demanding L2 task.

Although Conrad's study was intended to illuminate differences in the processing of spoken input, she used a post-listening reading cloze test as her experimental instrument. Her subjects comprised six groups of university students: two groups were native speakers of English; two were advanced learners majoring in English language and literature; and a further two groups were intermediate learners undergoing pre-sessional English tuition. Each of the three subject levels was divided into a 'listening' group and a 'non-listening' control group. The listening group heard a recording of a short lecture selected from EFL material and then completed a cloze test, which

consisted of a transcript of the recording with every fifth word deleted. The control groups completed the cloze test without having heard the recording. The subjects' test scripts were analysed using a procedure for evaluating cloze test answers for reading diagnosis (Clarke and Burdell 1977), which involves an assessment of the syntactic acceptability and semantic appropriacy of answers, and of the extent to which the original message has been preserved or altered.

Conrad found that her subjects' performances confirmed the hypotheses she had imported from earlier L1/L2 reading research: the L1 listeners appeared to rely primarily on semantic rather than syntactic cues and the L2 listeners committed more frequent violations of semantic constraints, relying mainly on syntactic cues. There was a significant effect of language level, both between native and non-native subjects and also between advanced and intermediate L2 learners. It was the lowest-level L2 group that seemed to make most use of immediate syntactic context and least use of overall considerations of meaning.

Clearly there are strong similarities between these findings and those reported in Voss (1984). Although using different elicitation techniques – dictation with unlimited replay, against a cloze procedure after a single hearing – Voss and Conrad both concluded that (1) native listeners process speech as chunks of meaning, using higher-level information to shape their interpretation and (2) non-native listeners – particularly the intermediate students of English in Conrad's study – directed more attention to what they perceived to be the grammatical text constraints, being obliged to base their expectations of the message on cues closer to the surface of the text.

However, there are two serious limitations on the validity of the experimental technique adopted by Conrad. Firstly, a post-listening cloze test

is incapable of monitoring the process of listening; like Voss's subjects, Conrad's listeners were required to provide data on the final product of their text interpretation, from which the role of semantics and syntax in the processing *en route* has to be inferred. Secondly, one might object that Conrad's procedure involved the deployment of subjects' reading skills, as opposed to their listening competence. Although the results of the three control groups had suggested that there was indeed a listening effect – i.e. the controls scored lower than their respective listener peers – that is not to say that some or all of the individual listeners were not influenced in their answers by being able to read the text – and free of time pressure. Even if, as we suggested in Chapter 2, reading and listening draw on the same underlying language processing system, it is still desirable to devise experimental techniques for investigating listening comprehension that rely as little as possible on the other, related receptive skill.

3.3.2. Message recall

One recent study (Wolff 1987) was constructed to use a process-oriented procedure of the sort that Voss's and Conrad's studies lacked and it offers an intriguing and quite different perspective on L2 listening. Although it was not the purpose of Wolff's experiment to make a direct comparison of L1 and L2 aural processing – since it involved only L2 learners – its orientation was in some ways similar to that of the speech perception studies that we have just discussed. Firstly, like Voss and Conrad, Wolff adopted an overall cognitive information-processing perspective, drawing on concepts such as the schema and the script (cf. Chapter 1.3). Secondly, he focussed on possible differences in emphasis or balance between top-down and bottom-up processing. Finally, he wanted to allow a comparison between listeners at varying stages or levels of L2 competence.

However, there were also three essential differences between Wolff's study and those of Voss and Conrad. In the first place, his experiment was constructed so as to reflect the comprehension of a complete text, rather than the piecemeal interpretation allowed (or encouraged) in tasks involving transcription (Voss) or cloze completion (Conrad), where the listener is inevitably obliged to focus on one short sequence of text – or even a single word – at a time. The second difference was that Wolff's experiment demanded individuals' recall unsupported by any verbal text or by the opportunity to replay once they had embarked on the recall. Thirdly, the listeners were not asked to produce their test answers in the target language; instead, they were allowed to recall in German.

Although we have said that the study itself was not primarily designed to be directly L1/L2 comparative, Wolff chose to base his investigation on story texts that had been used in earlier L1 comprehension research (e.g. Bransford and Johnson 1973, Hildyard and Olson 1978). This allowed him to make general comparisons, although not at the individual level. For his L2 experiment the stories were video-recorded with native speakers of English as the narrators. A copy was made of each recording and a single line-drawing illustration related to the text was inserted into the copy, giving two versions for each text: a non-illustrated version A and an illustrated version B.

The listener subjects were German secondary school pupils aged 12–18 years. In pre-listening instructions they were told that they would be asked to recall in German the story they were about to hear twice in English. When they had completed their retelling, they were interviewed about the way they had understood the text. Both the retelling and the subsequent interview were recorded.

Wolff specified a number of reasons for his decision to allow his listeners

to use their L1 in recall. Firstly, he hoped to counteract their natural shyness and anxiety; secondly, he expected that details that might throw light on the individual's comprehension processes might be lost in L2 recall; finally, he wanted to exclude the possibility that listeners might (attempt to) learn the L2 by heart – something he claimed was

a strategy very commonly adopted in similar exercises in the foreign classroom.

(Wolff 1987:314)

Results were reported for two story texts: "Rupert the Bear" (from Hildyard and Olson 1978) and "Balloon Story" (from Bransford and Johnson 1973). These were selected so as to allow comparison between a relatively easy and a relatively difficult text, respectively, the former being regarded as linguistically simple and the latter displaying greater complexity in terms of linguistic form, content and textual structure.

The recall and interview recordings were transcribed and analysed into propositions using a procedure developed by Turner and Greene (1977). The propositions were then grouped into three categories: (a) propositions that were identical to the original text; (b) those that represented inferences from, or elaborations of, the original; (c) those which were quite unrelated to the original. Wolff's view was that this categorization would make it possible

to measure in an admittedly rather indirect way at least part of the top-down procedures that have taken place during comprehension

(Wolff 1987:315)

since categories (b) and (c) are products of inferencing and necessarily the results of top-down processes. While admitting the indirectness of the

measurement of process, as opposed to product, Wolff suggested that only retrospective verbal reporting would permit a more detailed quantitative analysis of top-down processing – somewhat similar to the informal procedure adopted in Lynch (1987b) and illustrated earlier in this chapter.

The results were analysed in three ways: first, for context effects (version A versus version B); secondly, for effects of L2 listening level (by school type); and lastly, for effects of text complexity (“Rupert the Bear” versus “Balloon Story”). As far as context effects are concerned, differences emerged in the extent to which listeners appeared to have used the visual cues in version B of the two stories. The “Rupert the Bear” illustration had no measurable enhancing effect, while in the case of the “Balloon Story”, the listeners with access to version B were able to recall significantly more propositions and made more text-based inferences, while adding significantly fewer unrelated propositions than the version A group. On this evidence, Wolff concluded that text complexity is relatable to the use of information from context: the more difficult the text is (perceived to be) in linguistic, thematic and rhetorical terms, the greater the listeners’ need to exploit any potentially supportive contextual cues. This view squares well with Voss’s comment, quoted earlier, on the benefits of compensatory strategies in L2 language processing.

In the second area of investigation, that of possible differences between processing strategies at different L2 competence levels, the data were less conclusive. Wolff’s subjects comprised pupils from two types of secondary school, Gymnasium and Hauptschule, which cater for the academically more and less able, respectively, and whose EFL syllabuses therefore differ in their linguistic demands. Using the results of listeners’ recall of “Rupert the Bear” only – since the “Balloon Story” was considered too difficult for Hauptschule pupils – Wolff found that there was a significant difference in the amount of information recalled. The Gymnasium group produced a higher total of

propositions of all three types (a, b and c). However, when allowance was made for the relative proportion of recalled information, the Hauptschule listeners were shown to have produced comparatively more inferences and non-related propositions than their Gymnasium counterparts. Wolff's explanation of this finding is related to his third area of investigation.

The third issue for analysis was the general relationship between text complexity and processing strategy. Here, Wolff analysed the data from pupils' performances on the two stories and established a significant correlation between text difficulty and message recall. The easier story was remembered in more detail and with a lower proportion of inferences and unrelated propositions. Wolff commented:

The informants exposed to the more difficult text, whose bottom-up processing was impeded by language deficiencies, used top-down strategies instead. The high amount of inferences and non-related propositions in the "Balloon Story" protocols is a clear indication of an increased use of top-down strategies.

(Wolff 1987:316, my emphasis)

This interpretation of the recall data is, at first sight, strikingly at variance with the conclusions reached by Voss and Conrad in their studies of speech perception and also by other researchers into L2 reading, notably Carrell (1983). They had concluded that when the lower-level L2 listener/reader encounters obstacles to comprehension at the systemic level, the route to interpretation is effectively blocked and the learner is unable to seek and use higher-level data:

Non-native speakers of English, reading in English, don't read like native speakers; they do not process text as native speakers do. Neither advanced nor high-intermediate ESL readers appear to utilize context or textual clues. They are not efficient top-down processors, making appropriate predictions

based on context, nor are they efficient bottom-up processors, building up a mental representation of the text based on the lexical information in the text.

(Carrell 1983:199, quoted in Wolff 1987, my emphasis)

We will suggest three possible ways of reconciling Wolff's apparently aberrant findings with the generally agreed view. Two of them are related to the type of task that Wolff had required his subjects to undertake and the third to the type of text.

Firstly, as we have already suggested, there is a clear difference in the level of processing that arises naturally from the various tasks. The tasks used by Voss and Conrad had obliged listeners to direct their attention to the micro-level: in one case, the requirement to transcribe speech necessarily involved concentration on minute segments of text, at any one time, down to as low a level as the individual phoneme; in the other, the cloze reading test demanded the recognition of single words, possibly on the basis of visually aided recall or inference. So it seems reasonable to argue that Wolff's experiment tapped a quite different aspect of comprehension - global understanding of message - by asking listeners to recall a story as a whole, rather than attempt to construct the text piece by piece by replicating its discrete elements.

The second aspect of Wolff's study that may help to account for its unusual conclusions is the fact that, as he himself pointed out, he chose to permit the listeners to use their L1 as medium for retelling the stories in a deliberate attempt to avoid what he regarded as an inherent flaw in Carrell's reading study:

Carrell's data reflect the language knowledge informants have in their L2, whereas our data reflect the cognitive

knowledge they have of the text.

(Wolff 1987:325)

His argument is, therefore, that when the listeners are free of the burden of (re)production in the foreign language they will be better able to do justice, as it were, to what they have actually understood but might be unable to express in the L2.

The third possible explanation lies in the type of text that Wolff's subjects were asked to listen to. Since it was narrative, we can assume that the pupils were able to deploy - either consciously or subconsciously - personal schemata for narratives as they tried to follow the story they heard. In Voss's and Conrad's experiments, the texts selected were expository, rather than narrative, and are therefore likely to have given the listeners less opportunity to consult their personal schematic knowledge, especially in the case of the absurdist interview used by Voss. So it may be assumed that a strong reason for Wolff's finding that his L2 listeners applied more top-down processing when problems arose was simply that they had greater or easier access to appropriate schematic support than had been the case in the two speech perception studies.

However, the fact remains that Wolff presents a strong case for the advantages of his particular procedure, namely that the global recall task in his study enables the researcher to get closer to the sort of cognitive comprehension processes that occur in real language use than do accuracy-based experiments that encourage listeners to concentrate serially on text components. As far as we are aware, his is the only study of L2 listening to have used the technique of recall through the native language, in order to gain a more accurate insight into L2 comprehension processes by circumventing the need for the subjects to use their less sophisticated L2

productive skills in expressing recall. For similar reasons, the comprehension experiment in my own study was conducted through the listeners' native language; it will be described in Chapter 9.

3.3.3. Discourse analysis

Having considered some of the research evidence on the nature of the processes in which L2 listeners engage in non-reciprocal listening, we turn to a brief summary of studies that have focussed on the non-native listener in face-to-face interaction. The L2 learner engaged in conversation using the target language may have the opportunity to elicit adjustments in the input produced by his interlocutor and thus to increase his chances of understanding.

We will be considering the nature of the modifications made by the speaker in more detail in Chapter 4. For the moment, we will concentrate on the internal and external actions that may make it more likely that the listener achieves successful comprehension. Our purpose in doing so is not to attempt a review of discourse analysis research, but to delineate the interactional processes of which the L2 listener may take communicative advantage.

Perhaps the most influential single piece of adult second language discourse analysis research is that of Hatch (1978). She concluded that one of the principal skills that listeners have to develop, if they are to participate successfully in conversation, is the ability to identify the topic of conversation, in order to be in a position to respond appropriately. Particularly in the early stages of L2 learning, identifying the topic quickly and accurately enough to make a relevant reply can cause considerable difficulty.

Language learners have to develop ways of indicating current problems of

understanding to their native partner, so that they will clarify the topic and allow the learner another chance to make a response and so keep the conversation going. This essential conversational skill is, of course, one that we have to deploy in our native language. However, as Brown (1986a) has stressed, this necessitates the application of a triple set of skills, with which by no means all native speakers are fully at ease: (1) recognizing the adequacy of incoming messages; (2) providing appropriate feedback signals to the speaker; and (3) indicating unambiguously the nature of the comprehension problem.

In Hatch's (1978) data, learners coped with this problem of topic identification by using one of a set of stock responses such as "huh?", "excuse me?" and "I don't understand", or by echoing part of the preceding utterance. Negative effects of failing to use such tactics were demonstrated in a telephone exercise. When the non-native callers made insufficient use of these and similar devices, their native interlocutors tended to terminate the call before the learners had accomplished their information-seeking goal. On the other hand, when learners persevered and showed that they were making an effort to communicate, despite experiencing communication problems, the native speakers were more willing to allow the call to continue.

Hatch's view was that it might be necessary to reconsider the traditional view of the task facing the foreign listener in the case of face-to-face conversation. The successful L2 listener - like the effective native user - does not seem to attempt detailed recognition of all the phonological, syntactic and semantic information in the native's speech. On the contrary, Hatch suggested that listeners might attempt such fine discrimination only at the start of a segment of conversation and then try to predict the topic. Once the topic seems to be established, they might use their knowledge of the previous discourse and their general world knowledge to support their comprehension

of the incoming speech. In Hatch's view, this might greatly improve the listeners' chances of following and participating in the conversation, and could help to prevent the elementary-level L2 learner getting disoriented in the phonological and syntactic detail of the native speaker's utterances.

Faerch (1981) considered in more detail the options facing the L2 listener who has encountered a comprehension problem in conversation and suggested that there are two routes to a satisfactory solution: the psycholinguistic strategy, involving internal cognitive processes, and the behavioural strategy, entailing external social processes of discourse.

One psycholinguistic strategy would be for the listener to delay a decision about the meaning of the problematic item until sufficient contextual clues had become available to enable him to establish a plausible interpretation. As Faerch pointed out, this strategy has clear links with the notion of 'tolerance for ambiguity' that is advocated as a characteristic of the good language learner (Naiman et al. 1978).

The behavioural strategies could be divided into non-interactive and interactive subtypes. The first amounts to a decision by the L2 listener to save face, by not admitting or indicating to the speaker that they are having comprehension problems. Interactive strategies, on the other hand, are potentially face-threatening, since the L2 listener accepts and admits their inferior status as interlanguage users. They are of three kinds: general requests (e.g. "I don't understand"), specific requests (e.g. "what does X mean?") and claiming ignorance ("I don't know"). As Faerch himself observed, these interactive strategies straddle the borderline between language reception and production - "speech reception, more precisely, lack of comprehension, reflected directly in performance" (Faerch 1981:20).

Kasper (1984) took Hatch's and Faerch's ideas further: for the L2 listener,

participation in conversational discourse is not simply a question of establishing the topic and of activating the appropriate internal or external process in the face of any difficulty of comprehension. Just like native language users, they may also have adjust their current interpretation if the incoming message begins to conflict with it. Observation of native/non-native discourse suggested that the need for such adaptability appeared to represent greater difficulty for L2 learners than it did for native speakers. Learners appeared to find it less easy to process incoming speech in a flexible way,

by keeping open the possibility of having activated the wrong frame... and by correcting their frame instantiation fast when faced with disconfirming data.

(Kasper 1984:12)

From the psycholinguist's perspective on interaction, Garrod (1986) echoed Hatch's preoccupation with the identification of current conversational topic, suggesting that what we establish as discourse participants is a mental representation that

has more to do with a conception of what is being talked about than it has to do with the literal meaning of the discourse.

(Garrod 1986:229)

One example of this sort of global or holistic initial processing in an L2 context was offered in the form of a classroom discourse fragment in Anderson and Lynch (1988). A group of elementary-level adult learners of English were engaged on a comprehension task requiring them to draw a route on a city centre map, according to instructions recorded on cassette. They had the option of asking their teacher to replay the tape, requesting additional information, having the next part of the tape played, or discussing

what they had just heard with the other members of the class. The listeners' map was slightly different to the one used by the (recorded) speaker to give the directions. In this particular case, the listeners had two factories and a tower marked on the currently relevant section of their map; one of the factories was the silk mill mentioned by the speaker.

Tape: "...the last stop is at the silk mill"

Students: silk mill

Student O: (pause) it is the tower or...?

Student Y: it's better to + uh + we need more information

Student O: the silk mill in the tower or not?

Teacher: do you know the meaning of mill?

*Student K: milk?
etc.*

(Anderson and Lynch 1988:114-115)

What is of interest here is the different responses of two of the learners and their teacher. Student O seems to have been trying to work out how the referring expression "silk mill" related to the relevant discourse domain, i.e. to the locations on his map that he regarded as potential referents. Student Y appears to have adopted Faerch's psychological strategy, waiting for additional contextual clues, which the format of this specific classroom activity transformed into an explicit, public decision, as he was required to ask the teacher to play the next bit of the tape.

In terms of Garrod's comment, cited above, both O and Y were engaged in establishing what was being talked about. Neither of them was directly concerned with the literal meaning of the problematic item; their preoccupation was with solving their perceived comprehension problem. Yet,

interestingly, the language teacher – no doubt in an effort to help – checked whether they “know what silk mill means”; in other words, she was concerned with literal meaning, in the belief that this would offer the best route to a solution. (We will be returning to the possible effects of classroom listening experiences in shaping comprehension processes, in the final section of this chapter).

This brief summary of research into reciprocal listening has suggested the prime importance for non-native listeners of five elements in the L2 comprehension process:

(1) identifying the topic of conversation from the native speaker's initial remarks;

(2) predicting likely developments of the topic to which they might have to respond;

(3) recognizing and signalling when they have not understood enough of the input to make a prediction or a response;

(4) keeping a flexible ‘watching brief’ on the appropriacy and coherence of current topic frames and being prepared to update/replace them if required to by subsequent input;

(5) constructing an overall interpretation of what the discourse is about, rather than attempting to specify literal meaning.

In this section we have concentrated on the listener's part in the conversational process. In Chapter 4 we will be discussing the characteristics of the input produced by the other partner in native/learner discourse, the native interlocutor, in response to feedback from the listener indicating problems of comprehension.

3.4. Listening in the L2 learning process

Our central focus in this chapter is on the L2 comprehension process and in the later part of this study we will deal with the development of the learner's comprehension skills in a formal learning environment. We are therefore not directly concerned with the relationship between comprehension and L2 learning in general. However, given the importance of current interest in the notion of comprehension as a primary route to learning, it is appropriate that we should summarize the main arguments about the nature of the processes that might link what L2 learners hear with what they learn.

The key concept is 'comprehensible input', principally associated with the work of Krashen, one of whose influential hypotheses is that it is the process of understanding available target language input – at an appropriate level and under conducive affective conditions – that drives the L2 learning mechanisms:

comprehension may be at the heart of the language acquisition process: perhaps we acquire by understanding language that is "a little beyond" our current level of competence. This is done with the aid of extra-linguistic context and our knowledge of the world. (In more formal terms, if an acquirer is at stage *i* in acquisition of syntax, he can progress to stage *i+1* by understanding input at that level of complexity).

(Krashen 1981:102-3, original emphasis)

So far we have used the term 'input' to refer to all the incoming linguistic (and other) signals that listeners perceive and process, and from which they select cues in order to construct a mental model of the speaker's message. We might call this 'input-for-comprehension'.

However, as potential language learners, L2 listeners are likely to exploit at least part of this input not only to understand the current message, but also

to work out and eventually learn the underlying rules of form and use of the target language. Some of the input must therefore work as what we might term 'input-for-learning' - but which parts of the input? Clearly, not all incoming speech is immediately assimilable as learning material; if it were, then learning a foreign language would be more straightforward than evidence and experience indicate it to be.

The simple fact of presenting a certain linguistic form to a learner in the classroom does not qualify it for the status of input, for the reason that input is "what goes in", not what is available for going in, and we may reasonably suppose that it is the learner who controls this input, or more properly his intake.

(Corder 1981a:9)

Naturally, comprehensible input is essential when we learn a foreign language; we could not expect to learn without understanding. But what remains unclear - and still very much in dispute (cf. Ellis 1985, Swain 1985, White 1987) is whether L2 learners' access to such input provides a sufficient or a necessary condition for learning to take place. One controversy of particular significance for our study is what has been called the "dual relevance" issue (Sharwood Smith 1986): the fact that, as we have said, the same input can operate as (1) input-for-comprehension and (2) input-for-learning.

Sharwood Smith (1986) emphasized the need to distinguish comprehension, the extraction of meaning from all available information perceived by the listener, and acquisition, involving the learner's internal mechanisms for creating or restructuring the interlanguage system. Following Corder (1981a) he stated that it will be the learner himself that decides what is accessible for acquisition at $i+1$, although a great deal more input at $i+n$ may be relevant for comprehension through the listener's use of inferencing. The model he

proposed is shown below:

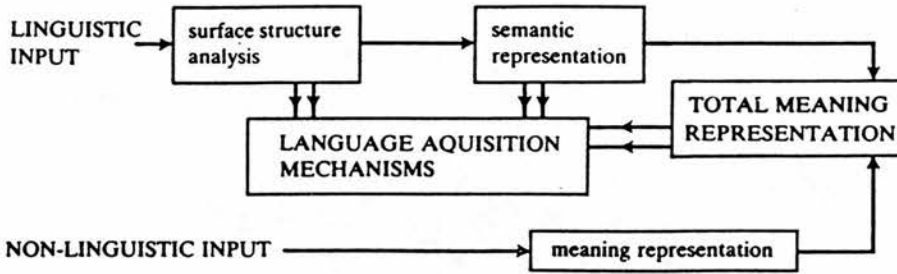


Figure 7. Input processing and dual relevance (from Sharwood Smith 1986:250)

The double arrows indicate processes of acquisition; the single arrows, processes of comprehension. Sharwood Smith outlined five stages in acquisition processing. Having first placed the input's surface structure 'on file', as it were, the L2 listener

(i) scans for any discrepancy between the semantic representation (SR), based on current target language competence, and the total meaning representation, consisting of SR + meaning based on any other contextual/schematic clues;

(ii) adjusts SR to accommodate any discrepancy at (i);

(iii) generates a surface structure from adjusted SR according to current target language grammar;

(iv) compares the original structure (on file) with the surface structure at (iii);

(v) restructures the L2 grammatical system, so that the adjusted SR (at ii) can be derived from the original surface structure.

As Sharwood Smith himself pointed out, this model represents an idealized

version of reality, since it implies that every piece of L2 input that reveals discrepancies leads to acquisition. In fact, the input has to have some characteristic – his own term was “robustness” – that makes it a prime candidate for acquisition. Although frequency of occurrence is the only component of robustness that he mentioned, we might suppose that perceptual or communicative salience would be among the factors that make a particular sample of L2 input robust ⁴.

Sharwood Smith’s model also implies that syntactic processing necessarily precedes semantic processing. Although, as we have seen in this chapter, there is conflicting evidence (Conrad 1985 and Wolff 1987) on the question of whether this is the case at lower levels of L2 competence, Voss’s (1984) findings would suggest that the more advanced foreign learner, like the native user, makes parallel and interactive use of information from all sources, rather than necessarily resorting to syntactic processing first.

On this issue of the relative priority of syntactic or semantic cues accessed by the foreign listener, Corder (1981b) postulated a distinction in L2 processing according to whether the interaction took place in the classroom or not:

The free learner concentrates on the data’s communicative properties – as a semantic challenge – while the captive learner approaches it as a structural problem – as a formal challenge.

(Corder 1981b:77)

This view would suggest a conditioning effect of formal L2 exposure – a point we return to in the final section of this chapter.

It is beyond the scope of our study to deal in detail with the status and validity of Krashen’s comprehensible input hypothesis for L2 acquisition *per se*, but we will briefly mention three critical reactions (Ellis 1985, Swain 1985 and

White 1987) on the issue of whether comprehensible input provides necessary or sufficient conditions for acquisition. All three authors argue that the hypothesis by itself fails to account for a number of SLA research findings on the input/learning relationship.

Swain (1985) cites longitudinal evidence from Canadian L2 immersion education programmes – possibly the optimal context for input/acquisition – that, even after seven years' exposure, learners approach native-like proficiency only in comprehension tests; on measures of oral and written production, they remain considerably below native-likeness. Her conclusion is that L2 learners need something more than comprehensible input; they need to be

pushed towards the delivery of a message that is not only conveyed, but that is conveyed precisely, coherently, and appropriately. Being "pushed" in output, it seems to me, is a concept parallel to that of the $i+1$ of comprehensible input. Indeed, one might call this the "comprehensible output" hypothesis.

(Swain 1985:248-9)

Swain's hypothesis is that the requirement to produce L2 utterances may force learners to move away from semantic processing to syntactic processing, thus directing their attention to the means of expression needed for successful communication of their intended meaning. In other words, comprehensible input plays a crucial role in L2 hypothesis formation, but it is comprehensible output that allows the learner to engage in hypothesis testing.

Ellis (1985) and White (1987) have both raised objections to the predominant role that Krashen appears to assign to comprehensible input. Firstly, as Ellis points out, non-native learners may acquire a foreign language without two-way communication – that is, without any guarantee that the

available input is actually made accessible through being rough-tuned to the individual learner's current level of competence ⁵. Secondly, even if the speaker does make linguistic adjustments, these may not necessarily result in more successful communication. Studies of teachers' classroom behaviour (e.g. Chaudron 1983a) suggest that - just as in the world outside the classroom - speakers' intentions are not always matched by listeners' success in understanding. This brings us back to Corder's comment that it is the learner who controls which parts, if any, of incoming language input are converted into intake.

Among White's criticisms of the comprehensible input hypothesis is that it is arguable that what she terms 'simplified input' could well provide the learners with impoverished and limiting data, rather than casting an optimal-size "net" as Krashen claims (Krashen 1981:131).

By talking to learners only in simple sentences one is depriving them of input which is crucial.

(White 1987:102)

However, it seems that - here and elsewhere in her article - White is using 'simplified input' in its narrowest sense of language modified in terms of form (phonological, syntactic or lexical). As we will see in Chapter 4, studies of native/non-native encounters indicate that the modifications which appear to matter most for non-native comprehension are not manipulations of linguistic elements, but adjustments of interaction, made by the native speaker in response to feedback from the listener signalling current difficulties of comprehension.

Despite these criticisms, the necessity of comprehensible input for SLA is not in question. What remains a matter of dispute is the extent of the role it plays in the acquisition process, the conditions of 'readiness' that are required

for learners to optimize their use of such input, and the way in which it is made available as intake.

3.5. Implications for L2 teaching

We began this chapter with questions as to the similarity or difference between the problems and processes of native and foreign language listening comprehension. As Faerch (1981) pointed out, the goals of L1 and L2 listeners are one and the same, as far as understanding language in real use is concerned. They need to identify:

- (1) the entities that a speaker refers to,
 - (2) the predication(s) made of those entities,
 - (3) the speaker's attitude to the predication(s),
- and (4) the speaker's assessment of the communicative event.

We have seen that, at certain times or in certain contexts, or assuming a certain level of L2 proficiency, the skills deployed by the foreign listener to attain those goals seem to be essentially those of the (successful, competent) native user. The research referred to in this and the preceding chapters has highlighted some of the component skills that make up successful listening. They include the ability to monitor one's own comprehension, to assess message adequacy, to treat the message as a whole, to seek clarification, to deploy inferencing strategies based on available information when knowledge at other levels is missing or insufficient.

In face-to-face conversation this may involve the listener's resorting to actions that result in reformulation:

especially important are routines that enable acquirers to

"manage" conversations with speakers who are more competent than they are in the language, routines that allow acquirers to get speakers to slow down, interrupt when necessary, change the subject, get help with vocabulary, etc.

(Krashen 1981:117)

In one-way listening, the compensation has necessarily to come via internal cognitive processes, as opposed to social actions; inferencing has a key role to play and will be based on the listener's search for relevant data from a range of sources,

from utilizing one or two contextual cues to activating a complex network of contextual and interlingual cues simultaneously.

(Faerch 1981:14)

Precisely those listeners who might presumably have most to gain from incorporating top-down processes whenever possible – namely, L2 learners – appear reluctant or unable to do so. The intriguing issue for both researcher and foreign language teacher is whether it is in fact reluctance or inability, and whether either is related to the nature of the current comprehension task, as Wolff (1987) suggests. Kasper (1984) expressed the view that the frequently observed tendency for lower-proficiency listeners to rely on low-level cues in interpreting messages is actually one brought about by conditioning in the L2 classroom:

the reason for learners to prefer bottom-up processing in foreign language comprehension is that this processing type is favoured in the foreign language classroom... reflected in exercise types like pattern practice and sentence-to-sentence translation. For the comprehension of such classroom-specific use, bottom-up processing is clearly the relevant procedure.

(Kasper 1984:15)

She stressed that her comment was directed at practices in the more traditional foreign language classroom; certainly in less conventional approaches, such as those we will discuss in Chapter 5, there has been a move towards encouraging top-down processing. Ironically, one of the predispositions of the classroom teacher may work against this. It is possible for the teacher to be overhelpful by leading learners directly to the solution to a problem, instead of allowing them the time and opportunity to practise deploying appropriate tactics. In a study of the classroom use of L1 listening comprehension materials, Brown et al. (1987) noted that some teachers were too willing to offer (conscious or unconscious) assistance by, for example, repeating the problematic piece of text in isolation and with altered stress, or by responding to pupils' requests for information with answers that exceeded the limits of what was being asked for.

Furthermore, the recent move towards encouraging learners' application of top-down strategies involving contextual and non-linguistic cues will have its limitations – and quite possibly negative repercussions – if it has the effect of overemphasizing its role in isolation from the complementary use of bottom-up processing. We might illustrate this with the example of the 'predicting' activities now found in many L2 listening comprehension courses. They often involve the learners being told in advance of the topic of a recorded text and being encouraged to think about and discuss what they expect the speaker to say. This is all well and good, provided that it does not lead the listeners to seek only information in the text that confirms their predictions, in which case they may well fail to notice cues available in the text that would have alerted them to the need to adjust their frame of expectation.

One of the characteristics of the unsuccessful listener is not an inability to predict (cf. Wolff 1987), but a reluctance to abandon or amend a prediction in

the face of counter-evidence.

The problem for them is that their prediction is wrong. It is too unconstrained. Just any prediction will not help the listener to understand what he hears.

(Brown 1986a:300)

Brown suggests that a useful distinction in this regard is that between 'external context' and 'discourse-internal context' (Faerch and Kasper 1986). Broadly speaking, these two notions correspond to our earlier use of 'context' and 'co-text', respectively, but with the important additional inclusion of the updating of knowledge that has been established in the course of the current interaction. Context and co-text are in this sense dynamic and open to change; static or once-and-for-all prediction may result in misinterpretation by making the listener insensitive to potentially helpful cues.

The evidence seems to point to a need for teachers to find ways of encouraging L2 learners to employ the same sort of mixed (parallel and interactive) processing that they use in understanding their native language, and to wean them away from exclusive inflexible use of either the bottom-up or top-down processing route.

The role of comprehension difficulty is clearly a key issue for both the learning and the teaching of foreign languages. The research studies discussed in this chapter have indicated the range of problems that L2 listeners may encounter and possible differences between native and foreign language comprehension processes when difficulties arise. The crucial pedagogic question is how comprehension problems can be exploited in the classroom to improve listening skills (and, ultimately, L2 competence as a whole), and it is to that question that we turn in Chapters 5 and 6.

It is customary for research studies to conclude with a comment to the

effect that more research is needed, and the comment below is no exception:

There is a good deal of research to be undertaken before we can start discussing how exactly the various aspects of receptive procedural knowledge interact with each other in the ongoing communicative situation, and before we can make specific proposals for what will function as good input to the learning process.

(Faerch 1981:20)

Despite its apparent conventionality, that may serve as a salutary link between this chapter, which has focussed on what is currently known about L2 receptive processing, and the next, in which we discuss the nature of the input that non-native listeners can expect to face in real life, as opposed to input designed for experimental exploitation.

CHAPTER 4

LISTENING INPUT IN NATIVE/NON-NATIVE INTERACTION

In previous chapters we stressed that although listening comprehension is often conceived of in terms of a receptive activity, the degree to which the listener plays an active part is of particular importance in two-way, face-to-face conversation. In Chapter 3 we touched on some of the means available to L2 listeners to persuade their native interlocutor to clarify, reformulate, slow down and so on. Krashen (1981), in particular, has written of the crucial importance to the L2 learner of developing routines for 'managing' conversation so as to elicit the formal and functional adjustments that may make the listening input comprehensible. We now consider in more detail the nature of these adjustments, the conditions under which they occur and the effects they may have on the L2 listener's success in comprehension.

In approaching the literature on the characteristics of conversational listening input experienced (or elicited) by the L2 learner outside the classroom, we need to note a preliminary terminological point to do with the notion of 'simplification'. The term is potentially ambiguous. Simplicity can be seen in terms of the linguistic complexity of surface structure, involving more or less varied, more or less common, and more or less elemental or regularized forms (Chaudron 1983a). But, as Meisel (1977) has pointed out, the criteria for judging linguistic simplicity should include not only surface structure but also derivational history, underlying meaning structure, and could extend to take in psychological simplification (computed through processing time) and perceptual simplification. When discussing baby talk, Ferguson (1977) contrasted 'simplification' – entailing some form of linguistic simplicity – with 'clarifying modifications', or cognitively more redundant speech. The same distinction was characterized as 'restrictive simplification', reduction or

regularization of surface form, and 'elaborative simplification', increase in surface form for the sake of message clarification (Meisel 1977).

In the specific literature on foreigner talk, Corder (1980) has criticized the blurring, through the use of the term 'simplification', of the distinction between usage and use (Widdowson 1978), between a speaker's use of a structurally simpler grammar and the simplified use of a fully complex code; Corder sums up this distinction as between 'code' and 'register'. This is particularly germane to the discussion of the evidence for ungrammatical versus grammatical foreigner talk, and will be taken up again in section 4.1.1 below.

Given the ambiguities of 'simplification', a number of researchers into NS/NNS discourse have sought other descriptions: "accommodation" (Corder 1980); "modification" (Henzl 1979; Gaies 1982a); "adjustment" (Freed 1978; Arthur et al. 1980; Long 1983c). As I will explain in Chapter 7, it was the purpose of this present research to assess the extent to which similar spoken messages are successfully simplified for NNS listeners - i.e. are understood by them. I therefore propose to adopt the term "modification" to describe NS adjustments of discourse, in preference to "simplification", since it runs less risk of confusion between process and product, intention and effect. Chaudron (1983b) has suggested that

the final test of what can be considered simplification... is perhaps the operational measure of what form is most efficiently processed and retained as linguistic or pragmatic information.

(Chaudron 1983b:439)

This has the advantage of reminding us of the listeners' perspective, since it is presumably consideration for the listeners' possible difficulty in dealing with incoming speech that underlies the modifications made by speakers, whether in L1 or L2 contexts.

4.1. Features of L2 listener-oriented modification

Studies of the way native speakers address non-native speakers have been concerned with two related but distinguishable phenomena: input and interaction (Long 1981a). Early studies of NS/NNS speech were strongly influenced by the focus – and, in some cases, the methodology – of a seminal study by Ferguson (1971). Such studies investigated the characteristics of NS input¹ with the primary goal of isolating those syntactic, lexical, morphological and phonological forms whose relative frequency of use might serve to distinguish NS/NS from NS/NNS speech. More recently, the emphasis has been, alternatively or additionally, on the examination of the interactional characteristics of NS/NNS discourse; as a result, there is now some evidence (e.g. Long 1980, 1981c, 1983a; Gaies 1982b) that modifications of the interactional structure of NS/NNS exchange are more consistent and more extensive than input modifications, and may have a greater effect on the comprehensibility of the native's speech (Pica, Young and Doughty 1987). These two complementary strands of NS/NNS discourse research will be considered in turn in sections 4.1.1 and 4.1.2.

4.1.1. Input modifications

4.1.1.1. Ungrammatical

Early work on the way native speakers might accommodate their speech in order to communicate with non-native speakers concentrated on 'foreigner talk'. The term was invented by Ferguson (1971) and defined as

a conventional register of simplified speech... used by speakers of a language to outsiders who are felt to have a very limited command of the language or no knowledge of it at all.

(Ferguson 1971:143)

Although claimed to be a register, it is in Corder's terms a simple code, since Ferguson described the principal processes underlying the use of foreigner talk forms as omission, expansion and replacement/rearrangement. Omission involves the deletion of articles, copula, prepositions and inflectional morphology, e.g. "He live three year Japan". Expansion might entail the addition of lexical tags such as in "You have food, yes/no?". An example of replacement/rearrangement would be the formation of negatives with "no" – "Me no like".

It is worth noting that the elicitation procedure used in Ferguson's original study was somewhat suspect: a group of American psychology students were asked to rewrite a number of sentences in the way they imagined they would say them to a group of illiterate non-European non-native speakers of English. Nevertheless, Ferguson's findings have subsequently been confirmed in a number of studies, not only through similar imaginary elicitation (e.g. Andersen 1977; McCurdy 1980; Meisel 1977), but also through naturalistic observation of what particular native speakers actually said when faced with non-native listeners. These observational studies have included foreigner talk in English (Hatch et al. 1978; Katz 1977, 1981; Ramamurti 1980), Portuguese (Goldberg 1982), Dutch (Snow et al. 1981) and German (Heidelberger Forschungsprojekt 1978). Possible explanations of the variables that give rise to ungrammatical foreigner talk are offered in section 4.1.1.3.

4.1.1.2 Grammatical

A number of studies eliciting actual (rather than introspective) NS adjustments to non-native speakers resulted in the production of a form of English that was fully grammatical, but in which the NS subjects were found

to reduce the complexity of their speech only to the point where the simplification was still admissible by the native speaker's grammar.

(Henzl 1979:165)

This suggests that ungrammatical foreigner talk is by no means the norm and supports the call for a distinction between foreigner talk code and foreigner talk register (e.g. Arthur et al. 1980; Corder 1980).

Among the most commonly observed syntactic features of grammatical foreigner talk are: the use of shorter utterances, measured in T-units (Arthur et al., 1980; Freed 1978; Gaies 1977; Scarcella and Higa 1981), the use of speech that is syntactically and/or propositionally less complex in various ways, e.g. contains fewer sentence nodes per T-unit (Freed 1978), fewer adjectival, verbal and noun clauses per T-unit (Gaies 1977; Chaudron, 1979) or fewer relative clauses per T-unit (Scarcella and Higa 1981). There is also evidence from a cross-language comparison of English, Japanese and Hindi-Urdu (Long, Gambhkar, Gambhkar and Nishimura 1983) that grammatical foreigner talk tends to be a regularized version of the language used in NS/NS discourse: NS/NNS speech exhibits higher frequencies of utterances containing canonical word order, (SVO for English, SOV for Japanese and Hindi-Urdu), more utterances with optional constituents (S, V or O) retained in surface structure, and more overt marking of syntactic and semantic relationships, e.g. by Japanese particles indicating topic, comment, subject, object and various directionals and locatives.

In the case of lexis, the range of vocabulary has been observed to be more restricted when native speakers address non-native listeners than when they are engaged in NS/NS interaction. This restriction applies on measures of type-token ratio (Gaies 1977; Arthur et al. 1980) and also in the avoidance of idioms and low-frequency lexical items (Henzl 1974, 1975, 1979; Chaudron

1979, 1983a).

Modification has also been noted at the phonological level. Henzl (1979) reported an experiment involving native speakers of Czech telling a story to L2 listeners, in which she observed a number of adjustments: more accurate standard pronunciation, slower delivery, more distinct word segmentation, as well as an increased use of non-verbal message support, such as explanatory gestures and facial expressions.

However, given the general perceptual impression of speed in L2 speech, it is perhaps surprising that the modification of rate of delivery found by Henzl (1979) appears not to be a consistently significant feature across different studies of NS/NNS speech. One might have expected that, stereotypically, native speakers would reduce their speed of speaking when talking to L2 learners, particularly at low levels of proficiency. In a re-examination of rate-of-speech findings from six ESL classroom studies², Chaudron (1985a) observed a marked variability at the individual NS level. While some teachers did adjust their delivery significantly to different levels of NNS proficiency, there were overall significant differences in only two studies (Steyaert 1977; Wesche and Ready 1985). Henzl (1979) had even reported one NS subject speaking faster to non-native listeners than to fellow native speakers. We will return to this issue in section 4.3.4, when we consider the effects on comprehension of speakers' rate of delivery.

4.1.1.3. Factors in variation of grammaticality

An important issue arising from investigations of native modifications to L2 listeners is the reported variability in the well-formedness of foreigner talk. Why is it that NS speech to non-native listeners is sometimes grammatical, sometimes not? In a survey of 36 studies of NS/NNS interaction, Long (1981c)

produced the following summary of grammatical versus ungrammatical NS modification:

Table 2
Studies of linguistic input to non-native speakers

Study	Language(s)	Ungrammatical input (X)
1. Indirect, elicited		
Andersen (1977)	English	X
Ferguson(1975)	English	X
McCurdy (1980)	English	X
Meisel (1977)	German, French,Finnish	X
2. Observational		
Arthur et al. (1980)	English	
Chickinsky (1980)	English	
Clyne (1977, 1978)	English	X
Dutch Workgroup (1978)	Dutch	X
Fillmore (1976)	English	X
Hatch et al. (1978)	English	X
Heidelberger Fpr.(1975)	German	X
Katz (1977)	English	X
Ramamurti (1980)	English	X
Snow et al. (1981)	Dutch	X
Valdman (1976)	Tai Boy	X
3. Quasi-experimental		
Campbell et al. (1977)	English	
Chan and Choy (1980)	Mandarin	
Freed (1978)	English	
Koike (1978)	English	X
Koshik (1980)	English	
Long (1980)	English	
Long (1981b)	English	
Long (1983c)	English	
O'Brate (1980)	English	X
Scarcella and Higa (1981)	English	
4. Classroom		
Chaudron (1978)	English	
Chaudron (1979)	English	
Gaies (1977)	English	
Hatch et al.(1978) 'G'	English	X
Henzl (1974)	Czech	
Henzl (1975,1979)	Czech, German, English	
Long and Sato (1983)	English	
Schinke-Llano (1983)	English	
Steyaert (1977)	English	
Trager (1978)	English	

Source: Adapted from Long 1981c:2³.

Long's reanalysis of the 16 studies producing ungrammatical foreigner talk led him to conclude that there were four important factors influencing grammaticality:

- (1) the L2 proficiency of the NNS addressee;
- (2) superiority (perceived or actual) of the NS's status in relation to the NNS addressee;
- (3) the native speaker's prior experience of foreigner talk;
- and (4) the spontaneity or otherwise of the communication.

In all the studies reporting ungrammatical foreigner talk the listeners were, or pretended to be, non-native speakers of low proficiency in the target language. There were no reported cases of intermediate or advanced L2 learners receiving ungrammatical speech. In eight of the 15 studies, the native speakers were (or felt they were) of higher status than their NNS interlocutors. The other experiments involving potential status differences took place in a classroom context and elicited no ungrammatical input. It may be that the teacher-learner relationship is comparatively equal - at least in the North American adult ESL cases that predominate in NS/NNS discourse research - and/or that other, individual factors may be at work, such as the language teacher's inhibition against using ungrammatical language.

There is conflicting evidence for prior foreigner talk experience as a factor in grammaticality. Some studies would suggest that ungrammatical foreigner talk is more likely if the native speaker has had considerable experience of talking to NNS listeners (e.g. Clyne 1977 1978; Dutch Workgroup 1978; Hatch et al. 1975; Katz 1977; Snow et al. 1981; and Valdman 1976). However, other studies (Campbell et al. 1977; Freed 1978; Koshik 1980; and all but one of the classroom studies ('G' by Hatch et al. 1978) have shown that native speakers experienced in foreigner talk use fully grammatical speech to L2 listeners.

One plausible resolution of this conflict is offered by Long (1981c): that there may be two distinct types of prior experience of foreigner talk. The first

is that available to native speakers such as factory supervisors and municipal employees, who may accumulate a considerable amount of essentially restricted experience with non-native speakers, e.g. migrant workers, of limited L2 proficiency, in work settings and in discourse related to immediate tasks. A second group of native speakers, for example EFL teachers and university officials, may build up first-hand experience of interaction with non-native speakers of a different kind, such as overseas graduate students; what these native speakers talk about with non-native listeners (and when and where they do so) is likely to be much more varied than is the case of the first NS group, with the result that the native speakers develop "a different set of expectations as to what is conversationally possible" (Long 1981c:8), even when their interlocutors are of rather limited L2 proficiency.

The final variable discussed by Long - the possible relationship between task-type and grammaticality of foreigner talk - is of particular interest for this research, which will be concerned with the possibility of the direct application of extracts from NS/NNS discourse as listening material. It can be seen from Table 1 (above) that grammatical foreigner talk has tended to occur when the NS and NNS partners have been recorded in pre-arranged meetings, whose main purpose has been to supply data for research (usually in some kind of laboratory setting) and/or when language has been the focus of the encounter, as in the L2 classroom or "conversation club" (Freed 1978)⁴. We might add that the only study to have manipulated task-type within an experimental design (Long 1980) found a significant differential effect, on both the degree and the nature of modification, of type of interaction between native and non-native speakers. This will be taken up again in the next section.

4.1.2. Interaction modifications

In addition to the investigation of speech modifications to NNS listeners a feature of recent studies has been their shift of focus from foreigner talk input *per se* to the structural characteristics of NS/NNS interaction in which foreigner talk occurs, i.e. to the study of "foreigner talk discourse" (Hatch et al. 1978), referred to in Chapter 3. This extension of analysis is important for two reasons. Firstly, it has required investigators to adopt a perspective in which both interlocutors are taken into account. Foreigner talk is not an object in itself, a description of the performance of something 'done' by native speakers; it occurs in discourse to which both native speaker and non-native speaker contribute. Secondly, there is some evidence (Long 1980; Pica, Young and Doughty 1987) that what matters as far as comprehension is concerned is the interactional modifications; these are more consistent and more marked in NS/NNS discourse (measured against similar NS/NS discourse) than are the NS modifications of spoken input.

Long (1980) recorded a series of NS/NNS interactions on the following lines: each of 32 dyads (16 NS/NS and 16 NS/NNS) performed six tasks in the same order -

1. informal conversation
2. vicarious narrative
3. giving instructions for two communication games
4. playing the first game
5. playing the second game
6. discussion of the supposed purpose of the research

This series of activities was classified into two sets of three: tasks 1, 4 and 5 were activities requiring genuine two-way information exchange; tasks 2, 3 and 6 demanded no such exchange. The results of this categorization are shown in Table 3:

Table 3
Relationship between task-type and NS/NS and NS/NNS conversation.

	Degree of difference between NS/NS and NS/NNS conversation on tasks:	
	1,4 and 5 (+info. exchange)	2,3 and 6 (-info. exchange)
INPUT MODIFICATION		
1. av. length of T-units	p<.025(ns)	p> .025(ns)
2. no. of S-nodes per T-unit	p<.01 (ns)	p< .025 (ns)
INTERACTION MODIFICATION		
3. distribution of questions, statements and imperatives in T-units	p< .001	p< .005
4. no. of conversational frames	p> .025 (ns)	p> .025 (ns)
5. no. of confirmation checks	p< .005	p< .01 (ns)
6. no. of comprehension checks	p< .005	p> .025 (ns)
7. no. of clarification requests	p< .005	p> .025 (ns)
8. no. of self-repetitions	p< .005	p< .005
9. no. of other-repetitions	p< .005	p> .025 (ns)
10. no. of expansions	p< .005	----- (ns)
11. no. of types 4-10 combined	p< .005	p> .025 (ns)

Source: Long 1981c:19.
(ns) = not significant

Clearly these results suggest that (1) there is a stronger tendency for interaction modifications to occur than input adjustments, and (2) tasks requiring two-way exchange of information lead to significantly more conversational modification. Given the potential importance in NS/NNS conversation of these interactional modifications, I will now briefly describe their principal features, observed in NS/NNS studies. Broadly, modifications can be divided into two sets: the purpose of the first set is to avoid conversational trouble; that of the second is to allow repairs when conversation has broken down. Long (1983a) has termed these sets "strategies" and "tactics", respectively, and they are set out in the table below.

Table 4
Devices used by native speakers to modify the interactional
structure of NS/NNS conversation

Strategies (S) (for avoiding trouble)	Tactics (T) (for repairing trouble)
S1 Relinquish topic control	T1 Accept unintentional topic-switch
S2 Select salient topics	T2 Request clarification
S3 Treat topics briefly	T3 Confirm own comprehension
S4 Make new topics salient	T4 Tolerate ambiguity
S5 Check NNS's comprehension	
Strategies and Tactics (ST) (for avoiding AND repairing trouble)	
ST1 Use slow pace	ST4 Decompose topic-comment constructions
ST2 Stress key words	ST5 Repeat own utterances
ST3 Pause before key words	ST6 Repeat NNS's utterances

Source: Long 1983a:132.

Given the already existing controversy over the use of the term 'strategy' in the context of language learning⁵, it might perhaps have been better if Long had adopted a more transparent pair of categories than 'strategy' and 'tactic'; 'proactive modification' and 'reactive modification', for example, could have made the distinction between prevention and remedy clearer.

It should be noted that the Long's first four strategies are connected with the negotiation of topic. In the case of S1 (Relinquish topic control) native speakers often attempt to pass the initiative for deciding current and subsequent topics over to the NNS partner in the discourse - assuming that the nature of the task allows. Hatch (1978) reported that native speakers tend to use more 'or-choice' questions to non-native speakers than to native speakers in comparable circumstances. She suggested that such questions not only offer the non-native speaker a series of topic options but also contain the answer to the question, lessening the cognitive load on the listener. An extract from Varonis and Gass (1985a) may serve as an illustration:

*NNS: Could you tell me about the price and size of
Sylvania TV ?*

NS: What did you want ? ... A service call ?

NNS: ... seventeen inch ...hunh ?

NS: What did you want ? A service call or how much to repair a TV ?

NNS: Yeah. Eh TV colour.

(from Varonis and Gass, 1985a:8)

For S2 (Select salient topics) Long noted a tendency on the part of native speakers to choose subjects which involve the NNS's personal history, or subjects that are temporally or physically salient, comparable perhaps with the 'here and now' orientation of caretaker-child conversation (Cross 1977). The tendency for verbs to occur in present active form, which might serve as an approximate indication of gearing to the 'here and now', has been observed in a number of studies (e.g. Henzl 1979; Long 1980, 1981b; Gaies 1982b).

A frequent finding in NS/NNS discourse research is that the interaction consists of a relatively large number of topics treated briefly (S3), in staccato sequence, as opposed to the smoother flow associated with NS/NS conversation. Arthur et al. (1980) found that the amount of information supplied in telephone conversation to NNS enquirers was significantly less on each topic than that given to NS callers, and the ratio of topic-initiating to topic-continuing moves has been found to be higher in NS/NNS interaction (Long 1981b). However, Gaies (1982b) subsequently replicated Long's (1981b) study and found significantly fewer changes of topic than in the original experiment; he hypothesized that the degree of topic-switching may be in inverse proportion to the L2 proficiency of the non-native speaker, since the L2 listeners in his study were EFL teachers of near-native proficiency.

New topics have been observed to be made more obvious (S4) by left-dislocation (Hatch 1978), and the use of questions to encode

topic-nominating moves (Hatch and Wagner-Gough 1976; Freed 1978; Long 1980) – again, presumably setting up a less complex response by the NNS partner.

Finally, a number of studies have reported more frequent checks of comprehension (S5) in native/non-native discourse, such as “Right?” in the following extract:

NS: When do you go to the uh Santa Monica ?

NNS: ---

NS: You say you go fishing in Santa Monica ? Right ?

NNS: Yeah.

NS: When ?

(from Long 1983b:182)

One caveat that should be entered when considering Long’s topic strategies (S1-4) is that they may well be strongly associated with task type. For example, strategy S3 – “treat topics briefly” – is unlikely to occur in a conversation where a satisfactory outcome is the L2 listener’s successful completion of a defined task, e.g. the execution of a set of instructions. The fact that the data for many NS/NNS studies, including tasks 2, 3 and 6 in Table 3, involved one-sided, NS-led interaction may have skewed the results. The abruptness and brevity noted in some of the more loosely defined conversational activities could stem from the native partner’s attempts to establish common ground for suitable talk.

The various modifications defined as (repair) tactics T1-4 and the dual-function strategies/tactics ST1-6 bring up a second important point: the status of NS/NNS modifications. It is now widely agreed in the literature that

Ferguson's hypothesized distinction between foreigner talk (= simple code) and native talk (= complex code) is untenable. It is not the deployment of particular linguistic or interactional devices that distinguishes NS/NNS from NS/NS talk, but the fact that the modifications that typically occur in both have a significantly higher frequency of use in NS/NNS discourse. In other words, the difference between the two types of conversation is one of degree, rather than of kind. Moreover, by corollary, the sort of conversational repair skills demanded of an L2 listener are not essentially different from those needed – albeit less frequently – by the native listener.

In this sense, T1–4 and ST1–6 are everyday modifications, whether in the case of native speakers talking to fellow native-speakers or to L2 users, but negotiation routines for disambiguating are

much more common in NNS/NNS and NS/NNS discourse than in NS/NS discourse, presumably because in conversations involving NNSs there are more utterances that are uninterpretable, or marginally interpretable, and thus there is a greater need to negotiate meaning.

(Varonis and Gass 1985b:23)

The need for data that point up the essentially comparative status of NS/NNS modification will be taken up again in section 4.4, which outlines the problems of research in this field.

4.1.3. Summary

The NS/NNS literature to date has indicated the following:

(1) native speakers modify the way they talk to non-native speakers in certain ways;

(2) their modifications of the structure of conversation, interaction, are

greater and more consistent than those relating to the formal features of speech, input;

and (3) since the interactional modifications have been shown to occur even in the absence of significant input modifications, we may adopt the working assumption that modification to interaction matters more for the NNS listeners trying to make sense of what they hear.

4.2. Causes of L2 listener-oriented modification

Having considered the characteristics of modifications to input and interaction from the point of view of the native speaker, we now turn to issues that centre on the NNS partner. In this section we consider what it is about the non-native speaker that causes the native speaker to adjust, and in the next section we examine what effects on NNS comprehension are achieved by the modifications of input and interaction made by the native speaker.

Long (1983b) isolated five possible NNS factors that may result in discourse modifications:

- (1) the 'foreign' physical appearance of the non-native speaker;
 - (2) features of the non-native speaker's interlanguage;
 - (3) the comprehensibility of what the non-native speaker says;
 - (4) the degree of apparent NNS comprehension;
- or (5) a combination of two or more of those factors.

4.2.1. Physical appearance

The evidence available suggests that the non-native speaker's physical

appearance is not a dominant factor in NS modification. Firstly, a number of studies have elicited marked NS modifications in telephone conversations with NNS strangers, suggesting that the lack of visual contact did not hamper the native speaker's ability to recognize and accommodate to foreign users of English (Hatch et al. 1978; Arthur et al. 1980; Chickinsky 1980; Abunahleh et al. 1982). Secondly, Varonis and Gass (1982) found that one group of 24 native speakers modified their speech significantly more to two native speakers of foreign ethnic descent adopting a heavy NNS accent (when asking for street directions), than did another group of 24 native speakers asked for the same directions by the same two native speakers using their normal English accent.

4.2.2. Interlanguage

The telephone conversation studies referred to above suggest that it is particular features of NNS interlanguage, displayed in speech, that trigger modifications. In another part of the Varonis and Gass (1982) street directions experiment, it emerged that when (real or feigned) non-native speakers asked native speakers for information, there was a strong tendency on the part of the latter to begin their response to the request by echoing part of the original question, usually with rising intonation. For example:

NNS : Please, I need information about the station train.

NS : Train station ? I can tell you where it is

(Varonis and Gass 1982:117)

This type of NS response occurred after only a single NNS utterance and independent of overall NNS proficiency level (measured by NNS subjects' placement in ESL classes). It was not clear from this experiment whether it was the pronunciation or syntax used by the non-native speaker that led the

native speaker to make such rapid adjustment to the listener. In a series of further experiments, Varonis and Gass (1982) conducted a systematic investigation of variables in NNS output, in an attempt to discover which in particular might affect NS reactions.

In attempting to tease out the effects of NNS accent and grammar, a second experiment was designed to elicit judgments by naive NS subjects (i.e. non-teachers) of the pronunciation level of audio-recorded L2 users. In general it was found that at the extremes of pronunciation accuracy, accent was the dominant factor in NS judgment; that is, very good or very poor pronunciation was rated high or low, respectively⁶. However, where pronunciation was of a moderate intermediate standard, the naive NS judges tended to be influenced by the grammatical accuracy of what the non-native speaker was saying. The conclusion drawn from this evidence for the interplay between accent and syntax was that

the basic element in these perceptions is comprehensibility, that is, how easy it is to interpret the message.

(Varonis and Gass 1982:125)

4.2.3. Comprehensibility

In the same series of experiments (Varonis and Gass 1982), a third study addressed the issue of NNS comprehensibility. The same audio-taped data used in the second study (above) was played to a different group of NS judges, who were asked to rate each sentence in a series of 14 grammatical/ungrammatical pairs, on the basis of its comprehensibility. In every case but one, the grammatical sentence was rated more comprehensible than the ungrammatical. However, the native judges' ratings of members of a

sentence pair produced by the same L2 learner varied widely, suggesting that with some non-native speakers, grammaticality has a stronger effect on their comprehensibility than for others.

4.2.4. Level of comprehension

There is some negative evidence that NNS comprehension is a crucial variable in stimulating NS modifications. This evidence consists of findings that the absence of NNS feedback on the extent of comprehension results in a much lower level of modification than that elicited in comparable two-way communication between NS and NNS partners.

Steyaert (1977) replicated an experiment by Gaies (1977), involving a story-telling task by ESL teachers to groups at various levels of L2 proficiency. In the replication study, the listeners were not allowed to respond in any way to the narrator. Steyaert's finding was that, where Gaies had reported significant amounts of modification to the NNS audience, her NS story-tellers failed to make significant adjustments.

Similar results were reported by Long (1980; 1981c), who, as noted earlier, found no statistically significant differences between NS/NS and NS/NNS conversation on various input and interaction measures, when the partners were engaged on tasks that did not actually demand two-way communication. Similar findings on the apparently crucial role of listener feedback for the communicative adequacy of speaker performance have been reported for NS/NS interaction of a variety of types, e.g. for mother-child communication (Snow 1972; Berko Gleason 1977) and for performances on communication tasks by adolescents (Brown et al. 1984) and by adults (Lynch 1984), as well as for NNS/NNS interaction (Schwartz 1980).

In addition, Gaies' research (1980, 1981) into the ways in which different L2

learners provide feedback to their NS partners suggests that there is a fair degree of individual variation in the extent of the control they exert over discourse. NNS partners who show immediate willingness to participate in the structuring of the spoken discourse

may obviate the need for their NS co-participants to employ fully those strategies which are primarily aimed at sustaining conversation.

(Gaies 1982b:80)

4.2.5. A combination of causes

There is as yet no evidence that any of these possible triggers of NS modifications - NNS appearance, interlanguage, comprehensibility or comprehension - is a primary cause, or that other dimensions of NS/NNS discourse may not be equally important. For example, Gass and Varonis (1984) and Varonis and Gass (1985a) have investigated further candidates for inclusion in the list of possible contributing variables. In particular, they have examined the effect of NS familiarity with various aspects of the discourse - the topic, NNSs' interlanguage in general, the specific non-native interlocutor's interlanguage, etc. Familiarity of topic seems to be the most influential variable in determining NS partners' ability to understand non-natives' speech (Gass and Varonis 1982). Familiarity with the listener has also been shown to be more important than foreigner talk experience by Pica and Long (1986), who examined ESL teacher talk and found that, in terms of spoken input to the L2 learners, experienced teachers faced with an unfamiliar class of students behaved more like inexperienced teachers with an unfamiliar class, than like experienced teachers with a familiar class.

It therefore seems safest to assume, in the absence of data supporting a

'primary factor' view, that the dynamics of NS/NNS modification are complex, rather than simple, and that native speakers react to a combination of factors. The extent to which native speakers are able to fine-tune their adjustments of input and interaction is likely to vary with the circumstances of the discourse, as well as with the NNS variables discussed in this section.

4.3. Effects of L2 listener-oriented modification

It would seem logical that, since the motivation for investigating NS/NNS modifications stems largely from a concern with the processes that lead to comprehensible input, researchers would have wished to investigate and measure the effects of different types of modification on L2 listeners' comprehension. As we noted earlier, simplification is an aim as well as a process. We may analyse and log native speakers' attempts to make spoken messages simpler, i.e. easier to understand, but ultimately the simplicity of the language is in the mind of the hearer:

we cannot speak of simplified texts without taking into account the understanding of the addressee.

(Davies 1984:186)

Yet it is only in the last five years or so that experiments have been designed to isolate any differential comprehension effects of alternative modification options at the native speaker's disposal.

Earlier studies were concerned with description and quantification of NS/NNS modifications; for example, Arthur et al. (1980) concluded their study of input adjustments to NNS callers by appealing to vague and intuitive criteria for assessing the degree of NNS comprehension:

the modifications made by (the native speakers) in our sample do appear to simplify and facilitate communication. Our

evidence... is indirect. We cannot be sure that the particular syntactic structures and lexical items that they avoided were those that would have given non-native listeners the most difficulty. However, it is reasonable to suppose that shorter, grammatically simpler sentences using a more limited vocabulary and expressing simpler ideas are easier to understand.

(Arthur et al. 1980:123, my emphasis)

Similarly, Chaudron (1979, 1983a) reported findings from the observation of ESL and content teachers' adjustments to their NNS students, but admitted the obvious difficulty of getting at what the students themselves actually understood; he was forced to rely on

- (1) comparison with similar speech directed to native speakers,
 - (2) intuitions about the difficulty of comprehending the utterances
- and (3) the apparent inability of the students to react appropriately.

The assessment of NNS comprehension of NS-modified speech tended initially to be indirect and impressionistic. This is a criticism that has been levelled at the majority of the NS/NNS research literature (Long 1983b). In fact, even such a reasonable assumption – paraphrasing Arthur et al. (1980) – as the relative comprehensibility of syntactically simpler sentences is dubious. In assessing the effects of different types of simplified reading texts, Johnson (1982) found that texts containing syntactically simple, short sentences – of the type common in low-level simple readers for L2 learners – were actually less well understood than grammatically more complex texts, for example, those including relative and temporal subordinate clauses.

While it is not necessarily possible to make direct extrapolations from results of reading processes to those of speech comprehension, Johnson's

findings may nevertheless serve as a reminder that 'reasonable assumptions' about the relative ease of comprehension do need to be tested. In relation to this issue of comprehension achieved, as opposed to comprehension assumed, Hawkins (1985) has forcefully argued the case for making L2 listeners' perceptions of NS/NNS exchanges a central area for study:

The claim that F(oreigner) T(alk) makes input comprehensible to the learner does not seem unreasonable. If we wish to show, however, that FT facilitates communication and say that it is an implicit teaching mode which allows the NNS to comprehend speech that would otherwise be beyond his/her linguistic competency, we cannot base our analysis completely on what we judge, from the discourse, to be comprehended by the NNS. The determination of comprehension is, in fact, quite elusive. We cannot make strong claims about how FT aids learners in their comprehension if we do not know what they comprehend.

(Hawkins 1985:176, original emphasis)

However, a number of research studies have now been specifically designed to isolate and manipulate particular features of modification observed in NS/NNS discourse, in order to achieve a better and more principled grasp of which modifications matter and to what extent, at which levels of NNS proficiency, and so on. Among the modifications subjected to this more robust investigation have been devices for topic reinstatement (Chaudron 1983b), repetition (Cervantes 1983), rate of delivery (Kelch 1985), discourse markers (Chaudron and Richards 1986) and redundancy (Parker and Chaudron 1987). In addition, Long (1985) reported results of experiments into global foreigner talk adjustments (as opposed to specific adjustment types) and their effects on NNS comprehension.

4.3.1. Topic reinstatement

Chaudron (1983b) designed a lecturette experiment to measure the relative effect of topic reinstatement devices on NNS comprehension. Five lecturettes on various themes were scripted to include a paired set of sub-topics, mentioned once and reinstated twice. The examples below show the five types of reinstatement of sub-topics from a talk on the Boston Tea Party:

- (1) repeated noun:
"The Governor... the Governor wouldn't allow the ships to leave"
- (2) simple noun:
"The Governor wouldn't allow the ships to leave"
- (3) rhetorical question:
"What did the Governor do ? He wouldn't allow the ships to leave"
- (4) if-clause:
"If you can imagine the Governor, he wouldn't allow the ships to leave"
- (5) synonym:
"Hutchinson wouldn't allow the ships to leave"

(Chaudron 1983b:458)

Differential effects on comprehension were noted across types of topic reinstatement device. Chaudron used two groups of L2 listeners: one was required to answer recognition questions only, the other both recognition and recall questions. The repeated noun device emerged as having a significant facilitating effect on both recognition-only and recognition-and-recall groups. Chaudron argues that the reason was "the clear redundancy of the repetition, which reinforces the aural impression" (Chaudron 1983b:458). The results were also analysed for any effect differences across L2 proficiency levels of the NNS subjects. This revealed that, while the repeated noun was the most

effective overall and for both low- and middle-proficiency groups, it did not have any greater effect for more advanced L2 listeners. This suggests that such a degree of redundancy is no longer necessary at higher levels of target language competence. Chaudron concluded that what actually contributes to "simplified speech" (sic) can be quite different for different learners, or at least for learners at different levels of L2 proficiency.

4.3.2. Repetition

Chaudron's main finding - the positive effect of redundancy - is to some extent corroborated by the results of a dictation experiment (Cervantes 1983). A group of ESL learners were assigned to one of two test groups and given one of two alternative versions of a dictation test; the text was the same in each case, but in one the listening passage (26 sequences of approximately 15 syllables each) was played once only, and in the second case each section was repeated a second time. Pauses for transcription were the same in each version of the test. The L2 learner group hearing the exact repetition scored significantly higher than the group that heard each section once only. It seems plausible that the initial hearing of the input represents what Ausubel (1960) termed an "advance organizer" for the second, and that under experimental conditions listeners may therefore be more relaxed, since they know that the segment will be repeated before they are required to commit themselves to a version on paper. It is also likely that they will use the initial hearing as an opportunity to identify what they cannot understand and are then able to focus on any problematic items on the second hearing. We will be returning to the issue of redundancy and repetition in section 4.3.6.

4.3.3. Global adjustments

The third study designed to allow direct assessment of the facilitating effects of NS/NNS modification is that of Long (1985). However, in this case the comparison being made was of NNS learners' ability to benefit from global foreigner talk adjustments to spoken discourse, rather than of the advantageous effects of particular modifications. Two versions of a lecturette on Mexico were scripted; they were designed to contain the same propositional information, presented in identical order, but one was a foreigner talk version, featuring characteristics attested in earlier NS/NNS discourse studies: e.g. greater length (in time and words), lower syntactic complexity, rephrasing and restatement, but without ungrammaticality.

Subjects were tested on during-listening comprehension questions and asked to rate their own understanding on a 0-100 scale. It was hypothesized that on measures of both achieved and perceived comprehension, the foreigner talk version would be found to lead to significantly higher scores by NNS listeners. Results supported both aspects of the hypothesis; the students scored higher on the test questions and also rated their understanding better, on the NS/NNS version.

In a replication study (also Long 1985), a larger group of ESL students was tested, to allow sampling of a wider range of L2 proficiency. Minor modifications were made to test items and procedure, but the NNS and NS lecturette versions ran as in the first experiment. The findings as to comparative effects on subjects' comprehension were similar to those of the initial experiment. As Long himself stressed, his study does not necessarily provide evidence that all NS/NNS modifications facilitate comprehension, but that the global effect of typical adjustments is a positive one, from the point of view of the NNS hearer's ability to comprehend what is said.

4.3.4. Rate of delivery

Kelch (1985) carried out a study intended to illuminate the question raised in Long's (1985) research, namely, whether all NS/NNS modifications have an equal effect on the comprehensibility of the native's speech. Kelch isolated two features for investigation:

(1) reduced speed of speaking;

(2) features of grammatical FT such as synonymy, hyperonymy (sic), parallel syntactic structures, and paraphrase.

Four versions of a dictation were scripted from current news reports on a volcanic eruption in Hawaii: (A) an NS version; (B) version A with reduced rate of delivery; (C) version A modified in terms of the features listed above; (D) version C with reduced rate of delivery. Students attending intermediate-level in-session English classes were randomly assigned to four experimental groups and completed the dictation of one version of the text, from an audio-recording.

Two scoring methods were used: an exact word count and an equivalent meaning measure. On both measures, reduced rate of delivery emerged as an important facilitating factor. A difference was found in the effect on listeners' comprehension of the syntactic modifications combined with slower speed of speaking (version D). On the equivalent meaning measure, version D also resulted in significantly higher scores; on exact word count, however, the interaction effect fell short of significance.

One explanation for this finding offered by Kelch is that the modifications in version C and D were cognitively rather than linguistically simpler (cf. Ferguson 1977, Meisel 1977, Chaudron 1983a), so that they enabled the L2

listeners to reach a better overall understanding but hindered exact recall. On the other hand, it has to be said that, given Kelch's research aim – to isolate features of foreigner talk discourse that enhance L2 comprehension – any findings in relation to the second set of features must be clouded by the fact that this category of "syntactic modification" is something of a catch-all, since it contained both lexical adjustments (synonymy, hyponymy and paraphrase) and structural changes (parallel syntactic structures).

4.3.5. Discourse markers

An investigation of the effect on degree of success in comprehension of a lecturer's use of discourse markers (Chaudron and Richards 1986) provided further insight into factors enhancing NNS understanding, even though the experiment did not specifically set out to compare NS and NNS versions of a text. The starting point for the study was a general inference drawn from L1 and L2 comprehension research that top-down processing might lead to improved levels of understanding, and specifically, the possibility that

the L2 listener may benefit from knowledge of the macro-structure and discourse organization of lectures.

(Chaudron and Richards 1986:116)

The focus of their study was the relative beneficial effects of two types of discourse marker in spoken academic text: "macro-markers" signalling the global structure of the lecture by highlighting major information and the sequencing of that information; and "micro-markers", which indicate the links between sentences within the lecture or function as fillers. Accordingly, they scripted four different versions of a lecture on US history:

(1) a baseline version, based on an actual lecture to ESL students,

(2) a Micro version with intersentential markers and pause-fillers,

(3) a Macro version with signals or metastatements about the principal propositions and important transition points,

and (4) a Micro-Macro version combining features from the previous two versions.

Three comprehension measures were applied to a total of 152 L2 learners of English: recall cloze, multiple choice, true/false. The results were ambiguous. They indicated that the Macro version, as expected, was found easier or more helpful - i.e. led to higher scores - than the Micro version. However, against prediction, there was no significant enhancing effect for the Micro-Macro version over other versions. Chaudron and Richards surmise that the addition of micro-markers brought about the same effect as the Micro version alone, increasing listeners' attention load without any benefits in informational terms. They conclude

whereas the micro-markers included here are of relatively less semantic value in the lecture information, and often do little else than allow the speaker time to plan the next utterance, the macro-markers are explicit expressions of the planning of the lecture information.

(Chaudron and Richards 1986:123)

By paying attention to the latter type of signal, L2 listeners may be able to (re)construct the overall schematic framework for the discourse and thus increase their chances of understanding subsequent input. Clearly, it would be of interest to investigate whether the same facilitating effects apply in the case of L1 listeners, or whether a lecturer talking to an NNS audience is, in effect, able to compensate for their natural problems with linguistic (bottom-up) processing by increasing the support he provides in the form of macro-markers, facilitating complementary top-down processing.

4.3.6. Simplification v. elaboration

The NS/NNS modification studies that we have discussed so far in this section have attempted to investigate the consequences for comprehension of specific aspects of input modification. Two recent experiments have signalled a shift of emphasis in approach: one (Parker and Chaudron 1987) suggests that it is necessary to subdivide the input category; the second (Pica, Young and Doughty 1987) seeks evidence for the claim made by Long (e.g. Long 1981c) that adjustments of interaction matter more than those affecting input.

Parker and Chaudron take up Meisel's (1977) argument, referred to earlier in this chapter, that simplification of language input for L2 listeners could comprise either structurally simplified forms (e.g. less marked or less complex surface structure) or cognitively simplified forms achieved through devices such as increased redundancy and marked thematic structuring. They argue that the latter form, or elaborative modification of input, could be regarded as in some sense intermediate between simplification of input and modification of interaction, as set out in Table 5 below.

Table 5
Types of modification

Modifications of Input		Modifications of Interaction
Simplification	Elaboration	
Shorter utterances	Redundancy	Clarification requests
fewer words per utterance	repetition of constituents	Comprehension checks
fewer words per T-unit	paraphrase	Confirmation checks
fewer T-units per utterance	use of synonyms	Utterance completion
	use of left dislocation	Other repetition
Less complex syntax	slower speech	Decomposition of
fewer clauses per T-unit	clearer articulation	propositions via dialogue
fewer S-nodes per T-unit	emphatic stress	
omission/deletion of sentence elements	rhetorical signalling or framing	
omission of inflections	supplance of optional syntactic markers	
Less complex lexis	Thematic structure	
smaller type-token ratio	presentative movement	
	extraposition	
	cleft constructions	

Source: Parker and Chaudron 1987:3.

Their argument is that the items in the middle column

serve neither to "simplify" nor "complexify" the surface form, nor to create opportunities for "interaction"; rather they are clarifications of meaning only, opportunities for the listener/reader to better decode the information.

(Parker and Chaudron 1987:4)

They point out that previous input studies have in fact conflated simplification and elaboration, or have examined only one and not explicitly compared it with the other. Their study was intended to redress that omission - but, it should be noted, through a test of reading comprehension, not listening. Their procedure was to adapt an article on psychology, producing a Version A, which increased the original redundancy and marked thematization, and a Version B, which had redundancies omitted and all sentences altered to canonical word order.

The subjects were post-intermediate ESL students (with mean TOEFL scores of approximately 530), who were asked to read one of the two versions and then complete two cloze tests, fixed ratio and rational deletion. Analysis of the scores revealed no significant differences in comprehension of the elaborated and non-elaborated passages. Faced with this null finding, Parker and Chaudron offered two possible explanations for it: (1) that the complexity of the passage was so high that it made excessive processing demands on the readers' L2 systems, counteracting any potential assistance in the elaborated version; (2) that successful response on the cloze test items might not be sensitive to the additional contextual clues available in the form of elaborative modifications.

We might suggest a further interpretation. Chaudron (1983a) had observed that, when addressing L2 learners, subject teachers often seemed willing to rephrase and reformulate expressions that they appeared to regard as too difficult for those pupils' current L2 competence. However, he also noted that this potential support went unused, because the L2 listeners seemed unaware that what they were being offered was alternative, not additional, information. In other words, learners may need to have reached a certain level of L2 proficiency in order to be able to recognize when elaborative modification is taking place and so to exploit it. Parker and Chaudron's elaborated Version A of the reading passage may not have made it sufficiently clear to the test subjects which information was redundant; they may consequently have not been in a position to take advantage of it.

4.3.7. Input v. interaction

Parker and Chaudron's inconclusive findings still leave open the possibility that both types of input modification (simplifying and elaborative) may make less difference in L2 listening comprehension than adjustments of interaction.

Pica, Young and Doughty (1987) conducted an investigation into the comparative effects of input-modified and interaction-modified discourse; their stated intention was to provide the first empirical test of the hypothesis first proposed by Hatch (cf. Chapter 3) that interactional modifications, which have been shown to be both more frequent and more consistent than input modifications (e.g. Long 1981c), are also more influential in assisting L2 listeners' comprehension.

Their experiment involved a communication game in which L2 learners listened to a native speaker giving them directions for selecting and placing 15 items (cutouts of plants, animals and people) on a board depicting an outdoor scene. Each instruction included a description of the item and references to where it should be placed on the board. The subjects' comprehension scores were calculated in terms of the number of items they correctly selected and placed.

Two alternative sets of instruction scripts were produced, to represent 'interaction' and 'input' versions of the task: a baseline version (based on an NS-NS task performance) and a linguistically modified version, made by altering the quantity, redundancy and complexity of language it contained. (Note that this experiment would also be subject to the criticism made by Parker and Chaudron, since it again conflated simplification and elaboration of input).

The L2 listeners who participated in the study were 16 EAP students of low-intermediate proficiency, half of whom were assigned to each of the two task conditions. The task was performed with listener and instructor sitting face to face, with a screen preventing them seeing each other's boards. In both conditions, the instructor read from a script, allowing pauses for the listener to complete the current part of the task. In the 'interaction' condition,

after hearing each segment of the (baseline) directions, the NNS listeners were encouraged to request help from the NS if they felt it was needed. No limit was placed on the amount of interaction allowed.

The results supported the hypothesis that it is changes in interactional structure, rather than modifications of input itself, that lead to increased comprehension – measured in this case by scores on selection, placement and overall comprehension (selection and placement combined). Further analysis was conducted to investigate how understanding might be assisted through interaction. It emerged that interaction modifications were most effective in achieving comprehension when the L2 listener had difficulty in understanding the input, but that such modifications were superfluous when the input was easily understood. In other words, NNSs may benefit most from negotiation through interaction when they experience comprehension problems. On the question of which aspects of adjustment make most difference, results suggested that understanding of difficult instructions was assisted most by repetition of content words relevant to selection and placement, but that a decrease in the complexity of input was not a critical factor for understanding.

Again, relating this study to that of Parker and Chaudron, it seems that these results support the proposed subdivision of input adjustment into simplifying and elaborative; while the former (decreased complexity of syntactic structure) showed no significant effect, the latter (redundancy through repetition) emerged as a significant contributing factor. It may be that the reason why Parker and Chaudron's results did not support their experimental hypothesis was that their study was one of reading, not listening; logically, the fact that Pica, Young and Doughty's 'interaction' condition enabled each individual listener to elicit on-line modification from the NS instructor also meant that the listeners could be in no doubt that the follow-up information was elaborative and intended to help them. It was

marked as listener-friendly, so to speak.

Pica, Young and Doughty's investigation also shows how in NS/NNS information exchange, it is this negotiation between task partners that leads to helpful elaborative input modification. Like Hawkins (1985), they explicitly emphasize the crucial role played by verbal and non-verbal feedback from the L2 learner in signalling the need for modification: "it is important to bear in mind that neither participant was acting in isolation" (Pica, Young and Doughty 1987:752).

Their research is important precisely because of its focus on the extent to which cooperative face-to-face NS/NNS conversation assists comprehension. The other studies of comprehension effects which have been discussed in this section were designed to allow controlled experimentation comparing scripted, recorded NS and NNS versions of a text. The fact that Pica, Young and Doughty's investigation suggests a positive facilitating influence for modification in live interaction with an NS partner is an important advance, and lends support to my own proposal for the use of unscripted collaborative NS/NNS task-based conversations as L2 listening comprehension material (see Chapter 7).

4.4. Problems of research into L2 listener-oriented modification

4.4.1. NS/NNS discourse in general

4.4.1.1. Comparability of data

A number of researchers have commented on the lack of rigour and coherence in NS/NNS discourse experimentation (e.g. Gaies 1982; Long 1983b; Chaudron 1985c). It is often difficult to make direct comparisons of data within

a study, let alone between studies by different researchers. For example, Long (1981b) presented conclusions drawn from a comparative analysis of NS/NS and NS/NNS conversations; however, the discrepancies between the data were striking.

Firstly, while Long set up his own NS/NNS observation, involving 36 paired interactions between Japanese ESL students and native speakers, the NS/NS data were 8 recordings of three-person conversations from Carterette and Jones (1974). One would expect that the interactional dynamics of trios to be significantly different from those of pairs (cf. Gaies 1982b).

Secondly, in the case of the NS/NNS recordings, the subjects were asked to have a 5-minute conversation in English about anything they liked. In the circumstances, it is hardly surprising that the interaction exhibited a very high proportion of questions and abrupt topic-switching. In the Carterette and Jones NS study, the participants had been told that the experiment was one into small group processes and to imagine that they were at a party.

A third source of difficulty is an incongruence in the context of the data collection: in order to render the data superficially comparable in terms of quantity, Long took 5-minute extracts from longer NS/NS recordings (which ran to an average 25 minutes overall), whereas with the NS/NNS data it had been difficult for some pairs to maintain a conversation for the stipulated 5-minute period.

4.4.1.2. Necessity of NS/NS baseline data

It is widely agreed that foreigner talk discourse is a relative phenomenon. As we have seen, native speakers do not – except under the specific circumstances that seemed to provoke ungrammatical foreigner talk code, mentioned in 4.1.1 – switch into a quite distinct variety of their L1 in order to

talk to NNS interlocutors; what they do is speak more clearly, use more comprehension checks, and so on, than when talking to fellow native speakers. Yet by no means all experiments into NS/NNS discourse have involved any NS/NS baseline data against which to set NS behaviour observed in discourse with a NNS user of the language. Even when NS/NS control data have been obtained for investigation, they have often been the result of interaction between different native speakers than those recorded in the NS/NNS study. Ulichny's study (Ulichny 1979) is something of a rarity, in the sense that she used the same native speaker interacting with, in turn, a fellow native speaker of English and then an ESL student. (Her experiment is open to criticism on other grounds, since it involved a single NS subject, and therefore suffers from highly restricted sampling).

4.4.1.3. Individual variation

Another consequence of the general comparability problem is that there is a high degree of individual variation in both NS modification and in NNS comprehension. While averaged groups of native speakers have been observed modifying more at lower levels of NNS proficiency (Gaies 1977; Chaudron 1978; Dahl 1981), individual native speakers have been found to adjust more to more advanced NNS listeners (Chaudron 1978; Trager 1978), and even using syntactically more complex speech to NNS hearers than to NS controls (Long 1980; Dahl 1981).

The degree of variation at the individual level may not be so surprising, when we bear in mind that conversational adjustments presumably vary with, among other things, the empathy felt by the NS subject for the NNS partner. This may be particularly true of those studies in which a native speaker has been set an open-ended task such as talking about anything they like (e.g. Long 1981b). In the same way that familiarity has been shown to have a

significant effect on NNS comprehensibility (Gaies 1982; Varonis and Gass 1982; Gass and Varonis 1984) and comprehensibility to influence NS modifications (Long 1981c), there seems to be reasonable indirect evidence for the effect of NS/NNS familiarity on the degree and appropriacy of NS modifications.

4.4.2. NNS comprehension studies

4.4.2.1. Lack of feedback

The effects, on the extent of NS modification and subsequent NNS comprehension, of the presence of a live listener have already been referred to (in 4.2 and 4.3). The role played in comprehension by feedback from the L2 listener is of particular importance for my research, since it will focus on the possible effects on comprehension of NS modifications to a real NNS listener. All but one of the investigations of comprehension reviewed in section 4.3 (the exception being Pica, Young and Doughty 1987) used scripted recordings made 'blind', to a microphone, for reasons of experimental design, to allow the control of specific modification type and content. The absence of feedback and the pre-packaged nature of the listening texts may well have influenced the lifelikeness of the NS performance. Interestingly, in the only study that compared premodified input with on-line interaction adjustments, Pica, Young and Doughty (1987) found that the latter had a significant facilitating effect on L2 listeners' success on the experimental task.

4.4.2.2. Level of listener

A further effect of the predominance of scripted NNS versions in experiments is the impossibility of taking into account the specific level of listener for whom such modified discourse might be intended. The texts may

have been written to include attested characteristics of NS/NNS interaction but, clearly, were essentially aggregations of observed performances and not actual instances of recorded discourse. This is a serious weakness. Foreigner talk discourse is produced with the needs of a particular individual or (in the classroom context) group of individuals in mind. Native speakers do not, as we stressed earlier, switch to a separate code; they modify what they say in ways that they perceive to be relevant to their interlocutor(s). The frequent emphasis placed on what we might call the 'dedicated' nature of listener-oriented input - characterized, for example, as "tailor-made" (Brown 1986a:290) and "customized" (Larsen-Freeman 1985:443) - underlines the importance of investigating modifications made in context, that is, to a particular listener at a particular level.

4.4.2.3. Generalizability

A wider problem is the question of the generalizability of findings related to NNS comprehension research. The majority of the investigations into comprehension effects have used the genre of the academic or expository text, usually in the form of a lecturette. This is hardly surprising, since the published researchers working in this area are predominantly lecturers or postgraduate students at universities in the United States. Consequently the L2 learners that they have easiest access to are overseas students attending pre-sessional and in-session EAP courses. But it is reasonable to question whether at least some of the results - on topic reinstatement or lecture discourse markers, for example - are actually exportable to other genres.

Until we have access to NNS comprehension data from a wider range of genres, doubts about generalizability will remain. At the time of writing, the only study to have experimentally explored any type of discourse other than the lecturette or expository article appears to be that of Pica, Young and

Doughty (1987).

4.4.2.4. Cultural factors in comprehension

In Chapters 1 and 3 we reviewed some of the literature highlighting the crucial role of schematic knowledge and topic familiarity in comprehension. Little account seems to have been taken of the possible facilitating (or hindering) influence of L2 learners' access (or lack of it) to cultural and background knowledge on their ability to understand particular texts. For example, one might suppose that experimental subjects' prior knowledge of topics such as the Boston Tea Party (Chaudron 1983b) or Mexico (Long 1985) might well have enhanced their understanding of the spoken text, particularly in view of the findings elsewhere (Johnson 1982) that cultural familiarity with the topic of a text can be an even stronger influence on comprehension than any of the linguistic simplification types selected for comparison.

Moreover, it is likely that in real-life face-to-face interaction with an NNS listener, one of the means of message facilitation used by a native speaker is to fill in topically relevant details that they believe may be unknown to the individual L2 learner. Yet this variable appears not to have been built into any published study – principally, no doubt, because of the general lack of genuinely interactive research. We will return to this issue in Chapter 8, when discussing the results of the data collection for the present study.

4.4.2.5. Lack of retrospective data

We have already referred to the argument of Hawkins (1985) for NS/NNS modification to be seen as a collaborative process and not simply as something that NSs do to, or for, NNSs. In particular, she explored the problem of establishing how specific elements in the interactive process ease or block

comprehension. One solution she proposed (and implemented) was to record and transcribe task-based NS/NNS conversation and then to gather retrospective commentaries by discussing the tape and transcript with the two participants separately. In this way she was able to find out from them what they had understood (or believed the other had understood) at specific points in the conversation and to pinpoint probable causes of any differences of interpretation that emerged.

The result (which we will be returning to in Chapter 9) provides an interesting perspective on the problems of NS/NNS communication and a salutary reminder that misunderstanding and non-comprehension lurk below the surface of seemingly successful interaction. Introspective protocols of this sort have been used in reading comprehension research (e.g. Cohen and Hosenfeld 1981) and they offer a potentially valuable 'gateway' for investigating how L2 listening comprehension can be assisted by the native speaker's reactions to NNS feedback. One advantage claimed for their use in listening research Lynch (1987b) is the fact that introspective commentary allows for the fact that comprehension is sometimes achieved only in hindsight, as it were, when subsequent incoming data cause the listener to amend or replace the current interpretation of a spoken message.

4.5. Conclusion

There is now a considerable body of research data on NS modification to NNS listeners. Its area of investigation has shifted from the form of input to the function of interactional modification. As a consequence of the growing evidence of a descriptive type, recent research has examined the effect of modification (and specific types of modification) on learners' comprehension, rather than taking it for granted that all adjustments are successful in helping NNS listeners' understanding. These comprehension effects have normally

been studied under controlled experimental conditions and have involved blind recordings in which the NS has read scripted foreigner talk discourse aloud.

Almost all the evidence offered in the literature on NS/NNS interaction comes from ESL contexts, and in particular from the United States. The focus of my own research will be on the possible effects on comprehension for EFL learners listening to recordings of NS/NNS modifications. It is my aim to assess whether foreigner talk discourse offers 'secondary' NNS listeners (i.e. the learners in the EFL classroom) a similar degree of help with comprehension as that made available to the original NNS partner in the discourse, and whether the modifications elicited by NNS partners at different levels of L2 proficiency (elementary, intermediate and advanced) are significantly different from each other and from NS/NS baseline recordings in the extent to which they enable NNS listeners to understand them.

There is, of course, a more general reason for studying the relative influence of NS modifications on NNS comprehension: the possible implication for the individual learner's long-term progress. If we assume that learners need to understand language in order for it to serve as potential intake for acquisition, then the degree to which they are actually able to benefit from real NS modification could be crucial factor in their L2 development.

CHAPTER 5

'INPUT-FOR-LEARNING': THE COMPREHENSION APPROACH

In Chapters 3 and 4 we considered various aspects of real-life L2 listening: the target characteristics of the listening performance of the non-native learner and the ways in which, in face-to-face conversation, that performance may be assisted through modifications made by native speakers to accommodate to foreign listeners.

It is now time to examine listening in the context of the L2 classroom and to consider the extent to which the activities devised by course writers and teachers are likely to help (or hinder) the learner's progress towards full L2 listening competence. In this chapter we focus on the role assigned to listening comprehension in L2 learning and the methods applied in teaching it; in Chapter 6 we analyse the principles of selection and sequencing that underlie the construction of listening comprehension materials.

5.1. Basic hypotheses about listening in L2 learning

The traditional view of the role of listening comprehension in L2 teaching has been as one of the four basic skills. Practice in listening has fitted into whichever niche the particular overall teaching approach specified. In their review of the practical literature related to the teaching of L2 listening competence, Benson and Hjeltnes (1978) narrow down the theories underpinning these overall approaches to three basic hypotheses. They offer a useful and convenient framework for our present consideration of the role of listening in L2 programmes.

5.1.1. The linear hypothesis

The first hypothesis was that language was a verbal habit developed linearly, starting with spoken medium skills (speaking and listening) and proceeding to written medium skills (reading and writing). This was the theoretical basis for the audiolingual approach, in which oral production – in the sense of the imitation of spoken forms – was emphasized from the first lesson. One of the first to express dissatisfaction with the linear approach was Newmark (1966), who saw such teaching as a hindrance to learning, rather than as facilitation. He laid the blame for the inhibition of L2 learners' progress on what he called the marriage of linguistics and psychology:

The focal emphasis of language teaching... has more and more been placed on structural drills based on the linguist's contrastive analysis of the structures of the learner's language and his target language... If the task of learning to speak English were additive and linear, as present psychological discussions suggest it is,... the child learner would be old before he could say a single appropriate thing and the adult learner would be dead.

(Newmark 1966:77)

His solution was to propose a shift of emphasis from the modelling of the form of utterances to the situation in which the natural language is used and from which it derives its meaning (Newmark 1966, 1971). To ask L2 learners to listen to and reproduce sequences of language-as-form, isolated and abstracted from realistic contexts, was to threaten serious interference with the language learning process.

5.1.2. The integrative hypothesis

The second hypothesis is that language learning is an integrative process.

The pedagogic consequence of this is that all four language skills should be introduced simultaneously, with the aim of allowing each skill to reinforce the others. Rivers (1971) claimed that initial listening comprehension materials should be kept within the syntactic and lexical limits of the learners' current L2 knowledge. Listening comprehension practice was to keep pace with the other course elements involving speaking, reading and writing. More specifically, Rivers wrote that

no language skills should be taught in isolation. Listening-comprehension activities should be related to and spring naturally from material being studied as oral practice or for reading; it can also provide a stimulus for writing activities. Listening comprehension should also be tested at all stages along with the other areas of language study.

(Rivers 1971:148)

It should be noted that the isolation she refers to is the isolation from other language skills, rather than the abstraction from the context of use that Newmark had criticized.

5.1.3. The primary skill hypothesis

It is Benson and Hjelt's third general hypothesis that encapsulates a decisive shift from earlier attitudes: the status of listening is transformed from that of being one language skill among others, to being the primary source of language experience. Those who support this view of listening claim that

language learning is a process initially requiring contextual decoding of new utterances before meaningful and creative learning can take place.

(Benson and Hjelt 1978:85)

So in this third alternative view listening should precede work on other skills; additionally, it should be 'listening for understanding', rather than the 'listening

for speaking' of the audiolingual approach (Nord 1981:69).

Here we might contrast the views of Krashen with those of Rivers, referred to earlier. For Rivers, listening should be bound by the lexical and syntactic constraints of language already covered in the learners' course; for Krashen, an advocate of the third hypothesis, learning/acquisition demands comprehension activity (slightly) beyond the learners' current competence (cf. Chapter 3).

This third view of listening comprehension, i.e. the belief that it represents the basic mode of early language learning, led to the development of a range of related teaching/learning methods, conventionally grouped under the umbrella term 'The Comprehension Approach'. This has exercised a strong influence on the way in which course designers currently conceive of listening comprehension, even if they do not fully implement its more extreme techniques. We will summarize the key characteristics of the approach and consider the evidence for the claims made about its potential carry-over effect on the subsequent development of other language skills.

5.2. The Comprehension Approach

5.2.1. Background

It is important to take account of the historical background against which the Comprehension Approach (henceforth, CA) developed, since it bears similarities with the L2 teaching/learning situation in many countries. It grew out of the North American context of foreign language teaching at secondary and tertiary level – typified by low student motivation towards L2 learning and also by signally low rates of L2 attainment. Asher (1981a) refers to evidence that less than 4 per cent of US high school graduates studied a foreign

language for 2 years and that over 90 per cent failed to achieve basic fluency (Lawson 1971). Asher had earlier suggested that part of the problem, paradoxically, was the overambitious objectives set for L2 teaching programmes: "it may be unrealistic to expect fluency in listening, speaking, reading and writing" (Asher 1969:3).

Even the few students who did manage to achieve a reasonable level of competence through the conventional multi-skill programmes were, as Belasco commented, often able only to 'vocalize'. This term has obvious parallels with Widdowson's 1978 distinction of 'speaking' versus 'talking', where the former involves the making of L2 sounds, and the latter, the expression of L2 meaning. Learners might be quite incapable of understanding a native user of the L2 speaking at anything approaching natural speed. Belasco's proposal (Belasco 1965, 1967) was arrived at independently of Asher's, but was essentially the same: that functional adequacy in comprehension was a more realistic aim for initial L2 teaching at school.

Neither mastery nor even nucleation¹ of the spoken and written skills should be part of the goals for the first two years of college foreign language training. Nucleation of the listening and reading skills is a feasible goal.

(Belasco 1981:21-22)

The alternative he offered - early concentration on the development of learners' listening competence - constitutes the core of the Comprehension Approach.

5.2.2. Features of the Comprehension Approach

The most important underlying assumptions of CA are that (1) it is reasonable to infer, from the observation of L1 and L2 acquisition, that proficient comprehension must precede even partial production (e.g. Newmark

1971, Davies 1980b), and that (2) this observation can be exploited in L2 teaching programmes, whether for adult or child learners. Linking these two assumptions, Postovsky (1977) claimed that

The priority of aural comprehension in the language acquisition process has never been seriously challenged as a principle on theoretical grounds. On the practical level, however, this principle has received only a superficial interpretation.

(Postovsky 1977:21)

The notion of listening as the primary route to language learning has frequently been expressed in the literature (e.g. Belasco 1967, Newmark 1971, Winitz 1981b, Davies 1982) and informs the whole approach. Winitz provides a convenient summary of CA:

Students are given an opportunity to acquire the grammar of a second language by acquiring a fundamental understanding of the language... Conversation is not discouraged. It is simply not taught. The belief is that conversational fluency will develop as the result of learning to understand a language.

(Winitz 1981a:xiii)

In the following sections we examine the key features of various CA programmes and some of the evidence to support the belief expressed in that extract.

5.2.2.1. The silent period and 'nucleation'

The salient feature of CA is the silent period at the start of the language programme, during which the learners listen and respond to the foreign language but are not required to speak themselves. This is based on the observation that such a period, in which the learner is free of the burden of oral production, greatly enhances the speed and quality of learning. Evidence

for this has been adduced from three principal types of language learning: child L1 acquisition, child L2 acquisition and adult L2 acquisition.

- Child L1 acquisition

Evidence is available from both normal and abnormal circumstances of L1 learning. Under normal conditions, infants rely initially on what Dulay, Burt and Krashen (1982) term 'one-way communication', that is, aural comprehension in the absence of all but the most minimal oral response. Clearly the child's listening competence is far in advance of his ability to produce speech, but this discrepancy does not greatly affect his understanding of appropriate speech from adults. We should note in passing that such caretaker speech shares many features with the sort of adjustments made in native/non-native interaction, discussed in Chapter 4 (cf. Cross 1977, Snow and Ferguson 1977).

Abnormal circumstances of L1 acquisition also indicate the relative independence of receptive and productive language development. Lenneberg (1962) reported the case of an 8-year-old boy who was speechless as the result of congenital anarthria. From the very first session of remedial therapy, the boy was able to respond normally and accurately to spoken instructions, even when these were recorded and played through headphones, so making it impossible for him to use visual clues to infer what was being said. So the enforced silence of speech-affected patients, like the natural silent period of the normally developing child, does not hamper listening comprehension.

- Child L2 acquisition

Studies of L2 acquisition by children (e.g. Huang 1970, Ervin-Tripp 1976, Hakuta 1974) ² have shown that learners pass through a period of silent comprehension, whose length may vary in individual cases from as little as a

few days to several months. Newmark (1981) described the behaviour of two foreign children – one American, one Japanese – attending a school in the Netherlands, where they participated in normal content classes, rather than taking special Dutch L2 lessons. The American child produced his first Dutch utterance in the second week of class; the Japanese child took a week longer. By the third month, both had accumulated a sufficient stock of stereotypic utterances, such as "Stop it" and "Go away", to participate in interaction with their Dutch peers. When language is produced, it is initially restricted to short formulaic utterances of this sort. But the limitation of this proto-L2 is a part of a temporary phase, a comprehension-based interlanguage, as Newmark pointed out:

If a test of achievement based on language production had been administered at this point, neither student would have given evidence that he was in fact on his way to becoming a native-like speaker of Dutch within less than a year.

(Newmark 1981:45)

- Adult L2 acquisition

A widely quoted illustration of the silent period in L2 acquisition by adults is that of the Vaupes River Indians (Sorenson 1967) ³. The relatively large number of mutually unintelligible languages spoken in the Vaupes River region of Venezuela – more than twenty among a local population of some 20,000 – means that it is the norm for adults to speak at least three languages. The multilingual situation is further reinforced by the custom of exogamy, so that children have parents speaking different mother tongues. Sorenson noted that when adults need to add to their L2 range they

do not practice speaking a language that they do not know well yet. Instead, they passively learn words, forms and phrases in it and familiarize themselves with the sound of its

pronunciation... They make an occasional attempt to speak a new language in an appropriate situation, but if it does not come easily, they will not force it.

(Sorenson 1967:680)

Introspective evidence for the utility of the silent period is offered by a contributor to a survey of adult L2 learning strategies (British Council 1978), describing her experience of acquiring German in Germany:

I now regard myself as at a pre-threshold level in German, i.e. I have never spoken a word to a German, but I am quite sure I could within a few weeks.

(British Council 1978:27)

The CA literature contains a variety of descriptions and metaphors for the unseen processes that take place during this initial period of non-production. Gauthier (1963) writes of "the ear loosening the tongue"; Asher refers to the internal construction of an intricate mental map that "may release talk" (Asher 1981a:51). A number of writers have described the gradual accumulation of language experience prior to this release of talk in terms of "nucleation" (Pike 1960; Belasco 1965, 1967) and "exponentiation" (Newmark 1966). The notion of nucleation was borrowed from chemistry, where it is used to characterize the process of crystallization. It refers to the way in which atoms and molecules cluster together. Initially, this happens with some difficulty, but once a certain threshold point of structuring has been reached, crystalline growth proceeds at speed. Newmark made the following parallel with the way that L2 grows during the silent period:

Perhaps by some process of stimulus sampling the (language) chunks are compared and become available for use in new chunks. The possible numbers of 'things known' in the

language exponentiates as the number of chunks increases additively.

(Newmark 1966:78)

What the various characterizations noted here have in common is the idea of a gradual initial development of language learning experience, through exposure to meaning in context, until a point is reached when L2 learning 'takes off' - "explodes", in Krashen's words ⁴ - and productive activity can contribute to the general exponential growth of the individual's L2 competence.

5.2.2.2. Meaningful input

Obviously if the L2 teaching programme is to involve a silent period, it cannot simply be a series of lessons in which the learners are exposed to a random sample of L2 speech in the hope that something will happen. The concepts of a programme and of randomness are incompatible. The disappointing results that typically occur when adult learners do submit themselves to an immersion approach - that is, a process of strictly informal acquisition of the L2 - are evidence that mere exposure to uncontrolled language is inefficient.

When we take into consideration the number of hours during which the average immigrant listens to the new language before he understands it to any degree of effectiveness, we appear justified in assuming that he is not learning aural comprehension in the most economical way.

(Rivers 1968:144)

If the spoken language that the learners hear is to serve as the basis for learning, it has to be structured and sequenced in a way likely to make it

available to the learner as intake - "input that is understood" (Krashen 1978:16). The aim of the various types of CA outlined below is just that: to provide initial L2 learners with appropriate data with which they may 'problem solve', as Winitz and Reeds (1976) put it, trying to make sense of what they hear and working out grammatical rules for themselves in due course. At the heart of CA is meaning. If the learners are required to listen to L2 speech that is well beyond their linguistic reach, they will be unable to experience anything but the general sound aura of the language; this amounts to what Rivers has termed "the sunburn approach" (Rivers 1971:129). Similar distinctions are frequently made in the CA literature between listening opportunity, or immersion in L2 sounds, and listening comprehension, or the experience of the L2 used for communicative purposes ⁵. The basic objective of CA was well summarized by Postovsky in this extract:

A successful aural comprehension course must satisfy at least three essential conditions: (1) the language material presented to the students must convey meaning from the very first hour of instruction; (2) a provision must be made for a student response which will verify comprehension of each utterance immediately after delivery; and (3) students must be challenged to problem solve and guess at the meaning of unfamiliar elements in a foreign utterance on the basis of context and other cues

(Postovsky 1977:22)

5.2.2.3. Task overload

This phrase was coined by Nord (1976) to describe the problem that arises when a learner is asked to produce L2 utterances before he has built up sufficient language experience through listening. He suggested that the elementary learner faced with the requirement to produce before reaching what Gauthier had termed "speaking readiness" would naturally revert to the

articulatory habits he knew best, namely, those of his first language. Negative transfer of L1 patterns could therefore be seen as a product of setting unrealistic and intolerable tasks for the neophyte learner.

Similar negative effects of premature concentration, at what in CA terms would be the pre-nucleation stage, on oral production and accuracy have been reported not only in the area of segmental pronunciation (Nord 1977, Winitz 1981b), but also syntax (Postovsky 1974, Krashen 1978), listening (Asher 1969) and recall (Stevick 1976). It has been claimed that task overload comes about because the amount of attention required to produce L2 speech overtaxes the learner's processing system, since it takes up attention and memory space that would otherwise be available for whatever other current tasks the system is expected to perform (Benson and Hjelt 1978:89).

In addition to the shock this causes to the emerging L2 system, there is also the factor of social stress experienced by learners who are obliged to speak individually in front of the group, in most cases for accuracy of form rather than appropriacy of content.

Lone utterance in a foreign language can be awe-inspiring enough without the constant expectation of a verdict of right or wrong.

(British Council 1978:50)

The purpose of the initial-stage CA emphasis on listening comprehension is to prevent this overburdening of the learner and/or the learner's L2 system; it can be seen as a form of grading, in which difficulty is reduced through the level of response demanded of the learner. By delaying oral production until adequate receptive competence has been built up, CA aims to facilitate the subsequent development of all language skills from the firm base established

through listening. Nord (1977) described this aural competence as "listening fluency" and his claim that it enables the learner to gain a feeling for what sounded right in the foreign language has been supported by a number of researchers (e.g. Asher 1969, Burling, Becker, Henry and Tomasowa 1981, Burling 1982).

The proponents of CA ascribed the conventional emphasis in language courses on early oral production to a general belief – misplaced in their view, of course – that language learning was equivalent to learning to talk (Postovsky 1975b). Instead of assuming that the amount and accuracy of talk was the principal indicator of current L2 competence,

There are reasons to believe that oral production is an end result of complex and mostly covert processes which constitute linguistic competence. Skill in production of speech output is the most complex skill to be acquired and therefore not a logical starting point.

(Postovsky 1975b:19)⁶

Postovsky's argument, here and elsewhere (Postovsky 1975a, 1977), was that if you require L2 learners to speak prematurely, you oblige them to rely on their L1 habits and patterns, and provide them with no means of helping them to overcome them (cf. Cook 1965); production should therefore be introduced only after a period of L2 familiarization through listening. Postovsky referred to evidence from first language acquisition for the role of imitation/production:

the child can imitate only what is already within his competence; in the early stages at least the imitation is more a product of learning than a mechanism for learning.

(Hebb, Lambert and Tucker 1971:218)⁷

The effect of the overall focus on early comprehension practice in CA programmes is to de-emphasize the conventional activities of imitation and repetition. Speaking in the L2 is not proscribed; learners are not required to speak at all. If they do wish to speak, they may do so in the L1. When they do feel confident enough to attempt L2 production, then their teachers do not comment on the precision of their pronunciation, but on the content of what they have said. Just as in the case of naturalistic L2 acquisition, there will be variation at the individual level as to the length of the silent period before a learner feels sufficiently secure to try speaking the foreign language.

5.2.3. Varieties of CA method

Having set out the main principles discussed in the CA literature, we will briefly outline the range of methods and materials developed within CA over the last 20 years or so⁸. We should bear in mind that 'The Comprehension Approach' is in fact an umbrella term covering a wide spectrum of applications. Minimally, they share the following assumptions:

- (1) rules are most easily acquired by inference in meaningful contexts;
 - (2) explicit initial instruction in rules may be harmful to the learning process;
 - (3) language acquisition is best served by a non-linear approach;
 - (4) the only teaching input should be through aural comprehension;
- and (5) speaking will develop spontaneously, given sufficient quantity/quality of comprehension practice.

5.2.3.1. Total Physical Response

The CA method with the longest and best documented history is Total Physical Response (TPR), created by and still principally associated with Asher⁹. During the first dozen hours of TPR, the learners remain silent and respond to taped commands. The teacher carries out the commands in front of the class and the learners follow suit. The activity begins with single-phrase commands such as "Stand up" and gradually becomes more syntactically complex, for example, "Stand up and erase your name from the blackboard" (after 30 minutes of the first session – Asher 1969).

The results reported from experimental TPR courses suggest that the performances of learners taught by the method compare favourably with those of conventionally taught control groups in all language skills, as well as motivation. Evidence has been presented for the relative success of TPR in programmes for a variety of languages apart from English: German (Asher 1972), Japanese (Kunihira and Asher 1965), Russian (Asher 1965, 1969) and Spanish (Asher, Kusudo and de la Torre 1974).

Given that TPR is the most radical of the CA methods in terms of its emphasis on right-hemispheric stimulation through physical action and movement (as opposed to the conventional focus on left-hemispheric, analytically oriented language experience), one might have expected it to be effective with children, rather than with adult learners. However, in an experimental programme in Russian through TPR, adults were found to outperform children in a range of age-groups and achieved retention rates of over 90 per cent (Asher and Price 1967)¹⁰. The empirical evidence for the success of TPR is discussed further in section 5.3.

5.2.3.2. Listening Fluency Programme (Michigan)

This intensive Russian course was developed at Michigan State University (Ingram, Nord and Dragt 1974). It was based on TPR for the first 30 hours (in a total programme of 270 hours). Two particular positive effects were noted: (1) there was less divergence among learners of varying language aptitude (assessed on the Pimsleur MLAT battery) than was the case with conventional teaching, so that lower-aptitude learners performed as well as higher-aptitude students, on TPR activities; (2) there was a marked increase in learner motivation (Ingram et al. 1974).

In conjunction with the initial TPR exercises, a series of listening comprehension activities were designed, using pictures and audio cues. The sequence of tasks was based on the authors' model of listening comprehension development (described in Nord 1975, 1977, 1981) which set up three stages of competence in L2 listening: decoding, anticipation, self-monitoring. The teaching programme consequently involved activities to match those three stages. In the decoding phase the students matched an oral message with one of an array of up to four pictures. The anticipatory response phase involved the listener in predicting the next part of a message. The final stage was the self-monitoring phase, in which the learner was required to discriminate between correct and incorrect L2 sentences, based on a contrastive analysis of L1 and L2.

Progression through these three listening stages was claimed to take learners to a level of listening fluency where the "L2 cognitive map" (Nord 1981:98) is sufficiently elaborate to allow them to apply and extend their knowledge and competence into language skills other than listening.

5.2.3.3. Optimized Habit Reinforcement (OHR)

This variety of CA is associated with Winitz and colleagues ¹¹ and is generally referred to by its acronym OHR, which means 'ear' in German, the target language for the first experimental use of the method in L2 teaching¹². Although OHR does not rely on the gymnastics of TPR, the six underlying principles set out by its originators illustrate the degree of overlap between various forms of CA:

(1) language learning is best achieved by teaching comprehension rather than production,

(2) language learning can be accelerated by restricting the length of sentences to about eight words in the early hours of training,

(3) pronunciation should be avoided until psychological rules are comprehended,

(4) interference is avoided by using pictures and the German language, without reference to English,

(5) language learning is a problem-solving activity – grammars can be internalized by encouraging subjects to solve grammatical problems in much the same way that a young child solves (constructs) the grammar of his native language, and

(6) the correct comprehension of grammatical structures should be reinforced so that students are made aware of their success.

(Winitz and Reeds 1975:12)

The technique involved the use of a teaching machine that gave an audio

cue and flashed a picture or pictures onto a screen. Learners selected the appropriate picture from an array of up to four, by touching the relevant part of the screen, which was divided into quarters. They were given the correct answer by a light flashing in the appropriate quarter. The programme required increasingly subtle discrimination of the taped input, through progressive reduction of the visual differences between the alternative pictures.

After adapting the basic OHR technique for use in a Russian L2 programme (see 5.2.3.4 below) Postovsky claimed that Winitz and Reeds' method was the most efficient for presenting meaningful language input from the first hour of instruction, for facilitating learner response and feedback, and for challenging the student to guess at unfamiliar material on the basis of familiar elements in the L2 message (Postovsky 1975a).

5.2.3.4. Delayed Oral Response

A number of experimental teaching programmes have been designed that rely on 'diluted' CA techniques. Postovsky (1974, 1975a, 1975b, 1977) analysed the effects of implementing OHR in the teaching of an intensive beginners' Russian course at the Defense Language Institute, Monterey. During the first six weeks of the course (180 hours) teaching was through OHR-type listen-and-match and also through written L2 response so that oral production was delayed.

Postovsky's analysis focussed on the level of retention of vocabulary and syntax exhibited by the students who had followed the experimental programme. They were tested at the end of the listening-only period and again ten days after completion of the initial 180-hour phase. The students (two groups of 11 and 12, respectively) scored over 90 per cent on both retention and post-retention tests. Postovsky provides no control data,

although he suggests that these scores were high in relation to comparable performances by conventionally taught learners. He ascribes the relative success of CA to the students' opportunity for mental rehearsal – due to the lack of time pressure and social pressure – and reports the learners' own comments on the way in which when they encountered in real life the objects depicted in the OHR visual materials,

(they) tended to trigger recollection of Russian utterances associated with these objects and events, thus reinforcing the initial learning and making Russian utterances more meaningful.

(Postovsky 1975a:181)

Other experimental language courses employing delayed oral production have been reported by Gary and Gary (Gary 1975, 1978; Gary and Gary 1978, 1981, 1982) in connection with the L2 teaching of Spanish and English. For example, Gary (1975) analysed the relative performance of children taught Spanish by delayed production methods and of others taking a conventional course. The total number of learners was 50, half of whom followed each method. One class were given a listening-only programme for the first 14 weeks (of a 22-week course); the other followed a conventional course for the entire period. At the end of the 22 weeks, both groups were tested for receptive and (oral) productive ability; the restricted group outperformed the conventional learners on comprehension tests, as might have been expected. However, they also did no worse than the second group on the speaking tests, even though they had been given 14 weeks' less explicit oral practice than had learners taught in the traditional manner.

The conclusion drawn from this study, as from those of other CA techniques we have summarized here, was that the 14 weeks of silence were a gestation period; although there was no requirement for the learners to treat

what they heard as input for immediate oral response, the presentation of meaningful material allowed them to process (at least some of) it as input for learning.

5.3. CA: the evidence for transfer from comprehension

The various CA techniques we have outlined are of interest only if they can be shown to enable the learner to transfer from the receptive aural mode to the other language skills¹³. The assumption in all these teaching programmes is that early focus on listening practice is just that: a temporary phase in L2 beginner courses that can lead to enhanced development of other skills at what Belasco termed the post-nucleation stage. The crucial question is: how strong is the available evidence that CA produces the facilitating effects that are claimed for it?

5.3.1. Effects on reading

The best-documented skill-transfer is from listening to reading (e.g. Asher 1972, Reeds, Winitz and Garcia 1977, Fahmy 1979); in the light of the psycholinguistic research into the listening/reading relationship reported in Chapter 2, this is to be expected. But these studies are open to the criticism that they are based on small samples, which may reduce their value beyond their immediate context. For example, Asher (1972) reported results achieved by a TPR group (n=11) attending a 32-hour German course, compared with those of two control groups, one of which had completed 40 hours of German and the other, 80 hours. A test battery was applied consisting of (1) a listening test involving one-sentence recognition items, (2) a second listening test requiring comprehension of a continuous story, and (3) a reading test. There were two principal points of interest in the results. Firstly, the TPR group scored significantly higher on both listening comprehension measures

than either the 40-hour or 80-hour subjects. Secondly, there was evidence of skill transfer to reading, since the TPR students – with no explicit experience of German written texts – performed as well as the other two groups.

Similarly positive results were obtained in a larger-scale study conducted at the University of Texas (Swaffar and Woodruff 1978). In this case, the comparison made was between CA-taught learners and external national standards, rather than with the performance of experimental control groups. A total of 23 classes of adult beginners of German (n=398) followed a programme that included an initial 4 weeks' TPR-based listening practice, followed by the University's normal German reading comprehension course. At the end of the academic year, the students were assessed on national MLA listening and reading measures. The Texas students' results were on average 70 per cent in listening comprehension and 68 per cent in reading; these were substantially higher than previous Texas students' results and compared with national norms of 50 per cent.

5.3.2. Effects on pronunciation

Evidence for a positive transfer effect from listening to pronunciation – for which claims had been made in some of the theoretical statements about the principles of CA – is available only in informal studies (e.g. Winitz and Reeds 1975, Postovsky 1977, Burling, Becker, Henry and Tomasowa 1981). These studies comment on the relatively enhanced accuracy (expressed as 'native-likeness') of production-delayed L2 learners of German, Russian and Indonesian, respectively, compared with formally trained students. Burling et al. (1981) reported that when their learners of Indonesian were first required to speak – at the end of their first term – their pronunciation was remarkably good, without the (presumed) benefit of overt practice or drilling. They concluded,

it seems that simply by hearing large quantities of the language, students become sensitized to the phonology, and when they start to speak themselves they have a sense of what sounds right and what does not sound right. Little in the way of deliberate instruction in pronunciation seems necessary

(Burling et al. 1981:165)

However, as the authors themselves admit, the sample of American students volunteering to take a course in Bahasa Indonesia is hardly likely to be a representative cross-section, so we should not assume that this finding is necessarily strong evidence for a facilitating effect of CA on pronunciation accuracy for a wider population.

5.3.3. Global effects

Positive transfer effects from listening to all other skills have been claimed from studies of groups studying Spanish (Asher 1974, Asher, Kusudo and de la Torre 1974) and English (Gary 1975, 1978). However, as in some studies dealing with the listening/reading relationship, sample size is a limiting factor. Asher, Kusudo and de la Torre (1974) conducted a TPR-based teaching experiment over two semesters of a beginners' Spanish evening class. The students (n=27) were undergraduates with no prior knowledge of the language. After 45 hours of instruction involving approximately 70 per cent TPR, 20 per cent speaking (voluntary, not required) and 10 per cent writing and reading – mainly teacher explanations on the blackboard at the end of sessions – the learners were tested on the Pimsleur Spanish Proficiency multi-skill battery. Their performance was then compared with that of a group of high school students (n=14) who had received 150 hours of multi-skill instruction, and with a second group of university students (n=44) who had completed 75 hours of audio-lingual instruction. The experimental TPR group scored significantly higher than both comparison groups, despite their shorter experience of

classroom learning.

CA proponents would argue for the possibility of a significant degree of transfer from listening competence to the other language skills, since their theoretical position is that learning involves the internalization of a single underlying system, analogous with Oller's expectancy grammar:

Speaking, reading and writing are performance skills which must be developed, but they are not additional components of a language.

(Winitz and Reeds 1975:15)

5.3.4. Affective benefits

We have concentrated so far on indications of what might be termed the pedagogic utility of CA – the extent to which the listening skill appears to transfer to or facilitate subsequently taught skills. But one of the other major claims of CA practitioners and researchers was the affective benefits that it might offer.

It should be recalled that Asher (1981a) had cited the high level of attrition and students' frustration with their lack of L2 progress as principal sources of a feeling among those involved in L2 teaching in the USA that 'something had to be done' about foreign language teaching. So we should emphasize that a number of the studies have reported noticeable and/or measurable improvements in these important aspects of learning – motivation, satisfaction and willingness to enrol for a further course (e.g. Postovsky 1976, Swaffar and Woodruff 1978, Nord 1981). Even if this derived only from the fact that "exposure to speech is a much stronger stimulant than exposure to print" (Moulin 1975:96) ¹⁴, it could still be a potentially positive factor in facilitating

learners' progress. It is therefore worth noting that the original purpose for the University of Texas experimental study (Swaffar and Woodruff 1978) had been the disappointingly high drop-out rate among beginner students of German. Between 1970 and 1975 an average 45 per cent of the students discontinued German after one semester. Following the switch to comprehension-based initial teaching, the rate fell to 22 per cent.

The evidence that has been outlined here cannot, of course, be taken as conclusive. However, our present purpose is not to advocate wholesale or even partial adoption of CA, but to look at a potentially interesting innovation in ways of viewing the overall role of listening comprehension in L2 learning and teaching and the way in which L2 input might be made comprehensible. Put negatively, there is no evidence in the studies reviewed here that CA teaching programmes lead to restricted development of other language skills; CA learners appear to do at least as well as those taught by conventional methods, even on tests of language skills that have not been the primary focus of teaching, irrespective of whether the learners have received more or less extreme forms of CA (i.e. TPR or delayed oral production).

5.4. Limitations of CA

Various limitations have to be placed on the possible adaptation of CA to teaching situations other than those in which they were designed. Firstly, the techniques and experimental programmes were developed for foreign language instruction at high school and university in the USA. There seem to be no case studies in the literature that deal with the implementation of initial CA programmes in the context of host-community (e.g. ESL) teaching. It remains to be seen whether CA concentration on listening would be suitable or effective in situations where the learners are also exposed to uncontrolled L2 speech outside the classroom and would also be required by their

circumstances to produce L2 speech¹⁵.

A second point also relates to the teaching situation of courses reported in the CA studies. Without exception, they describe courses where the learners are receiving free tuition. One might speculate that adult learners who are paying for their tuition might well be less willing to put up with the novel techniques of learning that CA students seem to have tolerated. Self-financed learners might well expect a more obvious immediate return on their investment of time and money than the ability to understand the foreign language to some degree.

Thirdly, there is the question of the link between the initial CA-based teaching sequence and the subsequent multi-skills programme which – as all proponents of the approach emphasize – should provide the necessary opportunity for the expansion of the learners' general L2 competence. A Spanish CA experiment at Purdue University (Corbett and Flint Smith 1981) illustrated the crucial importance of appropriate planning and integration of teaching materials at the junction of CA and conventional teaching. Without systematic integration, CA practice can remain largely unconnected to the language experience the learner receives in the rest of the course of instruction.

5.5. Implications of CA

Despite those three qualifications, there is some evidence, as we have seen, that various types of CA programme have had positive results. Such evidence includes empirical results of formal studies, informal evaluation through comments by learners, and teachers' observation of learners' behaviour and attitude. Apart from the linguistic advantages claimed to emerge in learners' subsequent L2 development, a number of the studies tend to

support what teaching experience might lead us to suggest about the affective side of learning; that, for example, performing in front of an audience in a foreign language is a potentially stressful experience. This was the view of one contributor to the British Council survey (1978) quoted earlier, which involved only relatively experienced language learners fluent in at least three foreign languages. Even if one reason for elementary learners getting tongue-tied is that their ear is not yet fluent, to paraphrase Gauthier (1963:36), we need to bear in mind that the traditional learning environment is essentially discomforting. CA reduces the strain by not forcing spoken performance in the target language.

The CA literature offers interesting evidence, particularly from Asher and Price (1967), that adult students need not necessarily be the relatively disadvantaged, inhibited L2 learners that they are often assumed to be. Even without resorting to TPR (as in Asher and Price's study), it may be feasible to develop adult learners' aural L2 familiarity, and hence their initial confidence, before moving on to more conventional forms of teaching activity.

Perhaps the most potentially useful aspect of CA is the importance placed on the nature and role of listening material. It is interesting that much CA research preceded (and then paralleled) work in second language acquisition, referred to in Chapter 3, which has resulted in the development of notions such as the learning/acquisition distinction and the role of comprehensible input.

5.6. Summary

There are a number of strands of the CA approach that can be seen to have wider applicability for the design of listening activities, beyond their specific original – and perhaps idiosyncratic – context. Firstly, there is the

potential importance of a 'silent period' during which the learner may only – but not merely – listen. As Brown and Yule (1983b) have noted, the listening process in real life is an internal one and may require no observable product.

Secondly, there is the point that we understand more than we can say; we take this for granted with young L1 learners but the point can easily become forgotten in L2 learning – by the students themselves as well as by their teachers.

Thirdly, linked with the previous observations, there is the argument for 'legalizing' L2 learners' use of their L1 in responding to comprehension tasks during the initial part of a learning programme. In Chapter 3 we referred to experimental evidence of the benefits of such L1 use (Wolff 1987) and we will be taking up this point again in Chapters 9 and 10.

Fourthly, CA has provided some evidence of the value of focussing on the activity of listening as a way in to more general learning. In terms of our discussion in Chapter 3, this involves the realization that some proportion of input-for-comprehension is likely to function as input-for-learning, or at least in increasing the learner's receptivity/ sensitivity to the target language.

The various CA methods and materials are predicated on the primacy of aural comprehension as the key route to language learning. However, CA course designers present no explicit theory of input facilitation to guide the construction of the listening comprehension materials themselves. In practice, they seem to have relied solely on formal criteria of syntactic and lexical complexity – what Parker and Chaudron (1987) term 'simplification', in contrast to 'elaboration' – in deciding on the sequence of items for presentation.

In the light of the evidence now available from NS/NNS discourse research (cf Chapter 4) on the importance of interactional modification in making

messages comprehensible to the L2 learner, it seems appropriate to consider ways of incorporating such insights into the design of listening programmes. Having considered the principles of and arguments for the Comprehension Approach, which effectively raised listening to the status of a language learning/teaching method, we turn in Chapter 6 to examine the ways in which course writers working outside the CA sphere have attempted to solve the crucial problem for listening materials design: the selection and grading of 'input-for-comprehension'.

CHAPTER 6

'INPUT-FOR-COMPREHENSION': GRADING L2 LISTENING MATERIALS

6.1. Introduction

Having discussed some of the CA techniques adopted to harness comprehension to 'drive' L2 learning, we now consider ways in which, more generally, course designers of listening comprehension materials have attempted to render spoken input more comprehensible, by grading materials for classroom activities involving listening comprehension. From the wider issue of input-for-learning, then, we move to input-for-comprehension.

A number of contributors to the CA literature reviewed in Chapter 5 commented on the lack of an appropriate theory of listening to underpin the design of graded listening comprehension programmes (Winitz and Reeds 1975, Benson and Hjelt 1978, Gary and Gary 1978, Nord 1981). Newmark (1981) warned against taking CA as a general panacea, since - despite the evidence of enhanced student performance, confidence and motivation - the basis for the selection and ordering of language input for listening comprehension practice was largely *ad hoc*.

The approach assumes that the course programmer can decide intelligently what items to present and in what sequence they should be presented. But in fact there is as yet no theory of language teaching that would guide those decisions.

(Newmark 1981:47)

In the wider discussion of L2 listening comprehension, there is also considerable evidence of unease as to how to grade materials and activities. In a comprehensive survey of published listening courses, Wallace (1983a, 1983b)

concluded that the lack of an underlying rationale for grading listening difficulty represented a fundamental weakness; the fact that most courses made no claim to grade listening difficulty meant that there could be no clear indication of learner progress in terms of improved listening. Even where authors did claim to have used rational criteria for grading, such criteria tended to be vague and subjective (Wallace 1983b)¹. We might illustrate such lack of precision and rigour with this extract from an article on listening course design:

Students of a foreign language appear to pass through various somewhat indeterminate stages as they learn to comprehend native speakers. One can arbitrarily distinguish five stages of foreign language listening development, but it is probably impossible to tell just when a learner passes from one stage to the next – and probably equally impossible to identify the stage for any learner at any given time.

(Taylor 1981:41)

In spite of these declared uncertainties, Taylor then proposed a five-stage sequence of L2 listening development, involving the recognition of:

- (1) stream of sound
- (2) isolated words
- (3) phrases and formulae
- (4) clauses and sentences
- (5) extended speech.

Essentially, such a grading scheme is couched in terms of a single physical characteristic, the length of the L2 listening text. It takes no account of factors such as context, familiarity of topic and/or speaker, listening purpose, or the level and type of required response. Some of the problems raised by the decision to select text length as the primary variable in assessing listening

difficulty will be discussed in section 6.3.

Wallace also observed that, even in those listening comprehension courses where the issue of grading is mentioned, it is rarely addressed seriously. He cited cases in which the course writers' stated rationale for grading their materials was at odds with the actual selection and ordering in the course. Blundell and Stokes (1981), for example, claim that their grading criteria are the length of the recorded texts, the number of speakers and the rate of delivery; none of these is in fact adhered to (Wallace 1983b).

Although no widely accepted framework for grading is yet available and realized in the form of published listening materials, there have been various attempts to define the skills involved in listening, or to develop appropriate L2 listening activities. There is in fact no shortage of descriptions of types of listening (e.g. Porter and Roberts 1981, Higgins 1982, Richards 1983) or of classroom techniques for training L2 listening (e.g. Beile 1978, Fish 1981, Ur 1984, Rixon 1986).

However, the problem is that these represent as yet unordered checklists and not principled proposals for learning sequences ². Richards (1983), for instance, defined a total of 33 "micro-skills for conversational listening", but any assessment of the relative importance for the L2 learner of, say, micro-skill 8 - "the ability to distinguish word boundaries" - and micro-skill 29 - "the ability to process speech at different rates" - remains essentially intuitive.

Snow and Perkins (1979) claimed that decisions about the balance between ease and difficulty of any particular spoken text were necessarily subjective:

listening comprehension materials are difficult to calibrate,
since no workable listenability scales have been developed.

(Snow and Perkins 1979:52)

Their choice of the term 'listenability' was analogous with 'readability',³ and in fact serves to highlight a tacit assumption that has underpinned traditional approaches to the teaching of L2 listening: that listening is in some sense a spoken form of reading. The fact that it was thought possible to construct readability scales based on syntax, lexis and information density suggested that similar criteria were appropriate for the grading of listening materials. This tendency to equate listening and reading largely ignored the differences of form and accessibility of print and speech for the L2 learner, described in Chapter 2.

6.2. General concepts of grading in L2 teaching

Before looking in detail at the ways in which considerations of readability have influenced the selection and sequencing of listening comprehension materials, we will comment briefly on some general principles of grading.

Mackey (1965) traced the establishment of systematic procedures of gradation (grading)⁴ to Comenius, whose main principle of language teaching was

that all knowledge must come in successive steps and that proficiency could be obtained only by degrees.

(Mackey 1965:204)

The purpose of grading was to avoid the disturbance

caused by a casual or perfunctory arrangement in which a confused mass of words retards, repulses or perplexes the mind.

(Comenius 1953:143)⁵

The aim was therefore that the learning of one thing should facilitate the learning of the next.

Grading was conceived of in terms of the relative complexity of a given teaching item as part of the language system. Mackey (1954) summed up his view of grading in two questions: "What comes before what?" and "How much of it comes at a time?" (Mackey 1954:45). He defined the grading process as more than simply selection; "it is the building up of a selected system in the best order possible" (ibid.:58). In the period before the development of what is conventionally referred to as 'communicative language teaching' ⁶, the view of language as a system – whether of formal rules or of verbal behaviour – was the dominant one and this naturally influenced the way in which course writers and language teachers conceived of grading.

Other writers' definitions of grading embrace the same essential principles as those stated by Comenius; "a progression from simple to complex" (Davies 1978:17); "a smooth and orderly progression to 'full' English" (Honeyfield 1977:431). However, the briefer the characterization, the greater the number of questions begged. What was it precisely that made a piece of language relatively 'simple'? In what way was the elementary L2 learner to be presented with 'reduced' English?

Lee (1977) offered a slightly fuller definition of grading as involving

a progression from what seems simple and easy to the learner towards what appears to be harder because more complex, although of course several other factors have also to

be taken account of.

(Lee 1977:248)

These additional factors included the specific learning purposes and interests of the students, and not merely their knowledge of the L2 system. We will return to the role of these factors in the grading of difficulty in listening materials in section 6.4.

Earlier, Howatt had suggested there was a need for an expansion of the concept of grading, away from a restrictive concern with language as a system to be internalized. He described the task of the course writer/teacher as having to decide

in which order new teaching points should come and how much to expect from the pupil in a given time.

(Howatt 1974:11)

Like Lee's definition, this indicates a decisive movement away from an exclusive focus on the language to be presented, towards the response required from the learner, and was part of a more general recognition of the manipulability of both input and task, in current terms.

More recently, there has been an increasing concern to widen the scope of grading still further, to include such factors as cognitive complexity and performance demands (Nunan 1985). Moves towards a process-oriented, rather than product-oriented, syllabus (e.g. Prabhu 1987) have also played their part in drawing attention to the ease or difficulty of the various components of a learning activity as opposed to the formal features of the particular text that the activity is based on. Candlin (1987) summarizes the current view of L2 task/syllabus design as requiring consideration of the following factors:

- cognitive load (the complexity of the mental operations involved)
- communicative stress (the extent to which task participants can assume shared knowledge)
- generalizability (conformity to common real-world situations)
- code complexity
- content continuity (proximity to learners' interests and knowledge)
- process continuity (coherence between learning tasks).

In subsequent sections of this chapter, we will be examining the implications for grading of these text and task factors, with specific reference to L2 listening comprehension activities.

6.3. Text grading

As we have already noted, Wallace found that very few published listening comprehension courses were based on explicit grading principles. However, where it is possible to identify implicit criteria, these are generally derived from reading comprehension and, hence, from readability. This dependence on criteria designed for the development of written-medium skills has been the subject of frequent criticism (e.g. Carroll 1971, Brown 1977 and 1978, Snow and Perkins 1979, Richards 1983) and we will summarize the main objections.

Conventional, reading-influenced grading of listening materials was implemented in terms of three principal textual criteria: level of vocabulary, complexity of syntax and text length (Rivers 1966, 1968, 1971; Davies 1978; Taylor 1981). Each of these variables is open to criticism.

6.3.1. Vocabulary

Level of vocabulary may be regarded as less relevant as a factor of difficulty in listening. In the case of conversational, informal speech it is typically not the speaker's use of highly specific or low-frequency vocabulary that causes foreign listeners problems, but rather their imprecise use of generalized lexis (Brown and Yule 1983b). In formal, transactional settings such as the academic lecture theatre, listeners' background knowledge often enables the speaker to employ technical - and supposedly 'difficult' - vocabulary without fear of losing the audience.

Sturtridge, McAlpin and Harper (1977) noted that it is in fact the informal aside or explanation that causes the greater listening difficulty for the foreign student. In a study of technical college lectures, Hutchinson and Waters (1981) observed occasions on which L2 listeners might well have been confused, rather than helped, by the lecturer's use of expressions intended to assist the (native) students. Two sources of likely difficulty in the performances they recorded were (a) the idiomatic use of language - "It's out of true, in simple terms it will wobble about" - and (b) unjustified assumptions about shared sociocultural knowledge - "about the distance between the wickets on a cricket pitch" (Hutchinson and Waters 1981:62-64).

6.3.2. Syntax

Using complexity of syntax as a grading factor is also less straightforward than might at first appear to be the case. It has been pointed out (Widdowson 1978, McDowell 1982) that in presenting L2 learners with 'simplified' versions of original texts ⁷, we can actually render the learning texts more opaque and less comprehensible, by altering their information structure and obscuring their communicative value, resulting in what has been termed 'homogenization'

(Honeyfield 1977). What such simplification may remove are precisely those elements in the original text that help to make meaning transparent:

Artificially constructed listening comprehension materials especially "cooked" for ESL students often reduce the amount of language redundancy available from a speaker in a natural setting, therefore making the listening task unnaturally difficult.

(Snow and Perkins 1979:52)

6.3.3. Text length

The third traditional grading variable, text length, is partly related to syntactic complexity and partly to considerations of listener fatigue and overload. Yet it seems paradoxical to argue that length is necessarily a critical factor of listening difficulty:

it seems obvious that the longer someone speaks on a topic the more chance there is of understanding the point of what he is trying to say.

(Wallace 1983a:106)

As we saw in Chapter 4, one of the ways that speakers modify what they say, when they observe their non-native interlocutor is encountering problems in understanding them, is to say things at greater length, reformulating and elaborating to make comprehension easier.

Clearly, there are types of listening where length is a source of difficulty, for example, when taking notes at a lecture; here, physical fatigue causes listeners – native and non-native alike – to experience 'micro-sleeps', periods during which attention wanders and some incoming information is lost (Lynch 1983c). But the degree to which length of text results in comprehension problems is bound to vary according to other aspects of the situation, such as

the overall purpose of the interaction, which we will be discussing again in section 6.5.

6.3.4. Authenticity

The issue of grading through text characteristics raises the vexed question of authenticity of texts for teaching. Although a detailed discussion of the semantics of the term is beyond the scope of this study, it is perhaps worth emphasizing Widdowson's distinction between 'genuineness' as a feature intrinsic to texts and 'authenticity' as a characteristic of the listener/reader's response to the text. As I have discussed elsewhere (Lynch 1982), I share Widdowson's view that whether or not the pedagogic means are contrived is immaterial, provided that a learning activity (and its associated materials) is effective in helping L2 learners to understand and respond to the text.

There is recent evidence from an L2 classroom study (Spada 1987) that the use of real-life listening texts - 'authentic' texts in the non-Widdowsonian sense - coupled with lifelike listening tasks, e.g. one involving a single playthrough without pauses or repetition, may be less effective as a strategy for improving L2 listening than employing unlifelike tasks, such as setting pre-listening questions and focussing on specific points in the text. Spada's conclusion is that there could be other ways of making actual L2 recordings comprehensible than by adjusting their text characteristics, or 'cooking' them, in Snow and Perkins' terms, and this is echoed in Nunan's comment that

The development of communicative language teaching with its focus on meaning has led to the use of more authentic materials. These, naturally enough, contain a range of linguistic structures, which has meant that grammatical criteria alone cannot be used as a yardstick of difficulty.

(Nunan 1988:55)

6.4. Task grading

The traditional perspective of listening difficulty derived from reading research ignored the listener's crucial disadvantage, when compared to the reader: the lack of control over the text in real-time listening, at least under conditions where he cannot ask the speaker to repeat or reformulate. The various formal characteristics sketched in Chapter 2 would make listening dauntingly difficult, if it were not for the fact that we do not normally need to listen at anything like 100 per cent efficiency. In other words, textual complexity is mitigated by the level of comprehension performance required for the listener's current purpose.

The development of procedures for manipulating L2 learners' listening purpose, by setting more demanding or less demanding tasks, has been a salient feature of the discussion of listening comprehension in recent years. The task is now generally regarded as an appropriate variable for adjusting the level of difficulty of a listening exercise. Whereas in earlier L2 listening courses, there was very little variety of task and the listening exercises were mainly comprehension questions constructed on the model of those used in reading comprehension courses, (e.g. O'Neill and Scott 1974; Underwood 1971, 1976), it is now generally accepted that tasks can be varied and set at a level appropriate to particular groups of learners. The practical literature - e.g. articles in teaching journals and guidelines in listening course materials - makes frequent reference to the variation of comprehension task complexity (e.g. Godfrey 1977, Lynch 1982, McDowell 1982, Thomas 1982, Ur 1982). Windeatt (1981), for example, showed how a single recorded text could be accompanied by listening tasks at as many as six different levels, allowing the L2 learner to choose the degree of comprehension difficulty they wished to work at.

However, despite the appeal of the argument that teachers and course designers should 'grade the task, not the text', a note of caution needs to be sounded. Brown has pointed to the potential conflict in the general move away from L2 teaching/learning that involved structurally based text grading towards a syllabus that places a premium on task-oriented communicative activities. If we shift the emphasis towards the value of tasks *per se*, then we require some means of establishing what makes tasks easy or difficult. This, she suggests, will require teachers to be provided with access to

an analysis which enables them to break the task down into its component parts, in a sense independently of the language which is required, and then to construct simple and intermediate versions of the same task so that students who are experiencing difficulty may make progress within a truly graded syllabus.

(Brown 1986b:13)

This aspect of listening task grading is closely related to the notion of 'process continuity' referred to earlier (Candlin 1987): learners and teachers should gain feedback about success or failure on a particular task in deciding what sort of activity to undertake next. Clearly, grading will have to take account of a range of factors; simplistic appeals to 'grade the task' are of little use and may lead to a random sequence of activities chosen for their communicative pay-off alone.

6.5. Multifactor grading

Brown and Yule (1983b) were among the first to extend the discussion of grading beyond the bipolar question of 'text or task?', suggesting that the grading of listening comprehension materials requires consideration of four principal variables: speaker, listener, content and support. Each of these

subsumes a number of factors; it is no longer appropriate to think in one-dimensional terms - as in a 'listenability' scale - or even in two-dimensional terms - balancing text against task. However, it should be stressed that Brown and Yule's perspective was an essentially theoretical one; although they set out guidelines for the selection and ordering of tasks, this was not applied directly in the form of a proposed course of L2 listening material ⁸. So in this section we will be relating their analysis of factors of difficulty with the practical literature of the teaching of L2 listening comprehension.

6.5.1. Grading by speaker

The elements that might be involved in grading materials by speaker are the number of speakers, their speed of speaking and their accent. Obviously, even with the benefit of the advent of videotaped language teaching material ⁹, it is likely to be more difficult to understand several speakers than a single speaker, especially when there is overlap between individuals' turns. Courses such as those by Crystal and Davy (1975) and Underwood (1979) are made particularly difficult for foreign listeners by the degree of natural speaker overlay. This problem may be lessened by the use of video recordings, but there will probably always be a lifelike degree of inaudibility at points where more than one interlocutor is speaking. As a rule of thumb, then, comprehension materials featuring a single speaker will be found easier, other things being equal.

The use of speed of speaking as a grading variable is one based on considerable empirical evidence, both from the laboratory research discussed in Chapter 2, NS/NNS research - especially Kelch (1985) - and from L2 classroom studies, such as those of Pimsleur, Hancock and Furey (1977), and Flaherty (1979) ¹⁰. The fact that it seems to be the universally held view that

'foreigners talk fast' suggests that rate of delivery would be a relatively powerful variable for grading L2 listening materials:

Often it is not the ideas, the vocabulary, nor the grammar which impedes understanding. Students may "know" these elements and yet be unable to understand what they hear. Furthermore, difficulties like these can be prepared for in advance, by pre-listening instruction. What cannot be prepared for is the sheer flow of words... It is important to be able to control this factor in order to teach listening more effectively.

(Pimsleur et al. 1977:28)

On the question of the effect of accent, there appears to be no experimental evidence that particular accents of English are objectively more difficult than others for foreign learners to understand. However, it is likely that most learners - assuming they have been exposed to a native form of the target language - will have become used to whichever is the prestige accent of the target variety (British, American, Australian, etc.) and that any other accent may cause them at least initial difficulties of adaptation.

Everyone feels that some accents are harder than others to cope with. It is probably truer to say that some are less familiar than others and therefore cause more problems for the learner. The teacher needs to listen for himself and come to a commonsense solution.

(Rixon 1986:58-59)

It is not at all clear, however, that individual teachers (whether or not they are themselves native users of the target language) will actually share a 'commonsense' view of the relative difficulty, that is, unfamiliarity, of L2 accents. Similarly, L2 learners are likely to have differing perceptions of accent difficulty ¹¹.

6.5.2. Grading by listener

Foreign learners listening to L2 texts may be more or less involved in what they hear, in terms of their response – or, rather, the response demanded of them. This can be varied through the type of task. Higgins (1982) proposed a series of listening scales in order to permit a classification of types of listening. The scale that relates to the listener's level of involvement was termed 'feedback'; it characterized the extremes of listener involvement in interaction as 'clandestine' and 'face-to-face'. As Porter and Roberts (1981) have pointed out, the majority of published L2 listening courses demand no more than a 'clandestine' response. The learners are merely eavesdroppers on other people's conversations.

This has particular disadvantages as far as stimulating and maintaining students' interest is concerned. Since in everyday listening of the eavesdropping type, all but the most lurid conversational topics – sex, power and danger, in Brown and Yule's view – make overhearing relatively boring, then motivation has to be kindled in the classroom by getting learners to do interesting tasks based on what they hear. Ur (1984) has provided a comprehensive survey of the range of comprehension activities currently available in published materials, designed to increase the individual listener's sense of engagement, particularly through a stimulating combination of visual and taped material ¹².

However, ingenuity of materials design takes us only so far; materials intended to be visually and conceptually motivating will be successful only if they stimulate an individual response in learners using them. Widdowson (1983) has highlighted a potentially exploitable difference between two levels of response, which he terms 'accessibility' and 'acceptability'. 'Accessibility' refers to the extent to which a learner – in our case, a listener – understands

the L2 text, by recognizing what is said and what is meant; 'acceptability' has to do with whether or not the listener agrees with the speaker's message. Allowing for this second type of response – where the listener responds as an individual and not merely as a language learner – is an important extension of the notion of what classroom listening is about, but it is likely to raise the level of perceived difficulty of a comprehension task if the learner has both to understand and comment on an L2 text. This additional degree of complexity will need to be taken account of in grading overall task difficulty.

6.5.3. Grading by content

This overall criterion subsumes four main components: syntax, vocabulary, information structure and background knowledge. We have already suggested (section 6.3) possible objections to the traditional grading of L2 listening difficulty in purely syntactic and lexical terms.

Simple measures of syntactic complexity are unlikely to get us very far in assessing the difficulty of understanding different chunks of spoken language.

(Brown and Yule 1983b:84)

Similarly, Widdowson (1978) expressed doubts about the value of the lexical equivalent of such 'simple measures', namely, word frequency counts, since they reflected language as an abstract system rather than reflecting potential use. Instead, he argued for a principled assessment of the availability of lexis, rather than statistical frequency, in grading texts. Obviously, grammar and vocabulary do contribute to the foreign listener's general perception of ease or difficulty of comprehension, but not to the predominant extent assumed in conventional text-based grading. As we saw in Chapter 4, other features such as elaborations of input and modification of interaction seem

likely to contribute more to the facilitation of comprehension..

The importance of information structure, and especially of foreign listeners' expectations about sequence in particular types of discourse, has been emphasized by writers such as Oller and Obrecht (1969) and Porter and Roberts (1981). More recent discussion has been informed by insights from 'script' and 'frame' approaches in cognitive science and artificial intelligence (cf. Chapter 1). It is perhaps no coincidence that news bulletins have received so much attention, both in the theoretical literature and in teaching materials (e.g. Brown 1977, Porter and Roberts 1981, Lynch 1982 and 1983a), since their information structure seems to be relatively constant across cultures and also facilitates comprehension and recall:

Their format makes them ideal candidates for exploitation, since they often follow a sequence of headlines/reports/summary - strikingly similar to the first three steps of the Survey/Question/Read/Recall/Review procedure recommended in reading efficiency courses... From the learner's viewpoint the in-built repetition of information enables him to flesh out what he may have only half understood the first time round.

(Lynch 1982:13)

Probably the most important factor in the area of content of spoken language is, paradoxically, what is not expressed in the text: the background knowledge assumed by the speaker to be available to the listener. It seems a reasonable claim that whatever is most familiar to a learner in cultural, professional or instructional terms will be easiest to understand. Faerch (1981) recommended that foreign language course designers and teachers should manipulate familiarity of topic and situation, as one way of grading learners' L2 exposure, arguing that the experience of the target language in 'script-like situations' was likely to increase the chances both of short-term comprehension and also of L2 acquisition in the longer term. This can be

argued to be a powerful factor in L1 listening as well:

General background knowledge can facilitate learning of new material because it acts like an advance organizer.

(Sticht 1972:309)

It is worth recalling, at this point, the findings of a study of L2 reading (Johnson 1982), which illuminates the relative contribution to the overall level of comprehension difficulty made by syntactic, lexical and schematic elements. Johnson investigated the relationship between what we might call text factors (grammar and vocabulary) and the reader factor (background knowledge relevant to the topic) and found that it was the latter that had the clearer influence on the foreign readers' quality and ease of comprehension.

In the context of L2 listening, the importance of encouraging learners to deploy their relevant individual knowledge has been the focus of much recent comment (e.g. Richards 1983, Faerch and Kasper 1986, Anderson and Lynch 1988). As we saw in Chapter 3, the general view – with the possible exception of Wolff (1987) – is that non-native listeners would be helped by being made more conscious of possible top-down processing routes, precisely because of the difficulties they experience in bottom-up mode, due to their relative lack of lexical and syntactic expectancies available – it is assumed – to the native listener (Kasper 1984, Conrad 1985).

6.5.4. Grading by support

The support that the listening teacher can provide includes the use of physical objects, of visual aids and of printed text. Dulay, Burt and Krashen (1982) pointed out the importance of the relative richness of the L2 learning environment in terms of the availability of concrete referents, which they

glossed as "subjects and events that can be seen, heard, or felt while the language is being used" (Dulay, Burt and Krashen 1982:26). This characteristic, sometimes referred to as the 'here-and-now principle', is drawn from the observation of the environment in which the child acquires its first language and it can be seen to underpin Comprehension Approach techniques in general, and Asher's Total Physical Response method in particular (cf. Chapter 5).

The second category of support, visual aids, covers a wide range from videotape, film and photographic slides to pictures, maps and diagrams. Views of what comprehension involves have changed considerably since the era of audio-lingual language teaching, when Rivers (1971), for example, had criticized the use in lower-level L2 listening comprehension classes of teacher gesture, mime and of visual aids, on the basis that

it is not clear to what degree the student is merely decoding the visual or kinesthetic signal system.

(Rivers 1971:129, my emphasis)

Now, as we have seen, most writers of listening comprehension courses encourage L2 learners to exploit as many available cues as they can, in line with the view that, paraphrasing Neisser's comment which we quoted earlier, comprehension involves seeking whatever useful information is to hand and integrating the various strands (Neisser 1976). So the provision of support through the classroom use of visual aids is no longer regarded as any sort of adulteration of 'pure' listening comprehension practice, but as a means of offering access to supplementary cues in a realistic and helpful context.

The degree of support provided by visual material was shown experimentally by Mueller (1980), who analysed the effect on listening recall of

giving learners a single illustration. He found that using a simple line drawing of the two speakers whose voices appeared on tape enhanced learners' recall of the content of the text (a taped interview). After experimenting with different groups who saw either no illustration, or saw it before listening, or after listening, he found that the visual aid helped more at the pre-listening stage than after listening, and that the learners with no access to the visual material did least well. Mueller interpreted this as evidence that

(1) the pre-listening visual provided a frame of reference for the subsequent text,

(2) having seen the visual, listeners were less likely to formulate false hypotheses, thus wasting memory space,

and (3) the drawing heightened learners' interest and so strengthened their purpose in listening.

We might relate these views to that part of Wolff's (1987) study which analysed the recall effect of visual support. Wolff found that his German listeners appeared to make greater use of the illustration accompanying the more difficult English story, but not the one that went with the less complex text. Visual cues may therefore come into play as and when the L2 listener perceives a need for them.

The third main type of listening support in Brown and Yule's analysis is the printed text. This demands careful use, since in its fullest form – the complete transcript of a spoken text – it may well lead learners to become excessively reliant on reading, rather than training their listening comprehension skills. Even partial printed texts, such as sets of key words or phrases from the tape recording, need to be exploited with great care.

A common technique is to present listeners with a list of lexical items

believed to be difficult – i.e. beyond the learners' receptive linguistic competence; this is sometimes termed a 'priming glossary' (Widdowson 1978:82). However, this brings the risk that such help at the pre-listening stage will render unnecessary the sort of intelligent guessing and context-based inference that is widely accepted to be an essential component in successful listening performance (cf. Carton 1971, Lynch 1980, McDonough 1981, Porter and Roberts 1981). Lexical spoonfeeding is likely to inhibit the development of the individual's ability to cope with unknown vocabulary when listening to L2 speech.

The various forms of support outlined here can be used to grade listening difficulty, by being gradually reduced and finally removed – where appropriate. But it should not be assumed that successful L2 listening necessarily means being able to listen without support; there are occasions where some form of visual or printed aid is a natural element even of native language comprehension, for example, when printed handouts are issued during a lecture. The relative quantity of support has to be geared to the type of listening text being used.

6.6. Current developments in grading listening activities

As we have noted, Brown and Yule's multifactor view of grading was based largely on their investigation of L1 adolescents' production and comprehension skills. More recently, Anderson and Lynch (1988) have provided a wider-ranging survey of experimental research into factors of difficulty in both L1 and L2 listening comprehension, which has highlighted additional components of the relationship between text, task and listener which may need to be taken into account in grading. In summary, their list of factors is as follows:

Table 6
Factors in grading listening activities

Input factors	Task/context factors
Information sequence	Extent/type of support
Familiarity of topic	Pre-listening activity
Explicitness of information	Type of response
- redundancy	- (e.g. recall, summary)
- need for inference	Time pressure
- referring expressions	Classroom grouping
Type of input (descriptive, narrative, etc.)	

(after Anderson and Lynch 1988: Chapter 4)

A number of these grading variables have already been discussed in the previous section, within the multifactor framework suggested by Brown and Yule. However, it is perhaps worth commenting on two variables that were not included in Brown and Yule's analysis: explicitness of information on the input factor side, and classroom grouping on the task/context factor side.

6.6.1. Explicitness of information

Explicitness of information can be subdivided into three components: redundancy, sufficiency and referring expressions. Let us take redundancy as an example. From both L1 and L2 comprehension research, there is evidence for a differential effect of redundant information on the level of understanding. Sonnenschein (1982) compared the performances of 5- and 9-year-old native listeners on a referential paradigm task ¹³ and found that redundant information seemed to confuse the younger group - presumably because of their less well developed memory and listening skills. The older children were better able to take advantage of the potentially helpful additional material in redundant messages, especially in cognitively more complex tasks.

This finding might be compared with that of Chaudron's (1983a) study, referred to in Chapter 5, of L2 learners' attempts to cope with various forms of 'simplified' input produced by their teachers when explaining vocabulary. He

had found that extended redundant reformulation of a lexical item thought by the teacher to be problematic, such as *"the beaver is known as a very industrious and busy, uhm, hardworking animal"*, appeared to help only listeners with higher levels of English proficiency. Lower-level L2 learners, like the younger L1 listener group in Sonnenschein's experiment, were more likely to fail to recognize and exploit redundancy. In both cases, it seems that listeners have to reach a certain level of competence – maturational in the L1 case, developmental in L2 – for them to benefit from the additional clues contained in natural speech.

6.6.2. Classroom grouping

In the case of the task-related grading factor, classroom grouping, there is recent evidence that listening comprehension performances are improved when the task involves cooperative, rather than individual, activity. In a controlled investigation of native secondary school pupils (Anderson and Boyle, in progress) it has been found that the pupils performed significantly less effectively when working on their own. Similar results were reported in a study of the listening skill development of younger, primary-age children (Yager, Johnson and Johnson 1985). Although there seems to have been no experimental investigation of the possible effect of groupwork on listening performance in the L2 classroom, Pica and Doughty (1985) suggest that groupwork, rather than teacher-fronted activity, will lead to the natural use of the linguistic and interactional strategies of negotiation regarded as likely to promote L2 learning.

Anderson and Lynch (1988) also illustrate the extent to which cooperative interaction among adult L2 learners engaged in a listening activity can increase their chances of success on the task, compared with their performance individually. Where the task format requires or encourages the

listeners to pool their individual interpretations, it seems likely that learners will be made aware of alternative routes or cues to comprehension. As we noted earlier, Faerch (1981) divided listening comprehension strategies into the 'behavioural' and the 'psycholinguistic' – one involving external action, and the other, mental activity. It is arguable that group-based listening activities designed to encourage L2 listeners into external, social action (as opposed to internal, cognitive processing) may well represent easier tasks and should be used particularly in the initial stages of L2 learning.

In a recent discussion of a classroom study in which L2 learners in groups at different levels of proficiency (post-elementary, intermediate and advanced) used identical listening comprehension materials, Lynch (1988b) argued that the mechanism that enabled the weakest learners to complete the task in hand as successfully as – though more slowly than – the advanced students was the availability of group discussion, and in particular the opportunity to agree on clarifying questions that they might ask the class teacher.

6.7. Conclusion

Changes in the design of listening comprehension courses over the last 20 years have reflected current concerns both in theoretical linguistics and also in applied linguistics (e.g. in the importance now attached to the role of background knowledge in the teaching of reading). There has been a movement away from a predominant focus on formal textual characteristics (syntax and lexis) as sources of difficulty, towards the use of materials that allow the incorporation of listener- and task-based variables. In terms of our earlier Figure 3, account has to be taken of all three components of comprehension – systemic, contextual and schematic – in constructing listening comprehension materials. Yet few listening courses make any explicit reference to the basis on which materials and activities have been graded and

sequenced.

The tangible effects of Brown and Yule's (1983b) analysis seem, so far, to be limited to the production of two sets of (unpublished) listening materials. The first is a pilot programme (summarized in Brown et al. 1987) intended for use in Scottish L1 classrooms; its aim was to make grading principles explicit in materials that teachers of English as a mother tongue could adapt when creating their own comprehension activities.

The second is an intermediate-level EFL listening course, described in Sheerin (1986), which manipulates text type - descriptive, narrative and argumentative - and text features, such as topic and number of referents, as the basis for grading complexity. However, it is not clear whether the author intended to incorporate modifications into Brown and Yule's framework, given that she was designing listening materials for an L2 audience, rather than for native language users.

The next chapter sets out a proposal for putting current views on grading into practice, in the form of a scheme of listening activities that would integrate insights from the studies of native/non-native interaction (cf. Chapter 4) with those from this chapter on the grading of L2 listening comprehension materials.

CHAPTER 7

A PROPOSAL FOR GRADING BY LISTENER: THE USE OF NATIVE/NON-NATIVE MODIFICATIONS

In this chapter a scheme is proposed for the creation of materials for an elementary-level L2 listening programme, based on principles derived from our earlier discussion - in particular, the characteristics of NS/NNS interaction (Chapter 4), the advantages of initial concentration on comprehension (Chapter 5), and the insights into the grading of listening complexity now available from L1 and L2 research (Chapter 6).

7.1. A framework for grading listening difficulty

The Scottish Education Department research referred to in Chapter 6 (Brown et al. 1984, 1987) has led to the development of a framework for grading the relative complexity of types of listening task. Although that research was concerned with the development of language skills by native users, we may assume that the findings as to the comparative difficulty of types of spoken discourse will also apply in the case of L2 learners. Since the analysis involves types of discourse, as opposed to the structure and characteristics of specific texts, it seems reasonable to adopt the working assumption that the relative complexity of comprehension tasks will hold across native and foreign languages. As we saw in Chapter 3, the comprehension problems encountered by foreign listeners - especially learners at an elementary L2 level - are likely to include additional difficulties to those experienced by the native listener, rather than problems so fundamentally different as to alter the relative complexity of types of listening - although maturity and content knowledge could well help the adult L2 learner.

The grading framework that has been developed on the basis of the

Scottish Education Department research into L1 communication skills has been represented in the following diagram:

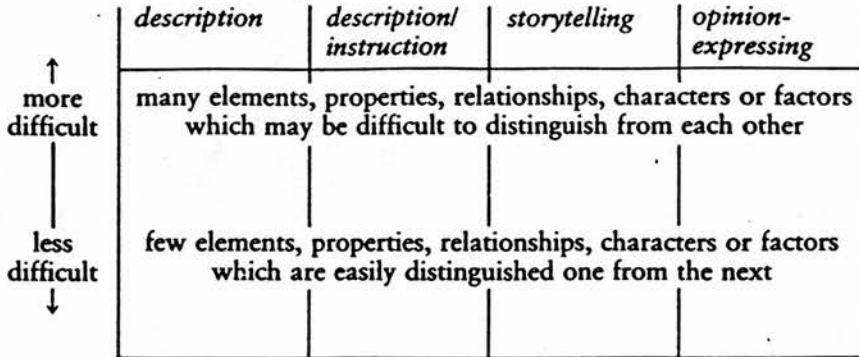


Figure 8. Relative complexity of input (Brown and Yule 1983b:107)

This framework allows for the grading of listening difficulty both horizontally and vertically; it enables the materials designer to grade complexity both between discourse types (left to right in the diagram) and also within a single discourse type (bottom to top). Horizontal grading is applied in terms of the overall nature of the speaker's message – descriptive, narrative and so on. Brown and Yule set such categories within an overall three-part taxonomy of task types:

The type of speech required in producing a description or a set of instructions is essentially an account of fixed or static relationships. The properties of an object or the relationship of one object to another tend to be stable. In a story-telling task, however, the relationships tend to be dynamic. That is there are changes of character, location and time involved, and the activities of the characters will typically differ as the story progresses. In expressing an opinion, there tends to be a quite different set of relationships, mainly abstract, between one part of what is being talked about and the next.

(Brown and Yule 1983b:109)

In Figure 8, vertical grading is effected by manipulating the relative difficulty of content in terms of the complexity of relationships between the entities (people, things, places, times, etc.) being referred to. However, as we noted in Chapter 6, research evidence now suggests that further elements of complexity will need to be incorporated into materials design, such as the structure of information, text explicitness, redundancy and task format (cf. Table 4).

Brown and Yule's grid offers a way of thinking about task and materials design for teaching oral communication skills – both productive and receptive – irrespective of whether or not the learners are working in their own language. The core of my proposal lies in the extension of this general framework to a specific method of producing L2 listening materials, through the exploitation of natural modification in native/non-native discourse. We will be investigating the feasibility of using L2 versions of unscripted narrative and thus working within the 'dynamic' area of Brown and Yule's scheme.

7.2. Listener-oriented grading

7.2.1. Scripted texts for L2 listeners

The conventional method of providing elementary-level L2 learners with listening materials offering comprehensible spoken input is to construct scripted or 'semi-scripted' texts, designed to be within the learners' syntactic and lexical range. However, as we saw in Chapter 6, such grading tends to result in texts which are skewed towards simplification viewed in terms of factors imported from research into readability and which may consequently distort the natural pattern of information in a text (cf. Honeyfield 1977).

7.2.2. Scripted texts for L1 listeners

A second method is to record samples of authentic, (that is, naturally occurring) simple speech intended for native listeners. There have been various proposals for the classroom use of simple, native-listener oriented, spoken texts in L2 teaching. Some have involved the use of material intended for young L1 listeners, for example, radio stories for pre-school children (Brown 1977) and primary school television broadcasts (Lynch 1983d).

Others have featured the use of broadcast advertisements - either for radio (Hafernik and Surguine 1979) or television (Lynch 1985). The particular characteristics of commercials (brevity, completeness of story, lexical/syntactic repetition) conspire to make the message relatively accessible for L2 listeners/viewers, even at low levels of proficiency. Price (1983) and, more recently, Vanderplank (1988) have demonstrated the potential benefits for L2 learners of exposure to television programmes subtitled in the target language. However, we may assume that the exploitability of such texts will be restricted; it would be difficult to envisage a complete programme of L2 listening practice based solely on advertisements or subtitled broadcasts, given the limitations on their legality and their availability, respectively ¹.

7.2.3. Native/non-native modification

The third potential area of simplification - spontaneous speech intended for non-native listeners - offers greater possibilities. There have been a number of previous proposals for the exploitation of materials based on insights from studies of native/non-native conversation, but none has been constructed on the specific lines suggested here.

Some proposals derive their view of the importance of comprehension

from the Comprehension Approach. Sculthorp, for example, argued that

comprehension must proceed from a form of the language simplified by the native speaker out of consideration for the foreign listener to the form used among native speakers that the listener is likely to hear in his own circumstances.

(Sculthorp 1974:15)

But it is not clear from this whether the author's intention was to record actual NS/NNS interaction. Certainly, in commenting in support of Sculthorp's ideas, Davies (1978) assumed that the listening texts would be recorded 'blind' to a microphone, rather than to an interlocutor:

Very useful early materials could, no doubt, be produced by asking native speakers to explain things as they would to a foreigner who they suspected knew very little of the language in question.

(Davies 1978:17, my emphasis)

This raises an important issue. The quantity and quality of feedback provided by a live listener has a significant influence on the modifications of input and interaction made by the native speaker. The same applies, too, in NS/NS discourse; it has been found difficult to record natural-sounding speech when the person being recorded is not interacting with an interlocutor, but has instead been asked to produce language for an imagined second person (Brown et al. 1984). We might suppose that it would be even more difficult for a speaker to modify *ex tempore* for an imaginary non-native listener, given the evidence for the crucial role played by the NNS partner's feedback in influencing adjustments made by the native speaker.

Simpson (1981) reported a small-scale project involving real interaction between native and non-native speakers, in which Dutch EFL teachers

attending an in-service course in Britain recorded themselves interviewing local native speakers. The purpose of the project was to collect materials that might be used with the teachers' students in the Netherlands. Simpson argued that the characteristic features of modification found in the recordings (e.g. increased use of explanation, more marked stress and more frequent comprehension checks) would make the material potentially usable in the EFL classroom:

this is the kind of language with which non-native speakers will inevitably come in contact, and therefore interviews between non-native speakers and native speakers are the most naturalistic and authentic type of listening material with which we can provide our learners.

(Simpson 1981:375)

The most substantial proposal for the use of Foreigner Talk in L2 teaching programmes is that of Schwerdtfeger (1983a, 1983b), who claimed that, despite its name, communicative language teaching has been 'lopsided' in its concentration on the productive aspect of language competence, with insufficient attention paid to the development of appropriate strategies based on realistic listening input. In this context, 'realistic' refers to the fact that, Schwerdtfeger argued, L2 learners should be presented with samples of the sort of language they can reasonably expect to encounter in real-life interaction with native speakers.

Her practical proposals, which related to the teaching of foreign languages in the European secondary school context, were threefold. Firstly, she suggested that the findings of research into NS/NNS interaction - and foreign language teacher talk, in particular - should be made available to trainees on pre-service teacher training courses, so that young teachers would have an early opportunity to develop this aspect of their classroom competence.

Secondly, she suggested that, when available, foreign language assistants should be asked to take not only intermediate and advanced pupils, as tends to be the case at present, but also beginners' classes. In this way, elementary learners might begin to develop an awareness of the sort of supportive, comprehension-oriented modifications that they can expect from a native conversational partner who is making an effort to adjust to their level of understanding (Schwerdtfeger 1983a).

Thirdly, she argued for the exclusion from L2 teaching materials of the wholly unrealistic 'dialogues' – or, more accurately, scripted readings by actors – between native speakers and curiously word-perfect non-native learners. These dialogues were likely to create quite false expectations in learners' minds. Instead, she proposed the use at elementary level of videotaped interaction between native and non-native speakers, which would reflect the normal characteristics of such conversation. This extract provides some flavour of the sort of Foreigner Talk used in her classroom materials:

NS: Ah! Il a dit: "Vous faites du tapage nocturne".

NNS: Tapage...?

NS: Tapage nocturne? Eh bien, euh... C'est... Vous savez: du tapage... du bruit, quoi.

NNS: Ah, un grand bruit...

NS: Oui, du bruit, la nuit (...) Un grand bruit qui réveille tout le monde.

NNS: Ah oui, comme le soir, la musique très fort...

NS: C'est ça, c'est ça.

NNS: Et les voisins font "poum, poum, poum"?

NS: C'est ça, exactement.

(Schwerdtfeger 1983a:154–155)

Despite the strength of Schwerdtfeger's argument for the need to make L2 listening input as realistic as possible (in terms of its proximity to the learner's probable experience of interaction with native users of the language), two points should be made in connection with her proposed use of NS/NNS dialogue. The first point is whether the interaction is a sample of spontaneous conversation between a native and a non-native user of French. It is not clear (1) whether the 'non-native' partner in the extract is actually an elementary learner of French or someone pretending to be less proficient than they are and (2) whether the participants are working to a script or semi-script.

The second point relates to the type of classroom activities that Schwerdtfeger outlined when putting forward the 'realistic input' view. Her exercises require learners to respond in the conventional way, as eavesdroppers, in other words at the 'clandestine' end of Higgins's feedback scale (cf. Chapter 6). Although there is potential value in providing learners with the opportunity to observe and discuss NS/NNS conversations that approximate to real-life language use, eavesdropping exercises run the risk of reducing students' interest, through their relative lack of engagement with events on tape or, in this case, on the screen. It might be better to devise activities that require the L2 listeners to respond in the same way as the original NNS discourse partner; we will be returning to this issue shortly.

In summary, there are three basic criticisms to be made of previous proposals for the use of NNS-oriented discourse in listening materials.

(1) None of them appears to have involved the use of spontaneous talk. It is not clear in the case of Simpson (1981) to what extent the interviews with native speakers were rehearsed, since she refers to the advisability of briefing the native interviewees in advance about the type of language that would be desirable, from the pedagogic point of view.

(2) Most incorporate the notion of Foreigner Talk (as opposed to Foreigner Talk Discourse) and consequently focus on changes in input that might be built into spoken L2 texts, rather than on the modifications of interaction. Research such as that of Pica, Young and Doughty (1987) suggests that interactional adjustments contribute more to comprehensibility.

(3) More generally, none of the proposed classroom applications has been framed within an explicit scheme for grading discourse types and tasks.

7.3. The proposal: naturally modified interaction

Our Chapter 4 review of the literature on NS/NNS discourse modifications has highlighted a number of weaknesses in the research to date. Among these a particularly significant failing – as far as the present proposal is concerned – is the relative scarcity of investigations into the actual comprehensibility of discourse containing listener-oriented modifications. Typically, the L2 listener's comprehension has not been measured, but has been assumed to result from the adjustments produced by the native speaker. Those studies that have attempted to isolate and evaluate the facilitating effects of listener-oriented accommodation have all involved the use of scripted texts read aloud, in various forms: for example, dictation (Cervantes 1983, Kelch 1985), short lectures (Chaudron 1983b, Long 1985, Chaudron and Richards 1986), and task instructions (Pica, Young and Doughty 1987). The focus of my study will be the assessment of the potential for classroom use of recordings of unscripted collaborative NS/NNS interaction, an area of practical application not previously explored in any published study.

My interest is in evaluating the effects of input and/or interaction adjustment on L2 listeners' comprehension, rather than in the form those adjustments might take. The main hypothesis for investigation is that

elementary-level EFL learners will be able to achieve significantly better comprehension of a videotaped NS performance on a communication task with an NNS partner at or near their own listening level in English, than of recordings of similar task performances with either native speaker partners or with NNS listeners at higher levels of proficiency.

There is a direct practical pedagogic application linked with the main hypothesis. The first step is to investigate whether NS performances of the same task with original NNS partners at different levels of English do indeed result in significantly different degrees of adjustment. The second is to assess whether these lead to different degrees of comprehensibility (on the part of 'secondary' listeners watching the videotape in their EFL classroom). If they do, then language teachers could adopt this method of text collection as the basis of a form of 'natural grading', in order to produce sets of teaching material for listening comprehension with L2 learners.

It would be feasible for EFL teachers, especially non-native teachers working in their home country who have access to native English speakers, to produce realistic material themselves, by recording those native speakers interacting with a learner at an appropriate level. In this way the classroom learners would gain the beneficial experience of what Schwerdtfeger has termed the "communicative dynamism" of native speakers (Schwerdtfeger 1983a:146) - that is, their tendency to assume responsibility for the maintenance of the conversation and the facilitation of comprehension by their NNS partner.

The current investigation (to be described in Chapters 8 and 9) took account of findings of NS/NNS studies reviewed in Chapter 4 and was designed to avoid some of the design weaknesses raised in that review. Specifically, the following points were incorporated into the design of the data

collection and comprehension experiment:

(1) In contrast to Comprehension Approach-based proposals (e.g. Sculthorp 1974, Davies 1978), the native speakers' performances are recorded live, as opposed to being script-based. Since in real life L2 learners will be faced with on-line modifications, rather than carefully pre-planned adjustments, that needs to be reflected in the listening input to which the learners are exposed in the classroom.

(2) The recorded conversations have a measurable outcome, so that it is possible to test whether the native speaker's performance results in the listener's completion of the task in hand. There is evidence (cf. Chapter 4) that interaction tasks with a concrete outcome lead to significantly more modification than open-ended tasks. The approach adopted by some investigators of NS/NNS interaction - essentially, to tell their subjects to talk about whatever they like for 5 minutes - has obvious limitations when the purpose of the subsequent analysis is to examine comprehensibility from the point of view of the NNS listener.

(3) Comparability is crucial. The communication task in this study is constructed so as to allow comparison not only of each individual speaker's performances on the same task with different listeners, but also of different speakers' performances on the same task. This enables us to compare across speakers to see whether different styles of NS/NNS modification emerge. It also allows us to compare across listeners to discover whether particular tactics adopted by listeners increase comprehensibility.

Given that our interest is in spontaneous, on-line modifications and their effects, the experiment cannot be highly controlled in the way that would be achievable with scripted readings of texts. In view of the ultimate aim of the study as a whole - investigation of a procedure for collecting NS/NNS

recordings for use as graded comprehension material in the L2 classroom – this relative lack of control cannot be avoided. Laboratory-type control would not allow my main hypothesis to be tested.

(4) It is necessary to include recordings of performances by each speaker interacting with a fellow native listener, that is, 'baseline' performances of the type argued for by Long (1983b). We need to know which aspects of a specific communication task present difficulties even for a native listener and therefore lead to negotiation and adjustment. As we have stressed, not all listener oriented modification is non-native listener oriented.

(5) One of the weaknesses of NS/NNS discourse research has been its restricted sampling and the consequent difficulty of generalization. At least one study (Ulichny 1979) was based on a single native speaker. Generalization from such studies is impossible. In the present investigation, twenty-seven NS subjects participated in the data collection stage, each contributing three narratives to four listeners. This represents a total of over 300 story texts – sufficient to provide a reasonable basis for inference.

(6) Research findings suggest that some native speakers are more accomplished in NS/NNS interaction than others. It has been suggested that this may be linked with individuals' experience (and therefore their expectations) of such discourse. There is some evidence from classroom-based studies that L2 teachers acquire a facility in modifying input and interaction, given the necessary feedback. For this reason, experienced EFL teachers were used in the study. In view of the practical application foreseen for this study, there was an additional reason for choosing EFL teachers: the native speakers most likely to be available overseas as potential participants in taping sessions for listening materials production are fellow teachers.

(7) The evidence that familiarity between speaker and listener contributes

positively to the quantity and quality of modification led to the conclusion that the EFL teachers selected for the initial data collection should, wherever possible, be videotaped performing tasks with their own L2 students. In this way they would be familiar with the learners' listening competence and would have less difficulty in adjusting to their level than a stranger would.

(8) The outcome expected of the original listener in the communication task is similar to that of the secondary listeners viewing the videotape of the interaction. This increases the likelihood that their listening purposes will be similar, and that the original listener's elicitation of modifications from the native partner will be beneficial for those hearing the materials later at the experimental stage.

(9) Wolff (1987) found experimentally that L2 learners were better able to indicate L2 comprehension through L1 response. The observed performances of learners taught through Comprehension Approach techniques suggest that the level of L2 listening comprehension is significantly in advance of their productive competence. The tasks in my study therefore require both original and 'secondary' listeners to respond either non-verbally or in their native language. As a result, the elementary-level L2 learners taking part in the experiment are not hampered in indicating how much they have understood by being obliged to produce the foreign language in giving their answers.

7.4. Hypotheses

The main research hypotheses for investigation may be summarized as these:

Hypothesis 1

That native speakers increase the degree of modification of input and

interaction when talking to non-native listeners at decreasing levels of L2 proficiency.

Hypothesis 2

That NS/NNS modifications of input and interaction bring about increased comprehension on the part of 'secondary' L2 listeners watching a videotape of the original interaction.

Hypothesis 3

That elementary-level 'secondary' listeners are assisted most to understand the story when watching a version told to an original listener nearest their own L2 proficiency level in English.

Hypothesis 4

That 'secondary' listeners find it easier to understand discourse in which the native speaker primarily adopts modifications of interaction rather than input.

7.5. Stages of the study

Five stages of research will be discussed in the next two chapters:

- (i) the selection of materials and the design of tasks to form the basis for the NS/NS and NS/NNS recordings;
- (ii) the collection of video-taped task performances;
- (iii) the analysis of input and interaction adjustments in the recordings;
- (iv) the comprehension experiment with 'secondary' listeners;

(v) the analysis of the results of the experiment.

Chapter 8 deals with stages (i)–(iii) and Chapter 9 covers stages (iv) and (v). Hypothesis 1 is tested on the transcribed data from the recordings of the task performances at stage (iii). Hypotheses 2, 3 and 4 are tested on the comprehension test results achieved by the secondary listeners participating in the experiment at stage (iii).

CHAPTER 8

DATA COLLECTION

In this chapter I describe the first part of the experiment and analyse the data arising from the video-recording of NS/NS and NS/NNS narratives. Although here, and elsewhere, the participants in the research are referred to as 'speakers' and 'listeners', it should be borne in mind that the purpose of the data collection was to capture samples of native/non-native interaction, that is, sequences of communication in which speaking turns would alternate between the discourse partners. So 'speaker' and 'listener' are used for the sake of convenience only.

8.1. Preparation

8.1.1. Subjects

8.1.1.1. Speakers

A total of 27 native EFL teachers agreed to take part as speakers in the videorecording sessions for the research. At the time of recording (June to September 1985), they were all full-time teachers at one of four EFL institutions in Edinburgh¹. These volunteers represented a relatively experienced sample of the EFL profession, with between 5 and 20 years' teaching experience. The accents of the speakers were for the most part English (13) or Scottish (8); the other accents were Irish (2), American (2), Australian (1) and South African (1). The non-native listeners showed no obvious signs of difficulty with any individual's accent.

8.1.1.2 Listeners

Four listeners were required for each of the 27 recording sessions, making a total of 108 subjects (27 natives and 81 non-natives). The native listeners in the recordings were volunteers from the administrative and teaching staff of the Institute for Applied Language Studies at the University of Edinburgh, where the sessions took place. The non-native listeners came from the same four EFL institutions as the speakers. The speakers had been asked to bring with them, wherever possible, students from their classes at advanced, intermediate and elementary levels. When speakers were unable to provide all three L2 listeners, students of the appropriate level from the Institute were used.

The majority of the non-native listeners (60 out of 81) were students of the speaker. In cases where speaker and listener were unknown to each other, they were allowed to talk together informally for approximately 5 minutes before the recording began. This allowed the native speaker to gauge the listener's level of comprehension and the listener to become accustomed to the accent and general speech characteristics of their native partner.

No test was carried out on the non-native volunteers to assess whether their listening (or other) proficiency in English was, as predicted, advanced, intermediate or elementary. Given the research evidence on native/non-native interaction discussed in Chapter 4, it was assumed that the important factor in the native speakers' degree of modification would be what they perceived their interlocutor's L2 proficiency to be, rather than what any external measurement suggested it was.

8.1.2. Task

In advance of the recording session, each speaker was sent a letter outlining what they would be asked to do. It explained that their task would involve being video-taped telling picture-based stories to a series of listeners with varying levels of English and that the aim of the research was to analyse how these communication tasks worked with partners with different degrees of language proficiency.

The speakers were not told the precise focus of the subsequent analysis – the investigation of their production adjustments for different listeners – although a number of subjects told me that they had realized, during the course of the four recordings, that they were having to modify what they said and the way they said it, and that this might be the focus of my research.

At the session itself, before recording began, each speaker was given more specific instructions about their task. This is an extract from their instruction sheet:

Instructions for the Narrator

As narrator, your task is to tell three simple stories, each based on a set of pictures arranged on a story card. Each card shows six pictures, in order of occurrence.

You have four listeners, who will hear the three stories in turn; the native listener first, followed by the foreign listeners in order of English proficiency, from advanced to elementary.

Your listener will have the same six pictures as you do; but theirs are in jumbled order. Above each of their pictures is a circle. As you tell the story, the listener's task is to recognise the order in which the pictures feature in the narrative and to write the numbers (1 to 6) in the appropriate circles, to match your story.

The listener is allowed to interrupt you at any time to indicate non-comprehension, to request clarification,

and so on. When they think they have numbered the pictures on their card correctly, they should tell you, and place their card face down on the table. You can go on to the next story.

Before starting Story 1 with each listener, please explain to them what they have to do. Make sure they understand their task. Remember that they have not read these instructions. In particular, make it clear that they are free to interrupt when necessary to get help in understanding what you have said

It should be clear that, as far as the listeners were concerned, the task required them to indicate their degree of comprehension of the story without having to answer (spoken or written) comprehension questions in English. The non-verbal response demanded of them – the numbering of the six pictures on their story cards – was a relatively 'pure' comprehension task, of the type advocated by Brown and Yule (1983b) and Chaudron (1985c), among others.

Although the listeners might well have seen the exercise as essentially a test of their English listening proficiency, the guidelines given on the speakers' instruction sheet were designed to get them to reassure the listeners that they could legitimately intervene in the narrative at any point when they felt the need to do so, in order to warn the speaker when they were experiencing on-line comprehension problems.

In short, the task was made as non-threatening as possible for the listener – particularly the non-natives – so that they would feel relaxed about indicating any difficulties in following the story. As a result, no subject in any session obviously gave up trying to find the correct solution. Those listeners, particularly intermediate and elementary non-natives, who were clearly having difficulty still persevered with the task in hand, and several narrators were asked to tell the story as many as three times before their listeners were satisfied that they had found a sequence that seemed to match their story.

8.1.3. Materials

The picture stories used for the recordings are from Heaton (1966) and are included in Appendix A. The speaker's and listeners' versions differed in the way suggested in the instructions to the narrator, mentioned above. The speaker's card showed the six pictures in narrative order, arranged in two rows of three. The listeners' card displayed them in random order, as three pairs of pictures, one above the other; over each of the pictures was a circle where the listener was to fill in the appropriate number to mark the sequence of the story.

These particular picture stories were selected with two main criteria in mind. Firstly, it should not be possible to predict the order of the six pictures with total certainty, without having heard and understood the whole narrative. In each case, there seemed to be two illustrations whose actual order could have been reversed in the story. In Story 1, it was pictures 2 and 3; in Story 2, pictures 4 and 5; and in Story 3, pictures 2 and 3.

The second criterion for selection was that each story should confront the speaker with problems of lexical choice, of having to find alternative means of expression for low-frequency items that might be expected to be unfamiliar to the lower-level non-native listeners. The items expected to offer such a challenge were these:

Story 1:	conscience	(picture 3)
	to slam/to bang	(picture 4)
	disappointed	(picture 6)
Story 2:	hat seller	(picture 1)
	fist	(picture 4)
	to imitate	(pictures 4, 5 and 6)
	to scratch	(picture 5)
Story 3:	to weigh	(picture 1)
	scales	(picture 1)
	barge	(picture 2)

to pour (picture 4)

In addition to these items in the stories themselves, the narrator's instructions contained a number of words (e.g. 'jumbled', 'non-comprehension' and 'clarification') that were likely to need paraphrasing or glossing for the lower-level learners. This was intended to make it impossible for the speaker simply to read the listener the instructions set out on the card.

8.2. Recording

8.2.1. Layout

For each recording session, speaker and listener sat on opposite sides of a table, with a small screen (15 inches high) along the length of the table, preventing them from seeing each other's materials. A video camera was positioned behind the listener and slightly to one side, focussed on the speaker's head and shoulders. A small lapel microphone was attached to the speaker and connected to the input socket on the camera.

The camera and microphone were both adjusted at the start of the session and the two partners were then left alone for the duration of the story-telling task. The recording and monitoring equipment was located in an adjoining room, which meant that the conversation between speaker and listener was not hampered - or assisted - by the presence of an observer or technician.

8.2.2. Sequence

My intention was, as stated in the instructions to the narrator, to record the four storytelling sessions by each speaker to the listeners in descending order of proficiency in English: native (Ln), advanced (La), intermediate (Li) and

elementary (Le). This was to allow the narrator a chance to tell the story once to a native speaker before meeting the first of the three non-native listeners.

It might be argued that, given this recording sequence, the narrators would naturally tend to embroider their stories and that each successive version would therefore contain more elaboration irrespective of the proficiency level of the listener. However, there is some evidence against this line of argument. In two of the recording sessions (those with speakers 6 and 19), the advanced non-native partner failed to arrive at the time arranged and their recording had to take place last, resulting in a recording order of Ln - Li - Le - La. Nevertheless, the pattern of adjustments adopted by the narrators in these two cases followed that observed in the 'normal' recordings. They made more frequent modifications for the elementary partner than for the advanced, despite the fact that the latter was the final listener in the series. This accidental evidence suggests that there was no major practice effect at work across each narrative series and that the modifications that occurred were the result of conscious adjustment to the level of partner, rather than to greater experience in telling that story.

8.2.3. Equipment

The equipment used in the video-taping sessions was as follows:

- a Sony C7 video-cassette recorder
- a Sony HPV2000 video camera
- a Rediffusion colour television monitor
- an Eagle PRO M3 condenser lapel microphone
- Sony and TDK High Grade 3-hour video-cassettes

For the purposes of transcription, the video-tape soundtrack was copied onto TDK D90 audio-cassettes using a Tandberg audio recorder and replayed on a

Sony TCM-737 cassette recorder.

8.2.4. Problems

Apart from the late arrivals of listener subjects for two recording sessions, there were two further problems. Firstly, one of the subjects, the elementary listener in recording 15, was already familiar with story 3 and told the speaker so before he began his narrative. Consequently, speaker 15 told her only stories 1 and 2. The second problem was a microphone fault, which affected recordings 8 and 13: in the former, story 2 was partially inaudible; in the latter, the whole of the interaction was lost.

There was therefore a final total of 24 complete recordings available, each of 3 stories told to 4 listeners. However, even in the cases of a recording fault, the listeners' task solutions were noted, so that when the listeners' performances are summarized and discussed in section 8.4, reference will be made to a total of 27 sets of results, with one story solution missing - that of story 3 to elementary listener 15.

Details of the individual recording sessions (including listeners' level and native language, task solutions and any additional remarks) are given in Appendix B.

8.3. Transcription

Transcribing began after the first recording session and took approximately 9 months (June 1985-March 1986). Although the microphone had been attached to the speaker, the sound quality of the recordings - with the exceptions noted above - was sufficiently high to make it possible to transcribe speech by both partners, even from a second-generation audio-cassette copy. Sample transcripts are available in Appendix C.

8.4. Analysis of listeners' performances

The purpose of the initial data collection was to obtain a sufficiently large sample of recordings to be able to analyse features of modification and to generalize about their relative frequency in NS/NS and NS/NNS discourse. This would then enable us to select suitable video-taped material for the secondary comprehension experiment. The analysis here is based on the listeners' task solutions and on the transcripts. No attempt is made to include a detailed investigation of additional non-verbal (facial and gestural) clues offered by speakers in the course of their narratives, although there are occasional notes about accompanying signals in the transcripts themselves, where it seemed necessary to disambiguate an utterance whose meaning might remain uninterpretable. One example of this would be where speaker 16 says '*like this*' and mimes fist-shaking, after his listener fails to understand the phrase '*he shakes his fist*'.

In presenting this summary of findings, I will be referring to listeners' performances and speakers' performances. Again, it should be stressed that the terms 'listener' and 'speaker' are a convenient shorthand, since in fact the success of either partner on the story tasks was only achieved through collaboration. Their performances in any interaction are therefore not to be regarded as separable, independent phenomena.

8.4.1. Successful performances

In assessing the listeners' success or failure on any task, a strict criterion was applied: to be rated successful, the listener had to get the ordering task precisely right, numbering all six pictures in their original sequence. Table 7 shows the number of successfully completed tasks:

Table 7
 Correct task solutions, by individual story
 Max. in each case = 27 (*26)

	story 1	story 2	story 3
Ln	20	24	18
La	17	24	18
Li	14	24	16
Le	8	16	9*
Total	59	88	61
Max.	108	108	107

There seem to be three main implications from these global data. Firstly, if we treat all the listeners as a single group, it appears that the comprehension tasks based on stories 1 and 3 were of roughly equal difficulty overall - 59 correct solutions out of 108 (54.6%) and 61 out of 107 (57.0%), respectively - and that story 2 was considerably easier, with 88 correct answers out of 108 (81.4%).

Secondly, story 1 produced the greatest spread of correct answers, from 8 (or 29.6%) of the elementary listeners to 20 (or 74.0%) of the native listeners. On the other two stories, the results for the four listener groups were less widely distributed; indeed, on story 2 three of the groups - all but the elementary listeners - achieved the same number of correct solutions.

Thirdly, the success rate of each of the listener groups taken separately corresponds with what we might expect: the elementary listeners did have more difficulty than more proficient language users. Nevertheless, speaker modifications do appear to have enabled individuals in the elementary category to reach a satisfactory understanding of 33 narratives - including those told by the 'more difficult' speakers.

8.4.2. Unsuccessful performances

In section 8.1.3 I explained that the choice of the three picture-based stories was made on my assessment of the impossibility of predicting with total certainty a correct narrative sequence by simply studying the illustrations, without having understood – or even heard – the story. In each narrative there seemed to be two pictures whose relative order might not be clear, from merely visual examination: these were pictures 2 and 3 in story 1, pictures 4 and 5 in story 2, and 2 and 3 in story 3. The predicted incorrect solutions – numbered as on the listener's card – were therefore sequence 634125 (correct 624135) for story 1, 341652 (correct 351642) for story 2, and 624315 (correct 634215) for story 3. An analysis of the solutions offered by the unsuccessful listener subjects seems to bear out the assumptions about the first and final narratives, but not about story 2:

Table 8
Incorrect task solutions, by individual story

	story 1		story 2		story 3	
	P	O	P	O	P	O
Ln	5	2	–	3	6	3
La	6	4	–	3	6	3
Li	6	7	–	3	9	2
Le	5	14	–	11	11	6

P = predicted incorrect order
O = other incorrect order

There is a striking difference between the patterns of unsuccessful performance by listeners on stories 1 and 3, on one hand, and on story 2, on the other. The data in Table 7 suggest that the second story was the easiest of the three, in the sense that a higher proportion of the listeners' solutions were correct for that story than for the other two. However, Table 8 reveals that none of the 20 unsuccessful listeners – aggregating all four proficiency levels – offered the incorrect solution predicted when the visual materials

were selected. More striking still is the fact that among the 11 elementary listeners who failed to get the answer right, there were no fewer than 10 different incorrect versions, with only one solution shared by two subjects².

I pointed out earlier that story 1 produced the widest distribution of correct answers among the four listener groups (from 8 to 20, in Table 7). It is also noticeable that the number of individual listeners who produced the predicted incorrect solutions for the first story was almost identical, at 5 or 6 (see Table 8), for all four listener levels. Conversely, the number of listeners who produced other incorrect solutions for story 1 increased with lower proficiency. So, while only two of the 27 native listeners gave an answer that could not have been due solely to the potential confusion between pictures 2 and 3, at the other end of the language competence scale, more than half of the elementary partners (14 out of 27) offered a solution that could have been influenced by difficulty in listening, and not simply by purely visual misinterpretation.

On the basis of this brief analysis of the relative success, or lack of success, experienced by the original listeners, story 1 emerges as the narrative that (1) differentiated most between (assumed) levels of listener subjects and (2) presented the most demanding of the three comprehension tasks. For these reasons - and for others that will be discussed in section 8.5 - I decided to select versions of story 1 as the test material for the follow-up experiment.

8.5. Analysis of speakers' performances

The analysis of speakers' performances presented in this section is not intended to cover all possible modifications of input and interaction observed in the earlier studies of native/non-native discourse reviewed in Chapter 4. I

will restrict myself to overall comments on speaker 'success' and more detailed analysis of selected features of input and interaction modification.

8.5.1. General comment

In assessing the degree of communicative success in individual speakers' performances, the same strict criterion was applied as that used in judging listeners' performances: success was equated with full achievement of the listener's task – the correct numbering of all six pictures in sequence. Using this yardstick, none of the 27 original speakers was 100% successful (see Appendix B). The overall picture is one of considerable variation in the number of successful solutions achieved by the listener. Each speaker told 12 stories (3 stories to 4 listeners) and the number of successful solutions per speaker ranged from 4 to 11, with an average success rate of 7.7 correct completions.

I propose to present my analysis of selected adjustment features in the same order as they were discussed in Chapter 4, starting with input adjustments and then moving on to interaction modifications. I will then briefly discuss a third type of accommodation, which seems not to have been reported in the research literature – the modification of information choice.

8.5.2. Modifications of input

In their summary of the types of adjustment observed in NS/NNS studies, Parker and Chaudron (1987) subdivide modifications of input into simplifying and elaborating adjustments (see Table 5 in Chapter 4). The narrative data in my study contain examples of both and I propose to consider two subtypes of each. As far as simplification is concerned, the category of 'less complex lexis' is realized through (a) avoidance of idiomatic expressions and (b) substitution of high-frequency for low-frequency vocabulary items. In the case of

elaboration, there are instances of (a) paraphrase and (b) increased pausing.

8.5.2.1. Ungrammatical modifications

I will briefly mention the issue of ungrammatical input. In general, my data support the claim (Long 1981c) that ungrammatical input adjustment is extremely rare in NS/NNS conversation where the native partner is an EFL teacher. In the present corpus, which amounts to some 15 hours of interaction, there are only two instances of apparently ungrammatical input from the narrator. Taken out of context, the two phrases do appear deviant: '*during is easier*' (speaker 24) and '*you can suppose what's happening*' (speaker 14). However, when these utterances are examined in context, we can see that both may well have been the result of the same discourse phenomenon – convergence – and are not simply instances of ungrammaticality.

In recording 24, the following exchange took place as the narrator was giving his elementary listener the task instructions:

*S: and what I want you to do + is + to put + numbers
+ from number one + up to number six*

L: yes

*S: /1.0/ uh + according to the way + that I tell
the story*

L: and have must I make that during or after?

S: good + you could + during is easier

L: yes

The second sequence containing apparently deviant input adjustment comes from the final part of story 3, told by speaker 14 to his intermediate partner:

*S: ... as indicated by the line painted by the boy
when the elephant was in it*

L: and afterwards we can suppose what's happening

*S: and afterwards you can suppose what's happening +
they take out the stones*

L: yeah

In both cases the underlined speaker's utterance was in fact a response to something the non-native partner had just said. These are not so much instances of ungrammatical input produced spontaneously by a speaker, in an effort to assist the listener, as examples of the sort of convergence found even in native conversation, where one partner picks up a word or phrase from what the other has said. Here, the two narrators seem to have opted for a shortcut, recycling something just said by their non-native partner, which had been communicatively effective but formally deviant.

8.5.2.2. Simplification

(a) Avoidance of idioms

A number of speakers who used an idiomatic expression when telling a story to their native partner avoided it when interacting with the lower-level learners. Below are two sets of examples produced by different narrators, taken from their performances of story 2:

Speaker 22

Ln 'having cottoned on to their joke'

La 'the man then saw the funny side of the story'

Li 'the man then thought this was very funny'

*Le 'then the man decided it was a big joke +
he started laughing'*

Speaker 23

Ln 'and so finally the penny dropped'

La 'and then it dawned on him'

Li 'and then he realized'

*Le 'and then + he thought + and he realized /2.0/
it was easy'*

Speaker 22 used an idiomatic phrase to her native partner, but switched to progressively more transparent expressions for her L2 listeners. In the case of speaker 23's narratives, idioms were used to both higher-proficiency partners (Ln and La) but avoided with the intermediate and elementary learners. It is noticeable that both speakers cited here also built redundancy into their Le versions, with their final phrases (speaker 22: '*he started laughing*' and speaker 23: '*it was easy*') acting as repetitions or clarifications of their previous words.

(b) Replacement of low-frequency vocabulary items

In section 8.1.3 I explained that my selection of the task materials was based partly on my assessment of the lexical problems that particular stories might confront narrators with, when telling the story to the lower-level learners. One of the items that I assumed would cause such difficulty was 'barge' in story 3. The lexical tactics adopted by the 24 recorded speakers are interesting; Table 9 below shows the distribution, across listeners, of the referring expression first used in relation to the barge in story 3.

Table 9
First-used referring term for 'barge' in Story 3

Item	Ln	La	Li	Le
barge	16	12	6	3
boat	7	11	16	19
ship	0	1	2	2

This seems to be a clear case of complementary distribution: 'barge' and 'boat' were used approximately equally with the advanced NNS listeners;

'barge' was predominant with native listeners; 'boat' was the item selected in narratives to the lower-proficiency learners. Assuming that 'barge' would be the target item used to a native partner (true in two-thirds of the 24 cases),³ we might say that the use of 'boat' or 'ship' represents a substitution tactic: the speaker used higher-frequency lexis in order to enhance the chances of being understood by the non-native partner. If we apply a similar analysis for two of the other items referred to earlier (section 8.1.3) as likely to cause comprehension problems - 'disappointed' in Story 1 and 'to imitate' in Story 2 - we find similar patterns of substitution, as shown in Table 10.

Table 10
Lexical substitution for one target item in each narrative

	Ln	La	Li	Le	χ^2	sig.
Story 1						
'sad' (etc.) for 'disappointed'	5	10	20	22	13.80	0.005
Story 2						
'do the same' for 'imitate'	11	16	20	23	4.62	0.25
Story 3						
'boat' or 'ship' for 'barge'	7	12	18	21	7.98	0.05

In the case of Story 1, a number of higher-frequency adjectives (e.g. 'sad', 'unhappy', 'angry') were used in NS/NNS interaction to replace the lower-frequency items that predominated in the native-listener version ('disconcerted', 'flabbergasted', 'dismayed', as well as the term most commonly used in these data, 'disappointed'). The figures in Table 10 include instances where the narrator used the target item followed by a replacement likely to be more familiar to the foreign learner, e.g. *'he's a bit disappointed... he's unhappy he's um + sad* (speaker 4).

Chi-square analysis of the three items selected indicates that there was an increased use of higher-frequency lexis with decreasing level of proficiency of task partner, reaching the 5% level of significance in two of the three cases chosen for investigation (story 1, $\chi^2 = 13.8$, and story 3, $\chi^2 = 7.98$).

8.5.2.3. Elaboration

(a) Approximation

A number of speakers opted to use a form of words that provided an approximate paraphrase of the target expression, in contrast to the more straightforward substitution, such as 'boat' for 'barge'. In the case of Story 3, the fact that a narrator opted to employ a superordinate term ('boat') to replace a less frequent hyponym was unlikely to impair the listener's understanding of the story, given that only one possible referent was available in the picture set. But a more complicated situation arises in the case of picture 4 in story 2, where the hat seller shakes his fist at the monkeys who have taken his hats up into the tree. Some speakers apparently felt a need to find alternative expressions for 'shake' or 'fist', or both, as shown in Table 11.

Table 11
Approximation tactics in Story 2

Tactic	Example (speaker to Le)	Occurrences
approximation only	'he shouts + and + waves his fist' [speaker 4]	6 [4,9,15,17,23,24]
approximation followed by target	'he shook his + hand at them + he shook his fist at them' [speaker 3]	2 [3,22]
target followed by approximation	S: he shakes his fist L: hmhm S: he shakes his hand at them L: hmhm [speaker 18]	4 [1,6,18,27]
target plus gesture	'so he shook his fist at them' (FROWNS AND SHAKES FIST) [speaker 10]	1

The problem that seems to have arisen is that, under different circumstances (i.e. without access to the picture series), it would be misleading to replace 'fist' with the most obvious alternative, 'hand', since mention of hand-shaking would suggest a rather different gesture and

purpose. Some of the narrators seem to have exploited the available shared visual information and to have relied on the fact that their partner would recognize which picture was being referred to by the use of the word 'hand', since it would apply to no other. Others seemed to become aware of the semantic ambiguity of 'he shook his hand' and changed 'shake' to 'wave', apparently finding 'he waved his hand' closer to the spirit of 'he shook his fist'. Of the 24 speakers, more than half (13) found it necessary to modify the target phrase in some way⁴.

(b) Use of pauses

As noted in section 3 of this chapter, two degrees of pausing behaviour were marked in the transcripts. For the purposes of this present discussion, I will be referring only to pauses of at least one second's duration. Such pauses have been claimed to occur with significantly greater frequency in NS/NNS conversation than in interaction between native users. The data relating to pausing of this type is set out in Table 12 below.

Table 12
Pauses in narrators' speaking turns, data for all stories

	Ln	La	Li	Le	χ^2	sig.
Duration of interaction (in mins.)	178.21	198.31	235.05	271.54	-	-
Number of pauses (more than 1 sec.)	630	800	1002	1233	221.72	0.001
Av. interval between pauses (in secs.)	16.99	14.89	14.08	13.23	0.52	0.95

The chi-square statistics calculated for the overall total of pauses and for the intervals between pauses show that, although the difference in the absolute number of pauses made by narrators to the four levels of task partner was large and highly significant, the differences among the average intervals between pauses were minimal and non-significant. In other words, when allowance is made for the fact that the interactions at the four proficiency levels lasted progressively longer, it emerges that the difference in the relative frequency of pausing by narrators was not significant. Moreover, there is

evidence of a substantial range of use at the individual level, illustrated in Table 13.

Table 13
Range of use of pauses, by individual speaker

	lowest	highest
Ln	6 [S18]	52 [S24]
La	16 [S27]	105 [S24]
Li	16 [S18]	96 [S12]
Le	11 [S18]	172 [S23]

Speaker 18 made least use of pauses of all the narrators; speaker 24 produced the highest number of pauses with native and advanced partners, and also used the greatest number overall (359 pauses). It is worth emphasizing that these figures may conceal different types of pausing, or rather pausing for different reasons. A speaker may be planning what to say next (utterance content), deciding how to simplify an expression for a particular listener (utterance form), or giving the partner time or opportunity to complete a current segment of the task in hand, and so on. However, it is less likely in these data that the narrator speaking to a non-native partner is faced with the problems of content planning, for two reasons: firstly, the Ln version – which preceded the three NNS versions – was intended to offer a rehearsal in the heuristics of telling the story; secondly, the content of the text was basically defined by the illustrations on the tasksheet.

Reliance on quantitative input modification, such as the four types we have considered here, runs the risk of atomizing the interactive nature of the exchange between the partners and it would therefore be worth looking briefly at a sample extract from discourse which contains an occurrence of the third tactic shown earlier in Table 11, the use of the target phrase followed by an approximation, in order to give a clearer impression of the texture of the conversation.

Speaker 16

*S: and he shakes his fist at them + up in the tree
/1.0/ he shakes his fist at them*

L: ah ok wait a minute

S: he waves at them + do you understand?

L: no

*S: well he wakes up first of all and um + he's
angry with the monkeys*

L: ah yeah

S: because + yes?

L: ah yes

S: because they've taken his hats

L: yes

*S: and he + shakes his fist that is he waves his
arm + at them*

L: hm

S: in anger

L: yes yes

S: and the monkeys + all wave their arms back at him

This is a good example of the type of cooperative behaviour often claimed to be a feature of NS/NNS interaction, particularly between teacher and learner. The listener signals an on-line difficulty (*'ok wait a minute'*) and the narrator responds in various ways: reformulating (*'he waves at them'*), checking comprehension (*'do you understand?'*), backtracking (*'well he wakes up first of all and um + he's angry with the monkeys'*), filling in a logical link (*'because they've taken his hats'*) and finally repeating the apparently problematic phrase with a further, explicit reformulation (*'and he + shakes his fist that is he waves his arm + at them'*).

This illustration of the way the formal linguistic adjustments of input are actually interwoven into a sequence of discourse between the partners brings us to the second major type of modification reported in earlier NS/NNS studies – adjustments of interaction.

8.5.3. Modifications of interaction

Again, the evidence that will be presented in this section is not intended to offer a comprehensive picture of all such modifications in narrators' performances. Instead, it will concentrate on one of the features isolated by Long (1983a): the frequency of comprehension checks.

8.5.3.1. Comprehension checks

A comprehension check is taken to occur when a speaker offers a listener the opportunity to confirm that they have understood the meaning of an item or stretch of discourse, or to ask for clarification. Typical instances range from explicit checks such as 'Do you understand?' or 'Do you know what X means?', through more opaque phrases like 'Are you with me?', to single-word and non-verbal signals, e.g. 'Right?' and 'Hm?'. In cases like these last two, where there is no explicit formal interrogative element, a comprehension check is taken to occur when the word or sound is produced with rising intonation and is followed by either a pause or a response from the listener. Table 14 shows aggregate figures for comprehension checks from all the recordings.

Table 14
Comprehension checks, aggregated by listener level

	Ln	La	Li	Le	χ^2	sig.
Duration of interaction (in mins.)	178.21	198.31	235.05	271.54	-	-
Number of checks	137	233	349	423	167.12	0.001
Av. interval between pauses (in sec.)	78.0	51.0	40.2	38.5	19.29	0.001

The chi-square statistics for the total number of comprehension checks and for the intervals between pauses in the four narrative conditions were $\chi^2 = 167.12$ and $\chi^2 = 19.29$, respectively. Both values are significant at the 5% level. Here, then, there is evidence of a large and significant differentiation across the four levels of original listener, both in aggregate terms and also when the longer duration of the NNS recordings is taken into account.

Although these data broadly support the commonsense view that speakers feel less need with native partners than with non-natives to check comprehension or to allow their interlocutor the opportunity to request clarification, aggregated figures must be treated with some caution. At the individual level, the data reveal an enormous range of frequency of use of checks. The total number of checks used to all four partners by a single speaker varied from 13 (speaker 24) to 145 (speaker 17). Similarly, the range of checks produced to the four types of listener considered separately was also considerable, as shown in Table 15:

Table 15
Range of total occurrences of comprehension checks, by listener level

listener	lowest number	highest number
Ln	0 [speaker 3]	23 [speaker 23]
La	2 [speaker 26]	53 [speaker 17]
Li	2 [speaker 26]	39 [speaker 17]
Le	2 [speaker 24]	46 [speaker 17]

Speaker 17 made heavy use of comprehension checks to all three categories of non-native listener. Interestingly, though, the number of checks he offered to the native speaker was only slightly higher than the average across all narrators - 7 checks, as against an average of 5.7 checks. It is worth pointing out that none of his three foreign partners was currently studying in his language classes, and so he may well have been compensating for his unfamiliarity with those three listeners.

Although we have so far considered input and interaction modifications separately, it is unlikely to be the case, as we have already noted, that individual narrators adopt either type of adjustment exclusively. In discussing the data in Table 13, I pointed out that, of all the narrators in the study, speakers 18 and 24 made lightest and heaviest use, respectively, of pauses in their speaking turns. If we compare the way in which these two narrators employed pauses and comprehension checks, there is some support for a potentially interesting conclusion (see Table 16).

Table 16
Comprehension checks and pauses:
speakers 18 and 24

	Ln		La		Li		Le	
	C	P	C	P	C	P	C	P
S18	4	6	12	22	13	16	16	11
S24	3	52	3	105	3	96	2	106

It appears that, at least for these two individual narrators and on these particular measures, there were distinct patterns of NS/NNS interaction behaviour. Speaker 18 made more use of comprehension checks as her partners' level of proficiency in English decreased, but her pause production increased substantially from Ln to La and then showed a marked decrease across the three NNS listeners. The pattern of adjustment in speaker 24's performances, on the other hand, represents to some extent a mirror-image of speaker 18's behaviour: his use of checks showed no increase across the four listeners, while he produced approximately twice as many pauses for his non-native partners as for his fellow native speaker. These differences in overall pattern suggest that there are alternative routes to success on a communication task with a non-native partner. Both comprehension checks and pauses have the effect of increasing the time the listener has available for processing what he has just heard. Both can be effective ways of assisting comprehension.

8.5.4. Evidence for Hypothesis 1

Our discussion of the nature and extent of speakers' modification tactics in sections 8.5.2 and 8.5.3 now enables us to assess the evidence for the initial hypothesis for this study, defined in Chapter 7. Hypothesis 1 was 'that native speakers increase the degree of modification of input and interaction when talking to non-native listeners at decreasing levels of L2 proficiency'.

Our analysis has focussed on three features of narrators' behaviour, exemplifying the categories proposed in recent NS/NNS interaction research – input simplification, input elaboration and interaction adjustment. For each of these categories, there is statistical support for Hypothesis 1. The simplification subtype selected for investigation, lexical substitution, was shown to increase substantially and significantly in two of the three stories, in relation to the use of an adjective (Story 1) and a noun (Story 3), as shown in Table 10. As far as input elaboration is concerned, speakers showed an extensive and highly significant increase in pausing in absolute terms, although this proved to fall short of significance when the greater length of the NNS recordings was allowed for (see Table 12).

Statistically the strongest confirmation of Hypothesis 1 comes from the data on interaction adjustment, where the parameter chosen for analysis – comprehension checks – suggested a strong and significant variation ($p < .001$) in both the total number and the frequency of checks (see Table 14). These results are broadly consonant with previous findings (cf. Chapter 4) that native speakers' modification of interaction tend to be stronger and more consistent than their adjustment of input, whether of the simplifying or elaborating type.

It is of course arguable that the behaviour patterns adopted when speakers collaborate with their interlocutors to produce successful interaction are never

going to be reducible to simple measures of frequency and total. What is of interest to us is whether the broad picture of speaker behaviour in the recordings is one of an increasing amount of adjustment to the lower-proficiency listeners, and whether this can eventually be correlated with the level of success achieved by listeners – both their original partners and also the secondary listeners in the follow-up experiment.

It is conceivable that on particular measures, such as the number of comprehension checks, an individual speaker could succeed in communicating the events in a narrative to an elementary-level partner without using significantly more frequent modification, provided that their choice of words were suitably geared to the listener's proficiency. So ultimately the success of a narrative (in terms of the number of correct solutions achieved by the listeners) will be the result of interplay among a number of factors. These are likely to include modifications of input and interaction of the sort selected for illustration here, but will probably also depend on the relationship between the two discourse partners, especially in a situation where their conversation is being observed and recorded. Some aspects of this relationship – beyond the linguistic and conversational accommodation they may negotiate – are taken up in section 8.6.

8.5.5. Modifications of information choice

The narratives produced by some of the subjects in the study suggest that there may be a further type of modificatory behaviour at work in their story versions, which does not seem to have been discussed in the NS/NNS research literature ⁵: some speakers used different types of information to their intermediate and elementary partners. A number of the teachers that I recorded show clear differences across versions of the same story, in terms of their decisions as to which information to refer to, or to highlight. Although

they and their listeners had the same pictures in all four cases, they seem to have geared their selection of information to the level of listener in three ways:

- (1) the level of descriptive detail
- (2) the explicitness of logical development
- (3) the filling in of assumed sociocultural gaps

8.5.5.1. Descriptive detail

Some speakers used an increasing amount of detail when establishing the identity of characters in the stories. For example, in story 1 the blind man first appears in the second of the six pictures; Table 17 indicates the details mentioned by two subjects to their four listeners when referring to that part of the story.

Table 17
Level of descriptive detail in identifying
beggar (Story 1)

	Speaker 12				Speaker 27			
	Ln	La	Li	Le	Ln	La	Li	Le
across street			X	X	X	X	X	X
old				XX				
blind	X	X	X	XXX	X	XX	XX	XXX
beggar	X	X	X	XXX			X	
hat		X	X	X				
tin/cup			X	X			X	XX
sign		X	X	X				X
stick			X		X		X	X
glasses		X		X	X			XXX
Total	2	5	7	13	4	3	6	11

Each X = one mention by speaker

The overall quantitative pattern is similar for the two speakers. Each of them mentioned more details, more often to their elementary listener than to the others. Moreover, some information was given only to their Le partner. In the case of speaker 12, it was the fact that the blind man was old; in the case

of speaker 24, it was the fact that he had a sign saying 'Blind' hanging round his neck. Neither piece of information was offered to any listener other than the lowest-level non-native partner.

In this particular picture series the blind man is one of only two male characters, the other being the small boy. There was therefore no possible source of confusion for the listener, provided that the word 'man' was used. Yet speakers 12 and 24 - and in fact all but one of the other speakers in the study - felt it necessary to supply more detail for their lower-level listeners. The pattern of information supplied by these two narrators is representative of the sort of increase in detail found across the four versions told by any one speaker.

8.5.5.2. Logical detail

The second differential information-choice characteristic to come out of the data is the degree of explicitness with which the speakers set out the logical development of the story. In conversation with fellow natives we interact by making leaps or jumps, assuming that certain details or general information can be taken for granted, rather than proceeding painstakingly step by step. But what happened in many of the narratives where teachers were addressing Li and Le partners is very different from this 'normal' mode of conversation, despite the fact that, in this particular case, the partners were able to rely on concrete shared information, in the form of the array of pictures. Below are extracts from versions of story 1 told by speakers 8 and 10. It is noticeable that they chose to make the reasons underlying the behaviour of the blind man more and more explicit as their listeners' likely level of comprehension decreased.

Speaker 8

*to Ln 'the blind man (...) he's obviously rattling his tin
to try and beg from passers-by'*

*to La 'it's a blind man + sh-- shaking a + tin + to try
and beg for money from passers-by'*

*to Li 'an old man + shaking a tin + this tin is to collect
money + from the people in the street + because
this man is blind + he can't see anything + and he
hasn't got a job + he needs somebody to give him
money so that he can live'*

*to Le 'the blind man has a tin and he's rattling the tin
+ in order to attract people's attention because
he wants them to give him some money + because
he's blind and he's poor he can't work'*

Speaker 10

to Ln 'a blind man (...) with (...) his little begging tin'

*to La 'an old man who was blind standing there with (...)
a little collecting tin + he was begging for money'*

*to Li 'a blind old man with (...) a tin + which he was
shaking + he was begging people to help him +
to give him money'*

*to Le 'a poor blind old man + standing there with (...)
his begging tin + the blind old man + was +
asking people to give him money + because he was
+ he couldn't work + he needed that money to
live'*

What had been taken for granted in the first version of the story was foregrounded in the NNS versions, particularly in those told to the intermediate and elementary hearers⁶. Table 18 shows the underlying logical links in this segment of the narrative.

Table 18
Underlying links for the beggar's actions:
speakers 8 and 10

	Speaker 8				Speaker 10			
	Ln	La	Li	Le	Ln	La	Li	Le
the old man is blind	X	X	X	XX	X	X	X	X
he can't see anything			X					
he can't work			X	X				X
he can't earn a living			X					X
he's poor				X				X
he has to get money somehow			X					
he has to resort to begging						X		
he begs from passers-by	X	X	X				X	X
he carries a collecting tin			X	X	X	X	X	X
he has to attract attention				X				
he rattles/shakes the tin	X	X		X			X	
Total	3	3	7	7	2	3	4	6

When we compare the amount of detail offered to the lower-level listeners, we can see some evidence for what we might call an 'overkill' strategy. Even when the actual quantity of logical linking is similar across the versions to different listeners, there may well be a qualitative difference. Table 19 shows the information mentioned in one part of story 3, involving the use of Archimedes' principle to weigh the elephant in the barge:

Table 19
Underlying links for the loading of the barge:
speaker 19

link	Ln	La	Li	Le
put coal in	X	X	X	X
boat sinks	X		X	
to correct level	X	X	X	
to painted mark		X		X
when elephant was in	X		X	
<u>so weights are same</u>				X
stop loading				X
take out coal		X		
put into buckets		X	X	X
weigh each bucket	X	X	X	X
find elephant's weight	X	X	X	X
Total number of links	6	7	7	7

In explaining the solution to the problem of weighing the elephant, this speaker used more or less the same amount of detail, but it was only the

elementary level listener who was told the inference to be drawn (underlined in Table 19) from the fact that the painted mark had been reached. It seems that the speaker was prepared to assume that the other partners would be able to recover that information for themselves.

8.5.5.3. Sociocultural background detail

This area could have particular implications for language teaching, because it may well give us some insight into the sociocultural image that teachers have of their students, which is likely to affect the teacher–learner relationship. The specific illustrations of this point in my data relate to the communicative function of the two gestures depicted in pictures 4 and 5 of story 2: head scratching and fist shaking. It seems to me that these particular gestures are probably international rather than culturally bound ⁷. So it is intriguing that some subjects seem to have assumed that they had to bridge a cultural gap by interpreting the gestures for their intermediate and elementary listeners.

In the case of picture 5, ten of the narrators appeared to think that their elementary listeners would not be able to understand why the man in the story was scratching his head. We might take speaker 5 as an example:

Speaker 5

to Ln 'this was rather puzzling + so he takes off his hat and scratches his head'

to La 'and he takes off his hat and scratches his head + in confusion'

to Li 'well the man doesn't know what to do + he's very puzzled + and so he scratches his head which means I don't know what to do'

to Le 'the old man is + very puzzled and worried about + how to get his hats + from the monkeys /1.5/ and he takes off his hat and scratches his head + as people often do + when they feel puzzled'

There were similar explanatory episodes for the incident in the same story where the man shakes his fist at the monkeys, which have taken his hats away. Again, the meaning of the gesture was made explicit only for the lower-level NNSs, in particular for the elementary learners.

So, summarizing this third type of NS/NNS adjustment, the speakers tended to modify their decisions about what narrative information to employ in telling a story, according to their perceptions of how well their listeners were likely to cope. They described characters and objects in more detail, they explained causal and motivation links more explicitly, and they interpreted for their intermediate and elementary listeners details that they allowed the higher-proficiency partners to infer for themselves.

8.6. Analysis of negotiation by speaker and listener

In section 8.5.2 I made the point that it would be necessary to look for possible differences in overall patterns in the discourse negotiated by the partners. Having analysed, albeit selectively, some of the details of the behaviour exhibited by listeners and speakers as if they were discrete performances, I will now consider some of the overall features of the recorded interaction that they collaborated in creating.

8.6.1. Degree of negotiation

Even a superficial visual examination of the transcripts (see Appendix C) reveals two basic patterns of turn-taking in these narratives. On one hand, there are recordings where the speaker was the predominant producer of language, using long narrative turns, with the listener making occasional contributions to indicate comprehension – sometimes only at the end of the story, when they believed they had reached the correct solution. One example

of this general pattern is found in recording 4, story 1 (see Appendix C, page 412). When addressing his native and advanced partners, speaker 4 produced what appear as 'blocks' of speech in the transcript, interspersed with minimal comments from the interlocutor.

The second type of interactional sequence is one in which the degree of explicit mutual negotiation was much higher and where the speaking turns were more evenly distributed. Again taking story 1 in recording 4 as our example, we can see that the transcript of the narratives told to the lower-level non-native listeners Li and Le displays a quite different interactional structure. Here, the visual effect of the transcript is rather one of 'strings' of short speaking turns, with a much more equal share of participation by the two partners. Table 20 provides a quantitative comparison of the four versions of story 1 told by speaker 4.

Table 20
Speaking turns in Story 1:
speaker 4 and all listeners

	Speaker	Listener
Ln		
Turns	1	-
Words	209	-
Mean length of Turn	209.00	-
La		
Turns	2	2
Words	251	3
Mean length of Turn	125.50	1.50
Li		
Turns	22	21
Words	262	32
Mean length of Turn	11.91	1.52
Le		
Turns	26	26
Words	221	50
Mean length of Turn	8.50	1.92

Necessarily, the change of basic pattern from 'blocks' (Ln and La transcripts) to 'strings' (Li and Le) involved an increased amount of talk by the intermediate and elementary listeners. As well as producing as many turns as the speaker, they also contributed a greater proportion of the words in the

interaction than did the more proficient partners. Partner Li's participation amounted to 11% of the word total (32 out of 294) and Le produced 18% (50 words out of 271).

Using this very broad assessment, it is possible to assign the various narrative transcripts to either the 'block' type - narrative with infrequent listener interventions, principally acknowledgments or requests for clarification - or the 'string' type - where there is constant alternation of speaking turn and a greater contribution from the listening partner. This division will be further discussed in section 8.7.

8.6.2. Listener's role

I have suggested a rough-and-ready quantitative distinction between types of overall pattern of interaction. A qualitative dimension also emerges from the data: the relative status of the listeners in the discourse. The data suggest that there was a marked difference between the status allotted by some speakers to their Ln and La partners and that given to their lower-proficiency listeners.

In section 8.5.3 I discussed speakers' use of more descriptive, logical and sociocultural detail with their intermediate and elementary partners. It might be argued that what these teachers were doing was making an admirable effort to narrate a story as clearly as possible to the listeners with lower levels of competence in English. However, to look at the situation solely in terms of what the native narrator did is to take a one-sided view of communication. Even in these relatively one-way storytelling tasks, the listeners were in a position to influence the interaction; indeed, they were encouraged to do so in the initial instructions from the narrator, by providing feedback on how comprehensible the story was. In that sense, the listeners

were potentially active participants in the discourse that led to the completion of their task.

However, it is striking that some narrators continued to provide information even when their non-native partners were giving unambiguous signals that they had understood the current episode of the story and that the narrator could proceed to the next picture. The example below is typical of this sort of pattern:

Speaker 22 (to Le)

S: and on the other side of the road + from the shop + there was a blind man + a man with + dark glasses + holding

L: a man who + sorry?

S: yes?

L: a man

S: a blind man

L: a blind man yes I see

S: a blind man yes he has a stick in his hand + and uh + dark glasses

L: hmhm ok

S: and he was holding + a + a can can in his hand + to collect money

L: yeah yeah + I see

S: yeah? /1.0/ so the little boy noticed him (...)

In his third turn in that extract, the listener said '*a blind man yes I see*', which might reasonably be taken as a signal that (he believed that) (a) he knew the meaning of the word 'blind' and (b) he had identified which character the speaker was referring to, that is, the only man in the set of pictures. But the narrator continued to supply information: firstly, that the man was carrying

a stick; secondly, that he was wearing dark glasses. Again, the listener indicated that he had understood, with *'hmhm ok'*. Still the speaker persevered with further descriptive detail: he referred to the can in the man's hand and even to its intended function. *'Yeah yeah + I see'* was the learner's third attempt to signal satisfactory comprehension; even then, the speaker checked again (*'yeah?*) before proceeding.

A second example shows how an elementary NNS listener had obviously understood the denouement of the narrative and indicated that by laughing at the appropriate point. But, again, the speaker doggedly continued to the end of the story:

Speaker 18 (to Le)

S: and he thinks it's the driver of the car

L: hm

S: who puts the money in his tin

L: (LAUGHS)

S: and so he lifts his hat

L: yes

*S: to the departing figure + of the driver + and
the little boy is standing there with no
thanks*

L: (LAUGHS)

S: for his good deed

L: hm

S: all right good

This speaker's behaviour in this segment is particularly interesting, because she reacted very differently to a similar signal from her advanced non-native partner, at the end of story 2:

Speaker 18 (to La)

S: so he's got a problem + and + wondering + what to do about this he scratches his head + and of course the monkeys all scratch their heads as well /2.0/ and they're obviously + going to do exactly what he does

L: (NONVERBAL SIGNAL)

S: got it?

L: yeah

S: right

In this second case, she accepted the advanced listener's claim to have understood the ending of the story, despite the fact that he had not actually completed her narration and was still on the fifth picture. This would suggest that she allotted rather different roles to learners at advanced and elementary levels. She was apparently prepared to take the advanced listener at his word, as far as self-assessment of his comprehension was concerned. There is at least the possibility that non-native adjustment of this sort by a speaker – no matter how well-intentioned – involving an 'overkill' strategy similar to that discussed earlier, could be perceived by the non-native learner as patronising and unnecessary⁸.

8.7. Selection of experimental materials

In section 8.4 I explained the reasons for my choice of story 1 as the test material for the second-stage comprehension experiment. I will now set out my criteria for deciding which speakers' versions of that story to use.

Firstly, it seemed reasonable to use only recordings in which all four original listeners had been able to reach a correct solution of their comprehension task. Otherwise, there would be a risk that any version

resulting in an unsuccessful solution by an original listener might be in some way flawed or unhelpful and, when used in the experiment, could therefore put the secondary listeners at a disadvantage. A total of five of the recorded narrators (speakers 4, 14, 16, 26 and 27) had told versions of story 1 to which all four of their listeners achieved the correct solution.

The second criterion was related to the overall nature of the partners' interaction, as discussed in section 8.6. In terms of my informal two-way division into 'block' and 'string' types, these five narrators showed different profiles of general patterning, according to listener level, as shown in Table 21 below.

Table 21
Overall discourse pattern type adopted by successful Story 1 narrators

	Ln	La	Li	Le
speaker 4	B	B	S	S
speaker 14	S	B	B	B
speaker 16	B	B	B	B
speaker 26	B	S	B	S
speaker 27	B	B	S	S

B = blocks; S = strings.

On the basis of this broad categorization, it appears that speakers 4 and 27 might represent a global strategy of increased negotiation with lower-level listeners, while speakers 14 and 16 might have achieved communicative success not by modifying their style of interaction but rather by adjusting their linguistic input to a degree appropriate to their intermediate and elementary partners' level of comprehension. Table 22 (below) provides more detailed information on the four narrators' sets of Story 1 versions.

Table 22
Word totals, speaking turns, pauses and comprehension checks in
Story 1 narratives told by speakers 14, 16, 4 and 27

	S14					S16					S4					S27				
	T	NT	LT	P	C	T	NT	LT	P	C	T	NT	LT	P	C	T	NT	LT	P	C
Ln	235	6	6	10	3	168	3	2	2	0	209	1	0	6	0	209	1	1	8	0
	(39.17)					(56.0)					(209.0)					(209.0)				
La	237	3	2	7	2	224	7	7	5	1	251	2	2	8	0	270	4	4	6	0
	(79.0)					(32.0)					(125.5)					(67.5)				
Li	235	5	4	6	1	266	2	1	6	0	262	22	21	9	4	300	22	22	4	0
	(47.0)					(133.0)					(11.91)					(13.64)				
Le	228	2	1	6	3	270	4	3	7	1	221	26	26	15	6	327	9	9	17	0
	(114.0)					(67.5)					(8.5)					(36.33)				

T = total number of words by speaker

NT = narrator's speaking turns

LT = listener's speaking turns

P = pauses of at least 1 second

C = comprehension checks

The figures in brackets represent the mean number of words in the narrators speaking turns.

The presentation of data in Table 22 is designed to highlight certain features of the four speakers' Story 1 versions; full transcripts are available in Appendix C. Analysis of the figures suggests that the two putative 'pairs' of speakers with similar overall styles of NNS discourse – speakers 14 and 16 on one hand and speakers 4 and 27 on the other – predominantly adopted adjustments of input or interaction respectively.

Speaker 14's four versions comprised very similar totals of words (235, 237, 235 and 228) and he seems to have made no differential modification in terms of pauses or comprehension checks (combined totals 13, 9, 7 and 9). Speaker 16 increased the total number of words as the L2 level of his partners decreased (168, 224, 266 and 270) and this included a rising number of pauses but little change in comprehension checking. With the exception of his La version, his mean length of turn was over 50 words; in the case of the La narrative, the mean figure disguises the fact that the bulk of his text was spoken in a single turn of 138 words, so that he was arguably still delivering the narrative in 'block' form. The relatively high number of turns in the La version is due to the listener's intervention with a clarification request that led

to a rapid succession of short turns.

The transcripts of the narratives by speakers 4 and 27 display a similar tendency to a greater degree of contribution from their Li and Le partners, compared with that from the native and advanced listeners. In the case of speaker 4, the number of turns appears to increase in direct relation to the listener's lack of proficiency in English, the figures being 1, 4, 43 and 52; the total for the Le version is particularly high, when we consider that the overall number of words (221) was in fact lower than in the La (251) and Li (262) conversations. Speaker 27's word totals rose in inverse relation to partner level (209, 270, 300 and 327) and the number of speaking turns with the two lower-level partners were higher than with Ln and La partners, although in this case the intermediate-level total (44) was greater than that for the elementary version (18).

When we examine the use of pauses and checks by these two narrators we can see a marked difference between them; speaker 4 resorted to progressively more use of both tactics, whereas speaker 27 seems to have relied on pausing rather than comprehension checks. But the overall pattern of both narrators' sets of stories is one of reduced length of speaking turn (Ln and La compared with Li and Le), in which the intermediate and elementary listeners seem to have felt encouraged or permitted to take a greater share in the responsibility for the success of the interaction than was the case with their more proficient counterparts.

It was on this basis that a decision was taken to use recordings 4 and 27 as examples of the more interactive style with Li and Le listeners, and 14 and 16 as examples of the less interactive approach. The reason for choosing two speakers, rather than one, to represent each broad style was to reduce the chances of the secondary listeners in the experiment achieving better results

on a particular version of story 1 not through any style effect but because of an individual speaker's storytelling ability. If the experimental results showed that one of the styles helped non-native listeners to a higher degree of success in comprehension than the other, then firmer conclusions might be drawn about the effect on comprehensibility of the overall pattern of native/non-native discourse.

8.8. Summary

In this chapter an analysis has been presented of specific features and general patterns in the video-recordings of narratives to different levels of original task partner. The statistical analysis of selected NS/NNS discourse characteristics from all the narrators provides support for Hypothesis 1 of this study: the story versions told to non-native partners were significantly different on both input and interaction parameters, the latter being statistically the more robust. On the basis of the results achieved in the listeners' performances on their comprehension task, story 1 was selected as the material for the secondary experiment, for two reasons: its greater degree of difficulty and its greater discrimination among listening proficiency levels. On the basis of speakers' performances, related to their adjustments of input and/or interaction, and to their overall style of narrative discourse, four sets of successful story 1 recordings (those by speakers 4, 14, 16 and 27) were chosen for use in the follow-up experiment, in order to assess the evidence for Hypotheses 2-4 of the study, concerning the possible beneficial effects of alternative types of NS/NNS modification on the comprehension achieved by secondary non-native listeners.

CHAPTER 9

THE COMPREHENSION EXPERIMENT

9.1. Test design

The design of the experiment to measure secondary listeners' comprehension of the videotaped narrative texts was strongly influenced by two considerations already discussed in this study: the positive effects of allowing learners to answer L2 comprehension tasks through their L1 (cf. Chapter 3); and the importance of separating out the ability to comprehend foreign language messages from the ability to (re)produce messages in that language (cf. Chapter 5).

The experiment adopted a classroom research format, rather than a laboratory-type design, in that the subjects were asked to participate in the tests in their normal EFL teaching groups, not in reconfigured experimental groups. (Details of the institutional arrangements follow, in section 9.3.) It was important to obtain some external measure of individuals' proficiency in understanding spoken English, since class placement in the institution concerned was based on the students' performance on a test of reading, grammar and oral competence ¹. Consequently there might be a relatively wide range of listening ability in the population and it was therefore essential to have available some assessment of its extent, in order to know whether the groups were similar enough to allow comparison across groups, rather than across individual learners.

A two-stage experimental design was adopted. The first stage consisted of an audiotape-based test of 'pure' listening comprehension, that is, the ability to recognize sounds rather than meaning. The second stage involved

the video-taped narrative materials described in Chapter 8 and was intended to measure subjects' ability to understand the message of the story version they heard.

9.1.1. Audio test

The instrument selected for the first stage of the experiment was the phoneme discrimination sub-test from the Edinburgh Language Battery, or ELBA (Ingram et al. 1968). The test was designed for use as a test of L2 proficiency in English with overseas students about to matriculate for graduate courses at the University of Edinburgh. The sound discrimination sub-test consists of two sections of 50 questions each, the first testing the recognition of vowels and the second testing the recognition of consonants. For each item in the test, the listener hears a single word played once on audio-cassette and has to circle one of a set of three alternative words on the test sheet, to match the item on tape. For example, where the word on tape is 'choke', the listener is offered a choice of 'chalk', 'choke' and 'chock'.

The reasons for choosing this particular instrument were threefold. Firstly, ELBA is a well-established test with statistical documentation and would allow reliable comparisons among my subjects' scores. Secondly, its format makes it intensive and economical, testing 100 items in under 10 minutes. Thirdly, it provides a relatively 'pure' measure of listening.

In the context of my study, the adjective 'pure' has two relevant senses. It refers to the fact that since the function of the ELBA subtest is to measure a learner's ability to identify phonemes in single words, it represents a test of sound, not meaning. It might therefore be described as a test of signal recognition, in contrast to the message comprehension that forms the basis of the second-stage videotape narrative test.

The second aspect of the 'purity' of the ELBA phoneme discrimination subtest is one of form. It can be claimed to be a relatively pure measure of listening ability because the candidates show their comprehension without needing to resort to L2 production, such as repeating or writing down the lexical item played on tape.

The need for care in item construction in tests of listening comprehension is a topic that has been raised recently by a number of writers, e.g. Brown and Yule (1983b) and Richards (1983). Brown and Yule suggest that there are at least four alternative sources of error on a listening item tested by written response – apart from the normally attributed reason that the learner has not understood the text:

- (1) misunderstanding the written question;
- (2) failure to convey intended meaning in the written response;
- (3) lack of attention to a specific detail in the test material;
- (4) poor memory.

Potential uncertainty about the precise source of error makes it important to design test items in such a way that these 'non-listening' causes of difficulty can be excluded when assessing listeners' performances.

In considering the design of listening measures from a different perspective – namely that of research into the input/intake distinction in SLA – Chaudron (1985c) argued that comprehension measures

differ in the degree to which they allow intervening variables, such as conscious knowledge or performance constraints, to influence the learner's response.

He proposed a matrix of listening task types (Figure 9), intended to clarify the extent to which different measures of comprehension will make different demands on the listener.

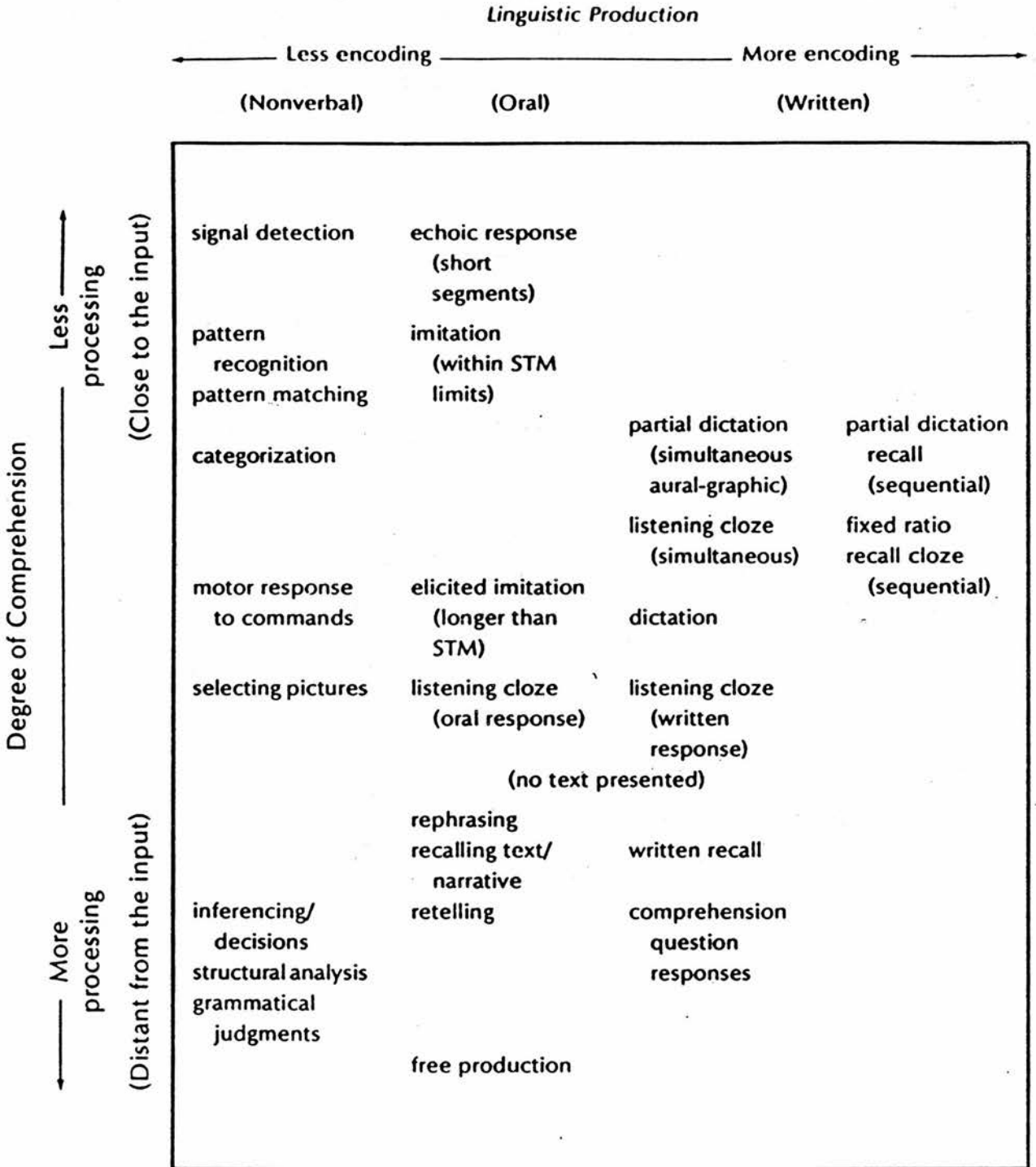


Figure 9. Dimensions of tasks responding to input

The matrix incorporates two principal dimensions of difficulty: the type/amount of production involved in the response; and the degree of abstraction from the original input, ranging from instant recognition to delayed analysis and reconstruction. The ELBA phoneme discrimination sub-test may be placed towards the top left-hand corner of Chaudron's matrix; it demands no linguistic encoding in the response, since the learners have only to circle one item in an array, and it demands relatively little by way of input processing, as the recorded material consists of a single decontextualized word. Consequently, we may assume that Chaudron would classify the task involved in the ELBA subtest as either 'pattern matching' or 'categorization'. Whichever it might be, the underlying point remains the same: that in terms of both its form and its function, the sound discrimination measure may serve as an appropriate means of establishing the level and range of pure listening ability among the experimental population in this study.

9.1.2. Video test

Again, the aim here was to restrict the focus of the tasks in the second, video-taped narrative stage of the experiment to comprehension and not to allow L2 production factors to intervene. With this in mind, two tasks were designed based on the story text. The first was a picture-ordering task similar to the one completed by the listener in the original interaction. The second was a retelling task in which the subjects were asked to write in their first language.

9.1.2.1. Picture ordering

As described in the previous chapter, the listeners in the story-telling sessions recorded at the data collection stage of my study were given a jumbled set of six pictures and were asked to number them to match their order of occurrence in the story told by their narrator partner. Given all six pictures and sufficient time, a listener could work out a narrative sequence simply by exploiting the visual clues in the array. However, as was pointed out in section 8.1.3, it is not possible to be absolutely certain of the correct order of pictures on the listener's tasksheet without hearing the story; in the case of the story selected for the secondary experiment, it was the order of the second and third pictures that might be doubtful.

In order to reduce the possibility of a subject achieving a totally correct solution to this ordering task without having understood – or even listened to – the video-taped narrative, the final picture in the original sequence was removed and made the focus of the second element in the video test, the retelling task (see below). The reason for retaining an ordering task at all, rather than simply relying on the subjects' performance on the retelling task for an indication of their degree of comprehension, was the assumption that some listeners might be unable to understand the details of the denouement of the story but might well have followed the gist of the earlier part of the narrative. The inclusion of an amended five-item ordering task would make it possible to assess whether an individual who failed to retell the end of the story had also been confused during the narrative build-up, or had merely failed to understand the ending.

9.1.2.2. Retelling

The final picture was therefore omitted from the picture-ordering test sheet and the subjects were asked to write in their own language what happened at the end of the story, i.e. to retell the events that would have been depicted in the missing picture. The study by Wolff (1987) – published since I carried out my experiment – suggested that, when low-intermediate listeners were permitted to provide L1 responses to an L2 story comprehension task, they showed a greater degree of comprehension than if they had had to respond in the L2. They also appeared to gain easier access to potentially helpful schematic, script-based processing of the spoken information. Wolff found that the recall scripts of his German secondary school learners of English indicated a greater use of 'imported' predictions in their L1 versions of the English text than in those of learners required to answer in English. This suggests that, under certain task conditions, L2 listeners at all levels may well deploy precisely the sort of top-down interpretation that other researchers (notably Carrell 1983) have claimed were lacking in the L2 processing of learners below advanced or post-intermediate level.

The main influences on my decision to allow the subjects to retell the story ending in their L1 were:

(1) the general principle that ability to comprehend precedes and exceeds ability to produce – a central tenet of the Comprehension Approach (see Chapter 5) and of Krashen's input hypothesis (see Chapter 3);

(2) a number of specific studies suggesting possible advantages in encouraging, or even demanding, the use of the mother tongue at lower levels of L2 proficiency as the medium for demonstrating comprehension, whether in the context of teaching (e.g. Terrell 1977) or of research (Hawkins 1985,

Chaudron 1985b).

Terrell, in particular, has argued strongly for the 'legalization' of the use of the L1 in response to L2 learning activities:

I suggest that the student be allowed to respond in his native language. If the student is permitted to concentrate entirely on comprehension by permitting responses in L1, he can rapidly expand his listening abilities to a wide range of topics and still be comfortable in the communicative process.

(Terrell 1977:331, my emphasis)

There is a link between this classroom-oriented argument, that L1 response enables the learner to devote more attention to understanding, and the evidence presented by a number of researchers into L2 comprehension. It revolves around the assumption that, when not required to respond in the target language, language learners are able to free information processing space that would otherwise be taken up by their attention to formal accuracy in preparing an L2 answer. The capacity thus made available may be devoted to greater attention to message content.

A parallel version of this argument is available from a study of the recall of spoken text by L2 learners of Dutch (Hulstijn and Hulstijn 1984, quoted in Chaudron 1985c). When task instructions directed the subjects' attention to the importance of framing their recall version in formally correct Dutch, the learners scored significantly lower than when they were not required to pay attention to the surface accuracy of the retelling. Attention to form appeared to be achieved at the expense of attention to content, at least below a certain level of L2 competence. Given this finding in relation to the use of the L2, one might reasonably argue that if listeners are permitted to answer in their own language, they are in effect being required to pay (even) less attention to form than in the 'free production' variety of L2 retelling task that helped Hulstijn and

Hulstijn's learners to achieve better performances.

There seem, then, to be potential benefits for the L2 listener in being able to respond in the native language; it enables the learner to concentrate more on what is being said. A further advantage of the use of L1 in indicating the degree of comprehension is illustrated by a study of NS/NNS interaction (Hawkins 1985). Hawkins reports a number of instances in her data where it only became clear through subsequent use of the non-native partner's first language in follow-up interviews that apparently appropriate responses in the discourse had been spurious and in fact indicated misunderstanding, rather than successful comprehension.

The final consideration in deciding to ask my subjects to answer through their L1 was an affective one. It might help to reduce the anxiety level among the learners taking part in the experiment, since they could otherwise feel concern about their ability to cope with the productive side of the task, given their elementary level of proficiency in English and also the fact that their scripts would be scrutinized not by their class teacher but by an outsider.

In short, there were three reasons underlying the decision to ask for written recall in the mother tongue: it would allow the listeners to focus on meaning rather than form; it would provide a more precise picture of their understanding of the narrative; and it would lessen the psychological pressure on the participants.

9.2. Preparation

9.2.1. Tape materials

9.2.1.1. Audio-tape

The phoneme discrimination component from the ELBA test battery was copied onto a Maxell C60 audio-cassette; the total duration of the recording was nine and a half minutes.

9.2.1.2. Video-tape

As explained in the previous chapter, the materials selected for use in the experiment were the versions of Story 1 told by speakers 14, 16, 4 and 27. These were edited from the original Betamax video-cassettes onto a single U-Matic video-cassette, using professional editing suite facilities³. Each of the 16 narratives was assigned a letter (A to P) in running sequence; this is shown in the table below, together with a indication of the duration of each narrative in minutes and seconds.

Table 23
Running order and duration of narratives

version	S14	S16	S4	S27
Ln	A [2.00]	E [1.20]	I [1.50]	M [1.35]
La	B [1.40]	F [1.35]	J [2.15]	N [1.50]
Li	C [2.00]	G [1.50]	K [3.00]	O [2.30]
Le	D [2.04]	H [2.10]	L [2.48]	P [3.00]
[Total	7.44	6.45	9.53	8.55]

Computer-generated title captions were inserted at the start of the compilation and 'Story A (B, C etc.)' at the beginning of each narrative to make it easier to locate the items for playing during the experiment.

9.2.2. Tasksheets

A double-sided tasksheet was prepared, with the 100 items of the ELBA subtest on one side and the story pictures on the other. A copy of the two pages of the tasksheet is provided in Appendix E. It should be noted that, apart from the design decisions relating to the narrative tasks described in section 9.1.2, an alteration was made to one of the pictures. A number of participants (both native and non-native) in the data collection stage reported in Chapter 8 had commented that they had been confused by a conflict between the story being told by their partner and the visual information in the third picture. In the original version (see Appendix A) picture 1 shows the small boy looking at toys in the shop window. In picture 2 he is depicted in the shop doorway, about to enter the shop but pausing as he notices the blind man on the other side of the road. Picture 3 is then a close-up of his face, looking concerned, set against a background of the shop window.

Logically, this third picture ought to show him still in the doorway. Perhaps because of this confusing background detail, a number of the original listeners (21 of the 108 listeners, including 5 of the 27 natives) had reversed the order of pictures 2 and 3, in order to give the first two pictures in their series the same background. Interestingly, though, this potential source of confusion was not commented on by any of the narrators, which perhaps underlines how different priorities in a communicative task can lead to quite different perceptions of the same information. In order to prevent similar confusion arising among the experimental subjects, the background details of picture 3 were removed, in order to make it compatible with the child's standing in the shop doorway (see Appendix E).

As will be clear from the videotape narrative tasksheet, the first five pictures were placed in jumbled order across the sheet, with a blank lozenge

shape for the subjects to number from 1 to 5; below them a blank picture frame was labelled with a number 6. Inside the frame were the words "What was the end of the story?" in Portuguese. To the right of the frame was a space and above it the instruction "Write in Portuguese what happened at the end of the story".

9.3. Subjects

Arrangements were made for the comprehension experiment to be carried out in May 1986 at the Instituto Britânico in Lisbon, the British Council's principal direct teaching establishment in Portugal. The subjects were students in classes following elementary-level EFL courses on a twice- or thrice-weekly basis (3 hours per week in toto). The Instituto operates a 10-week term and the subjects were in terms 3, 4 or 5, attending in morning, afternoon or evening classes. The majority of the learners were adults, although some were secondary school pupils with a minimum age of 16 years. With the exception of one Thai student - whose script was excluded from the subsequent analysis - the subjects were all native speakers of Portuguese. The total number of participants in the experiment was 222, distributed among the 16 groups as shown in Table 24.

Table 24
Number of listeners to narrative versions

version	S14	S16	S4	S27
Ln	Group 1 13	Group 5 15	Group 9 10	Group 13 16
La	Group 2 15	Group 6 17	Group 10 17	Group 14 12
Li	Group 3 14	Group 7 15	Group 11 13	Group 15 13
Le	Group 4 13	Group 8 14	Group 12 13	Group 16 12

9.4. Procedure

In the lesson before the test was due to take place, the students were informed by their class teacher that the next session would be taken by another teacher and would include a small experiment. In correspondence with the Institute, I had requested that the word 'experiment' should be used rather than 'test', since the latter might cause the students some anxiety. At the start of my session with each group, I also attempted to put the students at ease by first getting them to work in pairs, formulating questions that they would like answers to about my purpose in being there. When pairs had agreed on and asked their questions, I gave them the information they wanted.

The students were then given general instructions for the test in Portuguese ⁴. They were told that the aim of the experiment was to investigate the language difficulty of some examples of videotaped material. The test would be anonymous but they were to mark their test sheet with the appropriate group letter (matching that of the narrative version they were going to see). If they wished to be informed of their results, they could put their name on the test sheet. They were then given instructions for the first part of the experiment, the ELBA phoneme discrimination test.

9.4.1. Audio test

The ELBA test cassette begins with two examples preparing candidates for the discrimination series. When the Portuguese instructions had been given, the students were asked to give their answers to the sample questions orally, in order to check that the procedure had been understood. Once the pattern of questions was established in this way, the 100-item test then proceeded. The test cassette was played in all cases on a Goodman teaching recorder.

9.4.2. Video test

Immediately after they had completed the ELBA subtest, the subjects were given further instructions in Portuguese for the second phase of the experiment. They were told that they would be watching a videotape of someone telling a story in English and that the tape would be played twice. The procedure for the picture ordering and retelling tasks was explained. The fact that they were to write in their native language, not in English, was repeated for emphasis in the instructions; nevertheless, a number of students asked for further confirmation that this was the case – presumably since such use of the L1 in the EFL classroom was unfamiliar or proscribed.

The videotape was played twice, on a Sony U-Matic VCR with a 26" Grundig colour monitor. The replay immediately followed the first showing, but the students were then given time after the replay to write down their version of the ending of the story. The whole experimental sequence (i.e. audio and video tests) lasted approximately 25–30 minutes; no time limit was imposed. When all the students in a group had completed their Portuguese versions of the denouement to their own satisfaction, the tasksheets were collected in. I then taught the class for the rest of their scheduled lesson.

9.5. Results

9.5.1. Audio test

It will be recalled that the reason for using the ELBA sound discrimination test was to establish the degree of similarity or difference in listening proficiency among the sixteen groups, given that the experiment was to be conducted in the students' normal classes. The overall results for groups 1–16 are shown below (Table 25) for the separate parts of the ELBA subtest – vowel

discrimination (ELBV) and consonant discrimination (ELBC) – together with total scores (ELBT).

Table 25
Means and standard deviations for ELBA vowel,
consonant and total scores, by group

Group	ELBV		ELBC		ELBT	
	mean	s.d.	mean	s.d.	mean	s.d.
1	25.00	3.92	33.54	3.15	58.54	5.33
2	19.40	3.56	29.73	3.67	49.27	5.39
3	19.86	3.99	31.28	3.54	51.14	5.53
4	22.15	2.97	32.69	4.07	55.62	5.79
5	23.07	4.83	34.33	2.72	57.40	5.94
6	21.82	5.19	33.47	4.00	55.29	7.84
7	19.20	2.91	32.20	4.38	51.40	6.36
8	19.86	4.31	32.36	3.65	52.21	5.48
9	22.10	3.64	33.60	2.84	54.70	4.35
10	20.53	3.15	32.00	3.64	52.53	5.71
11	23.15	4.76	33.54	4.39	56.69	7.62
12	21.00	4.32	31.15	4.02	52.15	6.34
13	19.94	3.91	32.25	3.02	52.19	5.78
14	24.00	3.64	32.92	4.29	56.08	6.05
15	21.15	4.65	31.77	3.59	52.92	6.97
16	20.08	2.61	30.17	2.86	50.25	4.39
Total	21.39		32.31		53.70	

These results appear to point to two areas of variation. Firstly, there is variation within the ELBA scores for each group on the two components, vowel and consonant recognition, with mean differences varying from 8.54 (group 1) to 13.00 (group 7). Secondly, there is some variation among the groups, the lowest overall score being 49.27 (group 2) and the highest 58.54 (group 1). Given this initial evidence, tests were run to establish the extent and significance of such variation. In the case of the differences between each group's performances on the ELBA vowel and consonant discrimination tests, t-test results were as follows:

Table 26
T-test statistic on ELBV and ELBC performances, by group

Group	Mean diff. ELBV-ELBC	Corr. coeff.	2-tail prob.	t value*	d.f.
1	-8.54	0.13	0.68	-6.55	12
2	-10.33	0.13	0.63	-8.41	14
3	-11.43	0.07	0.80	-8.32	13
4	-10.54	0.22	0.47	-8.47	12
5	-11.27	0.17	0.54	-8.52	14
6	-11.65	0.45	0.07	-9.73	16
7	-13.00	0.50	0.06	-13.06	14
8	-12.50	-0.06	0.84	-8.04	13
9	-11.50	0.73	0.02	-14.51	9
10	-11.47	0.41	0.09	-12.81	16
11	-10.39	0.39	0.19	-7.38	12
12	-10.15	0.15	0.62	-6.74	12
13	-12.31	0.38	0.15	-12.54	15
14	-8.92	-0.05	0.89	-5.36	11
15	-10.62	0.42	0.15	-8.47	12
16	-10.08	0.29	0.36	-10.71	11

* For all results, $p < .001$, (2-tailed).

Clearly the differences between each group's mean scores on the two parts of the sound discrimination test are substantial and significant ($p < .05$). The fact that the group means vary consistently and considerably could simply mean that vowel recognition represents a more difficult task for these learners than the consonant test. This would not be totally unexpected, for two reasons. Firstly, the degree of similarity between the English and Portuguese phonological systems is greater in relation to consonants than to vowels (Shepherd 1987). While 18 of the 24 English consonants are equivalent or near-equivalent to Portuguese consonants, a higher proportion of the English vowels (12 of 22) have no equivalents or near-equivalents in Portuguese. This implies that Portuguese learners of English may experience more difficulty in recognizing (and producing) the L2 vowel forms. Secondly - but related to the previous point - it is arguable that, in this particular form of test, the listener may derive greater assistance from English orthography in relating sound to print on the consonant items; this may well make it easier for the learner to discriminate among, for example, 'fails - veils - Wales' than among 'rot - root - wrought' (both items from ELBA).

However, when we compare the t-test results on ELBV and ELBC scores with those on a Pearson product moment correlation (Table 27), it appears likely that additional differences must be at work.

Table 27
Product moment correlation coefficient for
ELBV, ELBC and ELBT - all groups

ELBC	.32	
ELBT	.83	.77
	ELBV	ELBC

For all results, $p < .001$)

One possible interpretation of the fact that the product moment correlation between the two components of the ELBA test is low ($r = .32$) is that the vowel and consonant discrimination items are in some way drawing on different aspects of aural competence, but there seems to be no obvious reason why this should be the case.

An alternative or additional contributing factor may be the test format, which is multiple choice, with only three options for each item. Consequently, it would be statistically possible for an absolute beginner in the language to get one-third of the answers right - i.e. to score 16.67 in each of the two subtest components - by pure guesswork. If we consider the breakdown of minimum and maximum scores provided in Table 28, we gain a clearer idea of the low scoring on the ELBV test.

Table 28
Minimum and maximum individual scores
on ELBA vowel and consonant tests, by group

Group	min.	ELBV max.	range	min.	ELBC max.	range
1	17	30	13	29	39	10
2	15	26	11	22	35	13
3	14	28	14	26	38	12
4	17	27	10	24	39	15
5	14	34	20	31	42	11
6	16	34	18	25	52	17
7	15	24	9	24	40	16
8	13	27	14	27	40	13
9	17	29	12	29	39	10
10	16	28	12	27	40	13
11	16	33	17	25	42	17
12	14	28	14	24	39	15
13	13	28	15	27	40	13
14	15	28	13	27	40	13
15	16	30	14	24	37	13
16	14	24	10	26	34	8

When we examine the minimum scores achieved on the vowel discrimination test, it is clear that in all but three of the 16 groups there were learners who actually scored below the level attainable by chance. Even the overall ELBV mean score of 21.39 (cf. Table 25) is relatively close to the chance level, when compared with the overall mean score achieved on the consonant component. The fact that many of the ELBV scores are so low could mean that it is randomness of the subjects' answers that has contributed to the lack of a systematic, parallel pattern between performances on the ELBV and ELBC tests.

Having considered the performances of the groups on the two components of the recognition test, we now turn to examine the *prima facie* evidence for the other type of variation mentioned earlier in this section, namely the variation in listening proficiency among the groups, indicated by their scores on the ELBA measure. The range from minimum to maximum ELBV, ELBC and ELBT mean scores (Table 25) appears to suggest that the groups are dissimilar in their aural comprehension ability. Further investigation of these scores was conducted through an analysis of variance, which gave the following results:

Table 29
Analysis of variance among groups
on ELBA vowel, consonant and total scores

	d.f.	sum of squares	mean squares	F ratio	F prob.
ELBV	15	615.03	41.00	2.58	0.002
ELBC	15	338.98	22.60	1.68	0.006
ELBT	15	1530.51	102.03	2.78	0.001

A post hoc analysis using a modified test of least significant difference (appropriate for comparing groups of unequal size) indicated that groups 1 and 5 were significantly different, at the 5% level, on ELBT scores from the other 14 groups. For this reason, it is necessary to take into account individual subjects' listening proficiency (as measured by ELBT) when comparing different groups' performances on the video test, in order to investigate possible effects of speaker and listener in the recording.

The general picture that emerges from the subjects' performances on the ELBA audio pre-test comprises the following elements:

- (1) markedly different results within each group on the two components of the discrimination test;
- (2) broad similarity across groups, with the exception of groups 1 and 5, in terms of their range of scores on the two measures;
- (3) overall, an elementary or post-elementary level of listening proficiency.

There are grounds for arguing that they constitute a suitably similar, low-proficiency population for our investigation of the potential effects of discourse modifications on the comprehension of elementary-level L2 listeners, although individual subjects' ELBT scores will need to be taken into account.

9.5.2. Picture ordering test

As outlined in section 9.1.2, the two elements of the videotape comprehension test – the picture ordering task and the written recall task – were intended to function as tests of the subjects' understanding of gist and detail, respectively. It was thought that the ordering task would represent an easier comprehension activity than recall, which was assumed to be more demanding in the level of understanding it required of listeners.

The scoring procedure adopted for the sequencing test allowed one point for each correctly ordered item in the five-picture series. A subject identifying the correct order of mention of the pictures (4-3-1-5-2) was awarded five points, the sequence 4-1-3-5-2 received four points, 4-2-1-5-3 three, and so on. The overall grouped data for the ordering task are shown in Table 30.

Table 30
Means and standard deviations on picture ordering
task, by group

Group	Mean	s.d.
1	5.00	0.00
2	4.07	1.10
3	3.57	1.16
4	3.46	1.33
5	3.73	1.16
6	4.24	1.09
7	4.07	1.33
8	4.57	0.76
9	4.60	0.97
10	4.00	1.12
11	3.69	1.38
12	3.92	1.32
13	4.38	1.03
14	3.75	1.14
15	3.00	1.08
16	3.83	1.03
Overall	3.99	1.17

As the overall mean of 3.99 would suggest, the great majority of subjects scored between 3 and 5 correct answers; of the 222 participants, only 24 (or 10.81%) scored less than 3 points. Two aspects of the listeners' performances

deserve particular comment. Firstly, all the subjects in group 1 achieved perfect scores. It will be recalled that this was one of the two groups whose mean ELBT scores were found to be significantly higher than all others in the experiment. It could be that their performance on the ordering task is directly related to their individual proficiency in listening. However, we will be commenting later on a striking difference between their results on the two elements in the video test.

Secondly, the sequencing task in general terms displays a much lower correlation coefficient with the subjects' total scores on the ELBA sound discrimination test than does the retelling task:

Table 31
Overall product moment correlation
coefficients on ordering, retelling and ELBT

ordering	.09	
retelling	.22*	.13*
	ELBT	ordering

* $p < .05$

The ordering/ELBT coefficient value ($r = .09$) is not only smaller than either of those for retelling/ELBT ($r = .22$) or for ordering/retelling ($r = .13$), but is also not significant at the 5% level. It is of particular importance to our analysis in this section that the Spearman rank order correlation between the two components of the video test turns out to be similarly low ($\rho = .14$). Moreover, when we consider the results on a group-by-group basis, it emerges that in only four cases - groups 6, 7, 8 and 11 - does the correlation coefficient rise above 0.5 (see Table 32, below).

Table 32
Product moment correlation coefficients
for ordering and retelling scores, by group

Group	order/retell	sig.
1	-	-
2	.01	.49
3	-.15	.30
4	.21	.25
5	-.17	.28
6	.52	.02*
7	.54	.02*
8	.51	.03*
9	.39	.13
10	.34	.09
11	.68	.01*
12	.16	.30
13	.29	.14
14	.04	.45
15	.41	.08
16	.32	.16
Overall	.13	.03

* $p < .05$

The fact that intra-group score correlations are in general so weak, including two cases (groups 3 and 5) where the relationship is marginally negative, suggests that the ordering and retelling tasks are, at the very least, testing different aspects of comprehension. We discuss possible explanations for these differences in section 9.6.

In the light of the markedly different overall patterns of performance on the two parts of the video comprehension test, it seemed advisable to treat subjects' results on those components of the test separately when testing the experimental hypotheses. We will now examine the evidence from the picture ordering test results for Hypotheses 2, 3 and 4, and will then analyse performances on the retelling test in section 9.5.3.

Tests of analysis of variance were run, with ordering task scores as the dependent variable and with due allowance made for possible effects of listeners' individual aural proficiency (through the incorporation of the ELBT scores as a covariate).

Hypothesis 2 – that NS/NNS modifications of input and interaction bring about increased comprehension on the part of a ‘secondary’ listener – was tested first with the variable ‘SPEAKER’ representing the individual narrator and the variable ‘NL/NNL’ separating groups’ scores according to whether the original partner in the videorecording was a native listener (i.e. in the narrative versions shown to experimental groups 1, 5, 9 and 13) or a non-native learner of English (the other 12 groups). Table 33 shows ANOVA results for these two variables.

Table 33
Analysis of variance of SPEAKER and NL/NNL effects
on ordering task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	2.33	1	2.33	1.88	0.171
main effects					
SPEAKER	4.63	3	1.54	1.25	0.294
NL/NNL	10.58	1	10.58	8.54	0.004
2-way interaction					
SPEAKER-NL/NNL	20.47	3	6.82	5.51	0.001
explained	37.03	8	4.63	3.74	0.000
residual	263.97	213	1.24		
total	300.99	221	1.36		

These data point to a substantial main effect of the original discourse partner ($F = 8.54$, $p < .05$) and to a smaller interaction effect between speaker and partner ($F = 5.51$, $p < .05$). The speaker effect by itself is smaller and falls short of the 5% level of significance. This seems, then, to support Hypothesis 2: there is a significant difference in how successfully the experimental subjects carried out the sequencing task, varying with the listening competence level of the original partner (i.e. native versus non-native). However, when we re-analyse the data from Table 30 by speaker, it emerges that the variation in the degree of success experienced by the Portuguese subjects was in fact against the direction predicted in Hypothesis 2. This variation is highlighted in Table 34.

Table 34
 Ordering task mean scores by group,
 showing speaker and level of original partner

	Speaker 14	Speaker 16	Speaker 4	Speaker 27	partner mean
Ln	Group 1 5.00	Group 5 3.73	Group 9 4.60	Group 13 4.38	4.43
La	Group 2 4.07	Group 6 4.24	Group 10 4.00	Group 14 3.75	4.02
Li	Group 3 3.57	Group 7 4.07	Group 11 3.69	Group 15 3.00	3.58
Le	Group 4 3.46	Group 8 4.57	Group 12 3.92	Group 16 3.83	3.95
speaker mean	4.03	4.14	4.05	3.74	

From this table we can see that, contrary to expectation, the aggregate mean for the four groups listening to the native-partner (Ln) versions is higher, not lower, than those for the groups working with the NNS-partner texts (La, Li and Le, considered together). We will be suggesting reasons for this unexpected result in the discussion of results in section 9.6.

Hypothesis 3 - that elementary-level listeners such as the subjects in this study will be assisted most in understanding spoken texts by a version told to an original listener close to their own level of L2 listening proficiency - was tested by dividing the 16 groups into the four horizontal bands featured in Table 34, so that the subjects' scores on Ln, La, Li and Le narratives were considered separately, under the variable 'LEVEL'. Table 35 presents the results of the test of variance conducted on that basis.

Table 35
Analysis of variance of SPEAKER and LEVEL effects
on ordering task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	2.33	1	2.33	1.90	0.170
main effects	20.03	6	3.34	2.72	0.015
SPEAKER	4.39	3	1.46	1.19	0.32
LEVEL	16.38	3	5.46	4.44	0.005
2-way interaction					
SPEAKER/LEVEL	26.58	9	2.95	2.40	0.013
explained	48.94	16	3.06	2.49	
residual	252.06	205	1.23		
total	300.99	221	1.36		

Again, as in the previous ANOVA analysis, the listener-level variable has a greater main effect ($F = 4.44$, $p < .05$), with a smaller interactive effect for speaker and listener combined ($F = 2.40$, $p < .05$). This indicates support for Hypothesis 3: the listening proficiency of the person for whom the discourse was originally intended does appear to exercise an influence on the degree of comprehension demonstrated by these secondary listeners. The effect of the LEVEL variable in this analysis of variance is less than was found for the NL/NNL variable in Table 34.

However, as was the case with Hypothesis 2, we have to note that the direction of the effect is the opposite to that predicted: on this ordering task, the subjects who heard the native and advanced versions scored higher, not lower, than those who heard the intermediate and elementary versions.

Hypothesis 4 - that 'secondary' listeners find it easier to understand discourse in which the narrator primarily adopts modifications of interaction rather than input - was tested by comparing the scores of groups 1-8, who were played the stories told by speakers 14 and 16, with those of groups 9-16, who watched the narratives produced by speaker 4 and 27. This division was effected by the use of the variable 'STYLE' in two ANOVA calculations, involving the NL/NNL and LEVEL variables, respectively. Results are presented

in Tables 36 and 37.

Table 36
Analysis of variance of STYLE and NL/NNL effects
on ordering task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	2.33	1	2.33	1.78	0.184
main effects	11.54	2	5.77	4.40	0.013
STYLE	1.94	1	1.94	1.48	0.225
NL/NNL	9.69	1	9.69	7.39	0.007
2-way interaction					
STYLE-NL/NNL	2.57	1	2.57	1.96	0.163
explained	16.45	4	4.11	3.14	0.016
residual	284.55	217	1.31		
total	300.99	221	1.36		

Table 37
Analysis of variance of STYLE and LEVEL effects
on ordering task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	2.33	1	2.3	1.79	0.182
main effects	17.61	4	4.40	3.38	0.010
STYLE	1.97	1	1.97	1.51	0.220
LEVEL	15.76	3	5.26	4.04	0.008
2-way interaction					
STYLE/LEVEL	3.72	3	1.24	0.95	0.42
explained	23.67	8	2.96	2.27	0.024
residual	277.33	213	1.30		
total	300.99	221	1.36		

The results of those two calculations require the rejection of Hypothesis 4. As far as the subjects' performances on the picture-sequencing task are concerned, the effect of overall style of discourse modification is negligible - $F = 1.48$ in Table 36 and $F = 1.51$ in Table 37 - and fails to reach significance at the 5% level in either case.

In short, the data from analysis of variance tests of the picture-ordering element in the video test fails to support any of the experimental hypotheses. The evidence for Hypotheses 2 and 3, relating to the possible beneficial effects of the L2 proficiency level of the original listener on subjects'

comprehension of the narrative material, indicate a significant statistical relationship, but in the opposite direction to that expected. There is no statistical confirmation for Hypothesis 4. These findings will be discussed in section 9.6.

9.5.3. Retelling test

The scoring procedure adopted for subjects' performances on the retelling test was designed to allow for the fact that the sixteen versions of the story used in the experiment were different, since it was the potential effects of these differences in the amount and form of spoken information that were the focus of investigation. In order to enable us to relate possible differences in subjects' performances on the retelling task with the content and discourse features of the particular version they heard, the final transcribed sections of all sixteen narratives relating to the events in the missing final picture were analysed (see Appendix C) and the following pattern of information provision was established:

Table 38
Bits of information in story endings, by speaker

	Speaker 14				Speaker 16						Speaker 4			Speaker 27		
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
surprise	+	+	+	+			+									
blind man	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+
made mistake					+											
thinks woman																
gave money	+	+		+	+		+	+	+	+	++	+		+	++	
not the boy	+				+		+									
door noise	+									+						
turns round		+	+			+										
raises hat	+	+	+	+			+	+	+	+	+	+		+	+	
bows													+	+		
towards her	+	+		+				+		+			+	+		
thanks her		+	+			+	+								+	
she's walking away						+					+					
boy disappointed					+	+		++	+	+	++	+++	+	+	+	
not thanked/seen			+	+		+			+					+	++	
for good deed										+						
	7	7	6	6	5	6	6	5	5	8	5	4	5	7	6	6

++ = information repeated or reformulated (each + = one occurrence)

The listeners' written recall scripts were examined and a point was awarded for each bit of information that matched the content of that speaker's version. Each subject's total number of points was then converted to a proportion, expressed as a percentage, of the information made available by the narrator in question, in order to allow comparison across the narrative texts. Three examples of the scoring are shown below, with the original Portuguese version followed by my translation, in which the point-scoring items of information are underlined.

HIGH-SCORING SCRIPT - SUBJECT 198:

"Apos o rapaz deita as moedas na caixa do cego, este pensa que foi a mulher rica, que tinha saído do carro, que lhe tinha dado o dinheiro e por isso tira-lhe o chapéu. Ao mesmo tempo o rapaz ao observar a cena fica muito desapontado, porque o cego não tinha visto que tinha sido ele que lhe tinha dado o dinheiro, em vez de comprar um brinquedo".

"After the boy puts the coins in his tin, the blind man thinks it was the rich woman, who had got out of the car, that had given him the money, and so he takes off his hat to her. At the same time, when he sees this happen, the boy feels very disappointed because the blind man had not seen that it was him who had given the money, instead of buying a toy".

Actual score: 5

Possible score: 6

Proportion: 83%

MID-SCORING SCRIPT - SUBJECT 73:

"O rapaz ficou desapontado quando reparou que a senhora não deu dinheiro ao cego, mas bateu a porta fazendo um barulho como dinheiro a cair

na lata, e o cego agradeceu à senhora”.

“The boy felt disappointed when he noticed that the lady did not give the blind man any money, but shut the door with a noise like money dropping into the tin, and the blind man thanked the lady”.

Actual score: 3

Possible score: 6

Proportion: 50%

LOW-SCORING SCRIPT – SUBJECT 117:

“A criança resolveu dar o dinheiro ao cego mas, ao fazê-lo (não percebi a razão...) ficou desapontado”.

“The child decided to give the money to the blind man but, having done so (I didn’t understand the reason...) he felt disappointed”.

Actual score: 1

Possible score: 5

Proportion: 20%

The results of scoring the listeners’ protocols in this way are presented in Table 39.

Table 39
Means, standard deviation and standard error
for the retelling task performances, by group

group	mean (%)	s.d.	s.e.
1	28.57	29.74	8.25
2	25.71	29.18	7.53
3	23.81	25.08	6.70
4	30.77	24.39	6.76
5	48.00	24.84	6.41
6	43.14	25.04	6.07
7	15.56	18.33	4.73
8	37.14	20.54	5.49
9	32.00	13.98	4.42
10	31.62	20.78	5.04
11	46.15	23.64	6.56
12	49.62	20.96	5.81
13	16.25	23.34	5.84
14	36.91	21.50	6.21
15	56.41	41.13	11.41
16	47.22	26.43	7.63
overall	35.15		

The overall figures for scores on the picture ordering and retelling tasks were compared using a t-test and the results are presented in Table 40, below.

Table 40
T-test result for overall scores
on ordering and retelling tests

	N	mean (%)	s.d.	s.e.	mean diff.	corr.	2-tail prob.	t value	d.f.	2-tail prob.
ordering		79.99	23.34	1.57						
retelling	222	35.15	26.90	1.81	44.77	0.13	0.06	20.02	221	0.000

Clearly, the relationship between the two parts of the video test is low ($r = .13$) and falls short of the 5% significance level. The substantial difference between the two test performances ($t = 20.02$, $p < .05$) might be due simply to a greater degree of difficulty in the retelling task, compared with the demands of the picture ordering test. However, in the light of the low Spearman rank order correlation coefficient value between the two tests ($\rho = .14$), quoted earlier, it seems that the two measures vary in type and not merely degree of

difficulty. We will be returning to this point in section 9.6.

When we examine the data by group, we find a substantial range within all the groups, and in all but four cases (see Table 41 below) the minimum score was zero. This would suggest that although the story ending was understandable to most subjects, it remained – one assumes – impenetrable to the 49 listeners who failed to score, either because they produced no written response at all (19 subjects) or because they gave an incorrect answer (30 subjects).

Table 41
Minimum and maximum percentage retelling scores, by group

group	minimum	maximum	(max. no. correct)
1	0.00	85.71	(6 out of 7)
2	0.00	71.43	(5 out of 7)
3	0.00	66.67	(4 out of 6)
4	0.00	66.67	(4 out of 6)
5	20.00	80.00	(4 out of 5)
6	0.00	66.67	(4 out of 6)
7	0.00	50.00	(3 out of 5)
8	0.00	60.00	(3 out of 6)
9	20.00	60.00	(3 out of 5)
10	0.00	62.50	(5 out of 8)
11	0.00	80.00	(4 out of 5)
12	25.00	100.00	(4 out of 4)
13	0.00	80.00	(4 out of 5)
14	0.00	71.43	(5 out of 7)
15	0.00	100.00	(6 out of 6)
16	16.67	100.00	(6 out of 6)

It is perhaps worth noting at this point that, although it is normally taken for granted that a successful completion of a task is demonstrated by a score of 100%, in this case we need to bear in mind that, given the nature of this particular discourse, a relatively low percentage score might in fact indicate an adequate level of comprehension. In this story, in order to 'get the point', the listener needs to understand (1) how the boy felt and (2) what caused that feeling. In a sense, understanding those two elements of the story ending in any of the versions – i.e. scoring 40% if the total number of information bits were 5, or 25% if there were 8 bits – would represent an adequate

performance on this retelling test.

When we consider the groups' test results in relation to the original configuration of partners in the recording (Table 42), there appears to be some evidence for the predicted gradient of difficulty among the four hypothetical levels of spoken text.

Table 42
Group mean percentage scores on retelling task,
by speaker and original listener

	S14	S16	S4	S27	(overall)
Ln	[1]* 28.57	[5] 48.00	[9] 32.00	[13] 16.25	(31.14)
La	[2] 25.71	[6] 43.14	[10] 31.62	[14] 36.91	(34.35)
Li	[3] 23.81	[7] 15.56	[11] 46.15	[15] 56.41	(35.48)
Le	[4] 30.77	[8] 37.14	[12] 49.62	[16] 47.22	(41.19)
(overall)	27.21	35.96	39.89	39.20	

The burden of the experimental hypotheses was that there would be an inverse relationship between the level of target language proficiency of the original partner and the degree of comprehension demonstrated by the experimental subjects; the lower the partner's competence in English, the higher the test results should be. From the data in Table 42, there does seem to be *prima facie* support for the view that an 'original listener' effect is at work. The overall mean scores for the four sets of group data increase progressively from native to elementary non-native: 31.14% (Ln), 34.35% (La), 35.48% (Li) and 41.19% (Le). In addition, it is worth noting that the overall Ln version scores, already lower than the three sets of non-native narrative results, may well have been boosted by the fact that groups 1 and 5 emerged as significantly more proficient listeners than the other 14 groups, on the basis of their ELBA phoneme discrimination performances (cf. section 9.5.1). When statistical allowance is made for level of individual subjects' aural

competence, the difference between the comprehensibility of native and non-native versions of the story may turn out to be more substantial than appears to be the case on initial examination of the groups' scores in Table 42.

Having summarized the global and group patterns of performance on the retelling task, we now turn to assess the statistical evidence for Hypotheses 2, 3 and 4. As in the previous section on the performance data from the picture-ordering test, the scores achieved by the subjects on the retelling task were tested by analysis of variance, using the variables SPEAKER (the four individual speakers 14, 16, 4 and 27), STYLE (the 'input modifiers' 14 and 16, versus the two 'interaction modifiers' 4 and 27), LEVEL (the four levels of original task partner - native, advanced, intermediate and elementary) and NL/NNL (one native versus the three non-native together). In all cases the experimental subjects' level of listening competence, as measured by their ELBT score, was included as a covariate in the analysis, to allow for any influence of individual listening proficiency on the scores achieved.

Hypothesis 2 - that NS/NNS modifications of input and interaction bring about increased comprehension on the part of 'secondary' listeners - was tested first with SPEAKER and NL/NNL as independent variables. The results are presented in Table 43.

Table 43
Analysis of variance of SPEAKER and NL/NNL effects
on retelling task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	7766.72	1	7766.27	12.31	0.001
main effects					
SPEAKER	5065.19	3	1688.40	2.68	0.048
NL/NNL	2779.30	1	2779.30	4.40	0.037
2-way interaction					
SPEAKER-NL/NNL	9927.11	3	3309.04	5.24	0.002
explained	25489.71	8	3186.21	5.05	0.000
residual	134418.25	213	631.07		
total	1599907.96	221	723.57		

It is clear that the strongest effect is that of the ELBT covariate, representing the subjects' level of listening ($F = 12.31, p < .05$). There are measurable separate main effects for both individual speaker ($F = 2.68, p < .05$) and for the original discourse partner ($F = 4.40, p < .05$). The interaction effect of speaker and partner ($F = 5.24$) is larger than that of those variables considered singly and also reaches a higher level of significance. These results therefore support Hypothesis 2, in that the story versions produced for non-native partners proved to be easier to understand – or allowed comprehension of more detail – than did the native-partner texts. Unlike the results reported earlier for the picture-sequencing test, the retelling scores do follow the predicted direction, showing an increase in scores with decreasing L2 level of the original listener (cf. Table 42).

Hypothesis 3 – that elementary-level 'secondary' listeners are assisted most to understand the story when watching a version told to an original listener close to their own level of English listening proficiency – was tested through use of the LEVEL variable, which compares groups' performances on Ln, La, Li and Le narrative versions. Table 44 shows the results of a test of variance conducted on that basis.

Table 44
Analysis of variance of SPEAKER and LEVEL effects
on retelling task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	7766.27	1	7766.27	12.92	0.000
main effects					
SPEAKER	5056.20	3	1685.40	2.80	0.041
LEVEL	4540.65	3	1513.55	2.52	0.059
2-way interaction					
SPEAKER/LEVEL	19330.42	9	2147.83	3.57	0.000
explained	36654.37	16	2290.90	3.81	0.000
residual	123253.59	205	601.24		
total	159907.96	221	723.565		

As in the previous ANOVA test, the subjects' level of aural discrimination

appears to account for most of the variation in performance on the retelling task ($F = 12.92$, $p < .05$). The main effect of the individual speakers is comparable with that shown in Table 43: an F value of 2.80 here, as against 2.68, and at a similar level of significance. The LEVEL effect is weaker than that of the NL/NNL variable and narrowly fails to reach the 5% level of significance.

As in all earlier cases, the interaction effect between variables investigated is more substantial than their single main effect. In this case, the combined effect of speaker and listener exceeds their separate effects ($F = 3.57$) and is considerably more significant ($p < .001$). In sum, as far as Hypothesis 3 is concerned, any main effect on text comprehensibility of the original listener's L2 proficiency is less marked when all four levels of partner are compared than when the grosser distinction is applied and the listeners are considered as two groups – native or non-native. However, there is again a sizeable and strongly significant interaction effect between speaker and listener.

Hypothesis 4 – that 'secondary' listeners find it easier to understand discourse in which the narrator primarily modifies interaction rather than input – was investigated by comparing the scores of subjects hearing the narratives told by speakers 14 and 16 with those of subjects shown a version produced by speakers 4 and 27. This division was effected through the use of the variable STYLE in two ANOVA calculations, involving the NL/NNL and LEVEL variables, and the results are shown in Tables 45 and 46, respectively.

Table 45
Analysis of variance of STYLE and NL/NNL effects
on retelling task performances

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	7766.27	1	7766.27	12.07	0.001
main effects	5746.67	2	2873.33	4.64	0.013
STYLE	3015.52	1	3015.52	4.69	0.032
NL/NNL	2796.61	1	2796.61	4.35	0.038
2-way interaction					
STYLE-NL/NNL	6718.92	1	6718.92	10.44	0.001
explained	20231.85	4	5057.96	7.86	0.000
residual	139676.11	217	643.67		
total	159907.96	221	723.57		

Table 46
Analysis of variance of STYLE and LEVEL effects
on retelling task performance

source of variation	sum of squares	d.f.	mean square	F	sig.
covariate					
ELBT	7766.27	1	7766.27	12.65	0.000
main effects	7498.44	4	1874.61	3.05	0.018
STYLE	2996.96	1	2996.96	4.88	0.028
LEVEL	4548.39	3	1516.13	2.47	0.063
2-way interaction					
STYLE/LEVEL	13830.71	3	4610.24	7.51	0.000
explained	29095.41	8	3636.93	5.92	0.000
residual	130812.54	213	614.14		
total	159907.96	221	723.57		

The analysis of style and partner effects (Table 45) indicates that although the subjects' individual L2 listening competence is once more the predominant factor in variation ($F = 12.07$, $p < .05$), the contribution of the interaction between the influence of discourse style and partner is almost as large ($F = 10.44$), at the same level of significance. There are substantial main effects for both style ($F = 4.69$, $p < .05$) and also partner ($F = 4.35$, $p < .05$), taken separately.

When we compare these figures with those resulting from the investigation of style and listener-level variables (Table 46), it emerges that while the style effect by itself is very similar ($F = 4.88$, $p < .05$) in both sets of data, the main effect of the original listener's level is much lower ($F = 2.47$) than the partner variable and also falls short of the 5% significance level. The combined

style/level effect is also smaller ($F = 7.51$, $p < .05$) than was the case with the combined effect of style and NL/NNL variables shown in Table 45.

If we compare the size of the main effect of the narrator's style in Tables 45 and 46 ($F = 4.69$ and 4.88 , respectively) with the figures for the speaker variable in Tables 43 and 44 ($F = 2.68$ and 2.80 , respectively), then it is reasonable to suggest that the ANOVA results lend support to Hypothesis 4. The two overall styles of native/non-native discourse - i.e. modification primarily of input or interaction - typified by speaker 14 and 16 on one hand, and by speakers 4 and 27 on the other, seem to exert a greater effect on the subjects' degree of understanding than do the individual characteristics of the four narrators taken singly.

The subjects' performances on the retelling task, then, confirm all three experimental hypotheses to a greater or lesser degree, suggesting beneficial effects on comprehensibility for secondary listeners played listening materials based on native/non-native discourse, compared with recordings of native/native conversation involving the same basic content. However, such beneficial effects are relative; on the evidence of this experiment, they are never more powerful than that of individual listening proficiency. Only in one of the conditions examined here - when the STYLE and NL/NNL variables are combined (Table 46) - do their joint effects come close to matching the influence of listeners' proficiency in understanding the foreign language.

9.6. Discussion of results

9.6.1. Variation in performance between the video tests

The central issue arising from the results of the video comprehension experiment is the need to explain the clear discrepancy between the subjects'

performances on the two components of the narrative experiment – the picture ordering task and the retelling task. It should be recalled that these two measures were intended to be complementary, the former allowing an assessment of listeners' general understanding of the gist of the story and the latter representing a test of their comprehension of the details in the crucial final segment of the narrative. However, as we have seen, there was a marked dissimilarity in the degree of success registered by the Portuguese learners, both overall and by group.

Let us assume first that the sequencing task were simply more straightforward than retelling. If this were so, then we would expect to find significant differences in the subjects' scores. This was in fact the case, as shown by the t-test results presented in Table 40, where the overall mean percentage scores were 79.99 on the ordering test and 35.15 on retelling, with their overall correlation $r = .13$.

However, the fact that the Spearman rank order correlation between listeners' performances on ordering and retelling is also low ($\rho = .14$, $p < .02$) suggests that there was more than a striking difference in task difficulty at work; the two test components seem to have been tapping rather different comprehension skills. Here we have to consider the evidence for a relationship between the preliminary assessment of the participants' L2 listening proficiency (through their ELBA sub-test scores) and their results on the two parts of the video test. In Table 31 we saw that the correlation coefficient value for ELBA and ordering was $r = .09$ (not significant at the 5% level) and for ELBA and retelling $r = .22$ ($p < .05$). This suggests that, for practical purposes, there is no relationship between these subjects' skill in sound discrimination and their ability to order the five pictures on the basis of the spoken narrative.

As the Table 40 results showed, the mean score for the ordering task was relatively high, at 80%, which actually meant that that the majority of the participants scored either 3 or 5 on the test. The obvious conclusion is the one adumbrated in section 9.1.2: that the picture sequencing task was easier to complete, not because it demanded a lower level of listening proficiency, but because it may in fact not have tested listening at all. The mean scores on the ordering test displayed in Table 34 show that it was the groups who heard the native versions of the narrative that achieved the highest mean scores. Table 47 (below) presents an alternative version of that pattern of performance, showing the proportion of subjects in each group who achieved fully correct solutions by numbering all five pictures in the original sequence.

Table 47
Proportion of correct solutions on ordering task, by group

	S14	S16	S4	S27	partner mean
Ln	Group 1 100.00	Group 5 33.33	Group 9 80.00	Group 13 68.75	70.52
La	Group 2 46.67	Group 6 64.71	Group 10 52.94	Group 14 41.67	51.50
Li	Group 3 35.71	Group 7 60.00	Group 11 46.15	Group 15 15.38	39.31
Le	Group 4 38.46	Group 8 71.43	Group 12 53.85	Group 16 41.67	51.35
overall	55.21	57.36	58.24	41.87	

If we compare the overall mean scores by speaker, we find there is relatively little difference among the four: they range from 41.87% (speaker 14) to 58.24% (speaker 4). But when we look at the overall means by original listener, there is a striking dissimilarity between the rates of success. Of the subjects who watched the narrative originally told to a native partner, 70.52% achieved a fully correct solution, compared with 51.50%, 39.31% and 51.35% for advanced, intermediate and elementary non-native versions, respectively. Why should it be that a higher proportion of individuals in the groups who

heard the Ln version scored 100% correct answers? One factor, of course, might be their individual listening competence in English. As we noted in section 9.5.1, groups 1 and 5 achieved significantly higher scores on the ELBA sound discrimination test than did the other 14 groups. It is also the case that all the subjects in group 1 produced correct solutions to the ordering test. However, this was not the case with group 5, who actually achieved the lowest proportion of successful responses of all four Ln groups. Apart from the performances of the two groups with relatively high ELBA scores, the success rates of groups 9 and 13 are also the highest in their respective speaker sets (for speakers 4 and 27).

Given this general pattern of success (on this particular task) when the narrative heard was one told to a native listener, there would seem to be three possible explanations. The first is that the pattern is a statistical quirk, or the result of comparatively low numbers of subjects; this cannot be discounted. The second is that success on the ordering test is related to subjects' individual level of L2 listening proficiency. This would explain group 1's performance, but not that of group 5; we have no evidence that either group 9 or group 13 were better listeners than the groups who watched the non-native listener narratives.

A third explanation seems the most plausible and is linked with the point made in section 9.1.2: the ordering test required a lower level of oral comprehension. If, as we assume, the Ln versions are more complex in ways such as those described in Chapter 8, then the L2 listener attempting to understand them sufficiently to carry out the sequencing task may well rely more on the complementary information available in the form of the visual array. In other words, the less you are able to follow the spoken message, the more you resort to making sense of the illustrations. This was the conclusion reached by Wolff (1987) and discussed in Chapter 3. The pictures and general

expectations about the activity of 'listening to a story' may have enabled learners who had greater difficulty understanding the spoken message to exploit the visual data and the associated mental scripts. (We will be returning to the issue of schematic interpretation in section 9.6.3).

In short, our conclusion is that the picture ordering task is, for some listeners to the native versions of the narrative, just that - a matter of weighing up information available in graphic form and linking it with whatever partial understanding they have reached of the speaker's story. The task may not have functioned as a direct test of listening, and it is for this reason that it shows little statistical relationship with performance on ELBA.

There remains, of course, the issue of the low correlations between the subjects' scores on the retelling test and those on ELBA ($r = .22$, $p < .05$) and on the picture sequencing task ($r = .13$, $p < .05$). However, it is noticeable that the relationship between retelling and the other measures is stronger than that between ELBA and picture ordering ($r = .09$, not significant at the 5% level), suggesting that the skills which the subjects were required to draw on in sound discrimination and in comprehension for retelling had more in common. This would be consonant with the view expressed earlier, that the ordering task may actually provide an unreliable means of assessing listening proficiency *per se*.

The fact that there is not a stronger relationship between performances on ELBA and on retelling is to some extent predictable, in the light of the evidence for a substantial effect of narrators' discourse style and L2 level of the original listener. This effect would counterbalance to some extent the individual listener's aural comprehension ability and would obviously weaken the statistical relationship between ELBA and retelling scores.

However, it is unlikely that the hypothesized effects account completely for

the discrepancy between scores on ELBA and retelling. A second probable factor is the difference in the testing focus of the two instruments. While ELBA is intended to measure low-level skills of phonemic recognition - i.e. signal identification in terms of phonemic contrasts in word trios - the narrative recall test demands the activation of higher-level processing skills in the interpretation of a spoken message. As we saw in Chapters 2 and 3, there is research evidence that individual listeners (and readers) vary widely in their ability or willingness to treat incoming messages as a coherent whole; some listeners appear to become 'blocked' when they encounter unfamiliar text elements, while others are able to cope with uncertainty and appear to suspend interpretation while they search for disambiguating information.

In the context of the experiment, the fact that a particular individual has a high ELBA score does not necessarily mean that they will perform well on the message interpretation required for the retelling task - even if we leave aside the proven effect of the different versions of the text on success on the test. The lack of a consistent pattern between retelling and ELBA scores is therefore not in itself incompatible with our basic assumptions in this study. A perfect correlation of 1.0 would indicate that retelling performances are predictable from listening proficiency as measured on ELBA. A perfect negative correlation of -1.0 would demonstrate an unrealistically extreme proof of the hypothesized effect, namely that low-level listeners were able to take advantage of input and interaction modifications to such an extent that they outperformed more proficient listeners (who would presumably have had to fail to notice or to exploit such adjustments). In the light of the findings of the ANOVA tests, that the interaction between NL/NNL and STYLE variables had almost as strong an effect as did the subjects' L2 competence in terms of ELBA results, the low correlation values are less surprising than they might at first appear.

9.6.2. Variation in performance within the retelling test

The overall percentage scores on the retelling test (presented in Table 42) are relatively low, given the experimental focus on the likelihood of enhanced comprehensibility of spoken texts created under certain conditions of native/non-native conversation – and also given the fact that the criterion for selecting the narratives by speakers 4, 14, 16 and 27 was that the original listeners had achieved 100% correct solutions. The overall mean score was 35.15%, with group means ranging from 27.21% to 39.89% by speaker and from 31.14% to 41.19% by partner. Although there is evidence of an effect of the original partner's target language level, as predicted, the overall mean score on elementary-listener versions (41.19%) is considerably lower than one might have expected, indicating that, even on potentially the most comprehensible narratives in the set, the members of groups 4, 8, 12 and 16 still understood (or recalled in writing) less than half the information offered by the native speakers.

As we noted in section 9.5.3, it is important not to assume that success should be equated with a score of 100% on the retelling task, since in real life it would be sufficient to have understood the two basic elements of the 'twist' in the ending, that is, the boy's feelings and their cause. Nevertheless, it is worth considering why scores overall were not higher. There are two possible reasons, both of which are connected with the difference in the conditions under which the original partner and the secondary listeners heard the narrative.

Firstly, there is the fact that the retelling task was designed to be more difficult than the ordering task; consequently, it would be misleading to compare the experimental subjects' performances on the recall test with those of the original partners on picture ordering. We do not know what scores

those original listeners might have achieved if they had been asked to complete a task like that featured in the experiment.

Secondly, and closely related to the previous point, the fact that the original partners were provided with all six pictures will have affected the type and amount of information in the narrative. Since they had all the illustrations available to them, the listeners' task by the time the final segment of the story had been reached was simply to use part of that narrative segment to confirm what they already knew by elimination, namely, that whichever picture remained unnumbered on their tasksheet ought to be the last one.

The fact that their partner's listening purpose at this stage of the story was as it was, means that the way in which the narrator framed and delivered the denouement of the story was designed for someone who needed to recognize the final picture, rather than to understand what events it depicted, since they were visible in detail in front of them. If, on the other hand, the narrators had been telling the story for a listener attempting to carry out the same type of retelling task used in the experiment, then we may assume that they would have expressed the information differently, for example, by including more detail, building in greater redundancy, providing opportunities for the partner to ask for clarification, and so on. So the relatively low level of overall scores achieved in the experimental use of the recorded interaction may be explained in terms of the different demands made of listeners in the two stages - data collection and the comprehension test.

If we now move on to consider the pattern of group performances on the retelling test (cf. Table 42), two points emerge:

(1) the scores for two groups are markedly lower than all others and similar to each other - those for group 7 (mean score 15.56%) and group 13 (mean score 16.25%);

(2) one narrator (speaker 14) appears to have been found consistently more difficult for all the four groups who heard him (groups 1–4) than was the case with the other three speakers. The causes of these findings may be linked; as we will see, the transcripts provide some evidence that lexical choice and information sequence are contributory factors of complexity.

9.6.2.1. Lexical choice

It would be arguable that the performance of group 13 broadly fits the predicted pattern of increasing success in comprehension across the four story versions told by speaker 27: Ln 16.25%, La 36.91%, Li 56.41% and Le 47.22%. Although the last two scores reverse the hypothesized gradient of difficulty, the general relationship between group 13's scores, on one hand, and those of groups 14–16, on the other, is as one would expect.

However, if we turn to the four scores on narratives by speaker 16, we see that the group 7 performance runs dramatically against prediction; all the other speaker 16 groups (i.e. 5, 6 and 8) have substantially higher mean scores than group 7, which in fact achieved the lowest mean of all sixteen experimental groups. The explanation for this particular discrepancy may lie in the speaker's choice of specific crucial items of vocabulary in his narratives. The extracts below show the relevant final section of the four story versions.

Ln version

"...and not the little boy /2.5/ and the little boy of course is + um very disappointed"

La version

"...and not the little boy + who is very disappointed /6.0/ is that all right? have you got it?"

Li version

"...and to his astonishment + and to his chagrin + uh the blind man + thinks it's the person who got out of the car who

gave him the money + and + takes off his hat to thank her + and doesn't realise that there's someone else there + that the little boy + has + um given him the money /4.5/"

Le version

"...while the little boy + realises that he doesn't know + that it was him + and of course is um very disappointed + very unhappy /4.0/"

We can see that in the Li version, which resulted in lower comprehension scores by the experimental subjects, speaker 16 chose to call it "*astonishment*"; (reformulated as "*chagrin*"), rather than referring to the boy's reaction as one of disappointment. For the secondary listeners, the word "disappointed" appears in general to have been sufficiently similar to the Portuguese "desapontado" for them to be able to exploit positive receptive transfer from their L1, even if they had not encountered this specific English lexical item before. On the other hand, the use in Speaker 16's intermediate-listener narrative of "*astonishment*" and "*chagrin*" may have been unfamiliar enough to cause difficulty.

In the case of the narratives told by speaker 27, there appears to be a similar relationship between lexical choice and the degree of comprehension achieved by the Portuguese subjects. Here, the narrator's use of the noun "*disappointment*" in place of the adjective used in the other versions could have contributed to the relative difficulty of the Ln story version for the subjects in the relevant group (group 13). This is shown in the extracts below.

Ln version

"and bows in the direction of the car + much to the boy's disappointment /1.5/ ok?"

La version

"bowed in her direction + ignoring the small boy + who had given him the money + and who + was very disappointed "

Li version

"says thank you + with his hat + to the lady + and the small boy + is very sad"

Le version

"he bowed + at the lady + and the small boy + was very disappointed + very sad"

Since only 7 (or 43.75%) of the listeners in group 13 mentioned the boy's feelings in their written versions, compared with 58.33%, 69.23% and 66.67% in groups 14, 15 and 16, respectively, there seems some justification in arguing that lexical selection is at least contributing to the level of difficulty. However, it is perhaps worth emphasizing that, in pointing out the potential influence of textual features, we are not judging narrators' success in modifying for a particular level of listener, since of course they were modifying (successfully in all cases) for different listeners - none of whom was a Portuguese learner of English. While we may be justified in commenting on the ease or difficulty of comprehension for the subjects, we are not directly assessing the speakers' competence in narrative modification.

9.6.2.2. Information sequence

In addition to the possible influence on listeners' recognition of vocabulary, speaker 14 changed the usual order of information, by mentioning the boy's feeling of disappointment before saying what had given rise to it. As well as thus reversing the stereotypical order of cause and effect in general, the speaker was changing the customary sequence of this specific type of discourse.

Thorndyke (1977) defines the default order of elements in a story grammar as:

- Setting
- Theme
- Plot
- Resolution (Outcome followed by Evaluation).

Information sequence was one of the aspects of text complexity mentioned in our discussion of grading (see Chapter 6) and it seems to offer a plausible explanation of the very marked discrepancy in the degree of comprehensibility – as measured by group mean scores on this test – of the narrative watched by group 7, compared to those seen by groups 5, 6 and 8. In story grammar terms, what speaker 16 did was to reverse the order of the Resolution components by telling the listener how the boy felt (Evaluation) before revealing the events leading up to those emotions (Outcome).

Moreover, this argument may have a bearing on a striking aspect of the groups' scores, namely, the fact that speaker 14 seems to have caused his listeners greater difficulty in understanding (overall mean 27.21%) than the other three narrators, whose listeners achieved overall means of 35.96% (speaker 16), 39.89% (speaker 4) and 39.20% (speaker 27). The scores of groups 1–4 suggest that speaker 14's narratives were relatively similar in perceived complexity and consistently more difficult than the other versions, with the exception of those heard by groups 7 and 13, discussed above.

It could be that the underlying reason for the comparative difficulty of speaker 14's stories for the experimental listeners is the same as that suggested in relation to group 7's problems with their text, since speaker 14 also disrupts the canonical order of a story grammar. In his four versions, the phrases *"to the boy's horror"* (Ln and La), *"to his shock and horror"* (Li) and *"to the boy's horror and surprise"* (Le) all mark the beginning of the Resolution segment, not its completion. It appears that comprehensibility is enhanced, for

this population of elementary-level learners of English, when the speaker adheres to the story schema they expect⁵.

9.6.2.3. Interaction effects

Although we have pointed out possible sources of variation in difficulty among different versions of the story, we cannot, of course, assume that the existence of such differences proves their contribution to variation in subjects' scores. Overall, as the statistical analysis showed, the strongest measurable influence is that of the covariate ELBT, representing the subjects' individual level of listening. When the relative effects of single factors and combined factors were investigated, it was found that the latter always outweighed the former. This is understandable. If a particular text resulting from discourse involving two participants is shown to be more comprehensible than other similar texts, it is presumably the case that both partners play their part in the success of that interaction and, incidentally, in the comprehensibility of that text for secondary listeners. To expect a dominant main effect of either the listener or the speaker would be to adopt an unrealistically one-sided view of communication. In this sense, the statistical results reflect what one would expect of the two participants' contributions to the original communicative event, particularly in the case of narratives told by speakers 4 and 27, which involve greater overt cooperation between discourse partners.

The four participant variables used in the ANOVA tests were intended to yield results at different levels of delicacy. On the speaker side, we compared the potential effects of the individual speakers whose stories were selected for use in the experiment (through the variable SPEAKER) and also of the narrative style they adopted, by modifying primarily input or interaction for their Li and Le partners (through the variable STYLE). On the listener side, two variables separated out, in one case, all four levels of original task partner (the variable

LEVEL) and, in the other, two categories of listener, native versus non-native (the variable NL/NNL).

The strongest effect of the four combinations tested was that between STYLE and NL/NNL, that is, between the two variables representing broader, less delicate distinctions. This might be thought to weaken the case for the proposal that teachers might exploit pedagogically the effect of different levels of listener on comprehensibility, but in fact the logic of the procedure we have advocated for materials production would be that the teacher would create the conditions for, and record, discourse between a native speaker and a non-native learner at the same level as their own students. So the finding that the most demonstrable effect on comprehension is at lower levels of delicacy still supports the proposal for using NS/NNS interaction as a means to materials creation. It shows that there is a statistically measurable benefit in using recordings of native/non-native conversation instead of that involving natives only. We return to this point in Chapter 10.

9.6.3. Qualitative aspects of comprehension

Although the principal means of investigating the experimental hypotheses are those of quantitative analysis, we should consider briefly three aspects of the quality of comprehension achieved by the subjects, which are directly related to arguments presented in section 9.1.2. It will be recalled that there were three reasons for asking the listeners to use their first language in completing the retelling test:

- (1) it might facilitate access to schematic information processing and allow them to focus on the meaning rather than the form of the English message;
- (2) it would enable us to establish a more precise picture of individual

listeners' mental models of the narrative;

(3) it ought to reduce the psychological load on the listeners.

Evidence that these three arguments were broadly borne out comes from an analysis of the subjects' written answers (in the case of the first two points above) and from informal comments after the test (in the case of the third).

9.6.3.1. Schematic interpretation

In the study referred to in Chapter 3, Wolff (1987) claimed that the low-proficiency L2 learners whose listening skills he investigated 'imported' more invented propositions into their L1 versions of an L2 narrative than when they were required to produce retold versions in the target language. His argument was that the freedom to reply in the native language also involved a freeing of the interpretative mechanisms and a consequent removal of the tendency (noted by earlier researchers) for language learners to resort to form-dominated, bottom-up routes to comprehension.

The recall data in my study lend some support to this line of reasoning. Forty-five of the 222 subjects produced an ending that differed from the original and seemed to conform to one of four basic narrative schemata, by providing the story with (1) a happy ending, (2) an unhappy ending, (3) a moral ending, or (4) a final 'twist'.

Among the happy endings were these:

"the boy felt happy" (subjects 106, 111, 115 and 213)

"the blind man felt happy" (subjects 98, 101 and 105).

The unhappy endings included:

"the boy was disappointed (shocked etc.) that the woman gave the blind man nothing" (subjects 32, 58, 62, 80, 113, 124, 161, 163, 166 and 175)

"the boy was disappointed at not being able to get a toy" (subject 67)

"the boy was disappointed that he had not been the first to give the man some money" (subject 186).

Moral endings varied widely in content:

"the boy decided to pick up the jewel that the woman had dropped and went to give it to the man" (subject 29)

"the boy decided he could not be as hard-hearted as the woman" (subject 39)

"the boy was struck by the blind man's obvious satisfaction with such a small gift" (subject 40)

"the blind man thought about the contrast between the actions of the boy and the woman" (subject 97)

"the boy was moved by the way the woman ignored the man's plight" (subject 110)

"the boy was pleased with his good deed but saddened by the fact that he had to give up buying the toy" (subject 116).

Finally, a number of the retold versions concluded with a twist which was rather more cynical than the one originally intended:

"the boy was disappointed when he realized that in fact the money was destined not for the beggar but for the woman standing by the car" (subject 69)

"the boy felt extremely disappointed to see the blind man get into the wealthy lady's car, clearly in no need of any money" (subject 146)

"the boy was disappointed because the man turned out not to be blind at all" (subjects 45, 125, 179, 181 and 219).

Individual variations on those four types suggest that listeners were in some sense going beyond the form of the spoken text, either by following a different mental script or by linking elements in the narrative in a way not intended by the speaker, in order to construct a sensible or plausible resolution. They clearly indicate a disposition on the part of some listeners to round the narrative off, rather than simply end it.

A further set of endings suggest that a number of the subjects were prepared to invent endings for themselves that bore little apparent relation to the text offered by the narrator. They share one common characteristic: the recall version contains a verbal marker indicating that the writer is uncertain of their interpretation. These marker phrases are underlined in the extracts below:

"I think that the old man took off his glasses and came back to give the boy the money, then perhaps he went to the shop to buy something" (subject 171)

"The lady praised the boy's action but he was unhappy because perhaps he was hoping for a rather different sort of reward"(subject 160)

"I suppose that the blind man took off his glasses and the boy was surprised that he was not blind"(subject 179)

"I think that after great hesitation and having then given some coins to the blind man, the little boy went back to the shop window to have another look at the toys, with the idea of going home to ask his mother for money to get the toys that he had not been able to buy. His mother liked the little fellow's good deed and gave him the necessary money. This time the boy did not hesitate"(subject 216).

Taken as a whole, these examples (from a total of 45 imported or invented endings) suggest that, as in the case of Wolff's (1987) experiment, an L1 retelling task completed in response to an L2 narrative may encourage or enable learners – depending whether the process is conscious or not – to become more resourceful listeners to the target language, exploiting and interrelating information available to them from (in this case) three primary sources: the spoken text, the graphic illustrations and their individual schematic knowledge from previous experience of narrative.

9.6.3.2. Precision of analysis

The second argument for allowing L1 response in the experiment was that, since the subjects were not handicapped by lack of L2 proficiency in retelling what they had understood of a specific text, their versions were likely to offer more clues as to the the nature of the mental model they had (re)constructed from the original text. Again, there are a number of instances where the L1-based procedure seems to enable the analyst to draw surer inferences than

would be feasible from a version retold in the L2, especially in view of the relatively low level of target language competence of these Portuguese learners.

Subject 29, for example, wrote that *"the boy decided to pick up the jewel that the woman had dropped and went to give it to the blind man"*. This highly moral version of the denouement appears at first sight to come under the 'invented' category, since there is obviously no mention of a jewel in the spoken narrative (story version C), nor is one featured in the picture array. However, it may be that this listener misinterpreted visual information in pictures 4 and 5 (see Appendix E) and assumed that what is in fact the same graphic convention is being used in two distinct ways.

In picture 4 the arc of short lines is intended to emphasize the noise represented by the word "BANG" next to the car door. In picture 5, a similar set of marks indicates the sound of the boy's coins rattling into the blind man's tin. It seems quite possible that subject 29 perceived the door handle in picture 4 to be something shiny (another conventional interpretation of an arc of marks of this sort), such as a brooch, falling to the ground; this was then picked up by the boy and given to the beggar in picture 5. If this analysis of the source of confusion is correct, it is only available at all because the subject in question was able to use his first language. He would not have had the L2 resources to express his understanding of the ending in English, and his visually-based route to comprehension would have remained hidden ⁶.

Similarly, there is an example where another listener's version of the story ending seems to reveal the process of interpretation:

"The blind man was moved by the boy's generous action. Realizing that the boy had given him all the money he had, he wanted to give it back to him"

(subject 104).

This subject's version - again, one with a distinctly moral ending - may have resulted from a combination of the recognition of a sequence of lexical items with an underlying mental script. The relevant section of the original transcript (story H) is as follows:

S: ...the boy arrives + beside the blind man and + drops + his money + into the can

L: hm

S: but the blind man /1.0/ uh + thinks that the person who got out of the car gave him the money + and takes his hat off + in that direction /1.5/ while the little boy + realises that he doesn't know + that it was him + and of course is um very disappointed + very unhappy /4.0/

If we consider only the nouns in that segment, we find the following sequence:

boy - money - blind man - blind man - (gave) money - (that) direction - little boy

The boy's feelings ("*very disappointed + very unhappy*" in the transcript) do not feature at all in this listener's version. Unless they were forgotten - which is less likely, since the story was played twice - we may assume that the subject did not hear or understand the references to them and was obliged to rely on the chain of propositions suggested above. If this speculation is correct, then the learner's written version represented a rationalization that integrated what had been identified in the spoken text with a plausible narrative schema, namely, virtue rewarded, or at least reciprocated.

In both the cases we have discussed, we may assume that it would not have been easy for the listeners to have expressed their interpretation of the message in the target language; L2 items such as "jewel" and "generous"

would probably have been unavailable in their interlanguage. In the face of such lexical gaps, they would have had to choose between 'resource expansion' and 'message adjustment' (Corder 1978/83). In either case, the L2 product is unlikely to have provided such a clear reflection of what had actually been understood as is present in their L1 responses.

9.6.3.3. Psychological load

The third argument for asking the experimental subjects to respond to the second part of the video comprehension test in Portuguese was an affective one: that they would feel less tension and anxiety when relieved of the burden of L2 production, especially in written mode. The evidence for such an alleviating effect is slight and incidental, but is worth brief comment.

As mentioned earlier, at the start of the video section of the experiment a number of individuals made a point of checking that the task instructions were indeed correct, that is, that they were expected to write in Portuguese. It seems that they had taken this to be a slip of the tongue on the part of the instructor and assumed that she had meant to ask them to answer in English, as they would in their normal lessons.

At the end of the lesson that included the comprehension experiment, various students – perhaps 8 or 10 in total – commented individually that they had enjoyed the video test. The gist of what they said was that they had particularly appreciated the opportunity to express their understanding in Portuguese rather than having to pass it through the filter of their English interlanguage. This evidence for the affective benefits of L1 use is sketchy and informal, but should perhaps not be dismissed simply because of that, especially since the comments were volunteered and seemed important enough to the individuals concerned for them to take the trouble to pass them

on to an unfamiliar researcher.

The argument that L1 response to comprehension tasks in the initial stages of L2 learning should be 'legalized' is not, of course, new; the variants of the Communicative Approach (cf. Chapter 5) rely on just such an assumption. But the case is perhaps strengthened when the comments that tend to support it come unsolicited from language learners themselves, rather than from the professional enthusiasts for a particular pedagogic method.

9.7. Summary

In this chapter we have seen that the basic hypotheses underlying the experiment have been supported by the subjects' results on the retelling test of comprehension. There does seem to be a beneficial effect on comprehensibility, when secondary listeners are played recordings of L2 interaction between native and non-native speakers, as opposed to native/native discourse. That effect comes close to counteracting individual subjects' level of proficiency in listening. Statistical analysis suggests that the strongest influence on degree of comprehension is the modification of discourse produced by the NS and NNS in collaboration. Having discussed the quantitative and qualitative dimensions of listeners' comprehension in the experiment, we turn in the final chapter to consider the implications of these results for materials and classroom practice.

CHAPTER 10**CONCLUSIONS**

As its title suggests, the purpose of this study was to lead to practical recommendations and guidelines for the design of graded materials for use in foreign language teaching. In drawing together the various threads in this final chapter, I will be relating the findings of the experiment to the previous theoretical background of listening comprehension research and of native/non-native discourse studies, and then to the potential practical applications in the classroom of the procedure adopted in this study.

10.1. Theory**10.1.1. Listening comprehension research**

A major theme of the research into listening comprehension reviewed in the first three chapters is the powerful influence of schematic knowledge on the individual's interpretation of discourse. We saw in Chapter 3 that the extent of the listener's access to such knowledge in L2 comprehension is in dispute. Some researchers (e.g. Voss 1984; Conrad 1985) have found evidence for what we might term a threshold effect, in that L2 learners seem to have to reach a certain level of proficiency in the foreign language before they begin to deploy schematic and contextual information to assist the processing of the linguistic elements in a text. More recently, Wolff (1987) has presented findings which suggest that, given conducive task conditions (assistance from visual material and a listening task that demands attention to overall message) learners at quite limited levels of L2 competence seem to integrate data from systemic, contextual and schematic sources, much as they would in listening to their mother tongue.

The subjects' written versions of the story ending in the videotape narrative experiment suggest that Wolff is correct in drawing attention to the crucial role of the nature of the listening task and the form in which the comprehension response is given. There are clear traces in many of the Portuguese learners' written answers of elements 'imported' either from their perception of the accompanying illustrations or from their previous experience of narratives of a similar type. There is no doubt that many of these listeners were able to integrate the linguistic elements they recognized in the spoken text with schematic information; their written version of the denouement represents an amalgam of elements from different sources. Teasing out the various strands of information that contribute to comprehension is, for the purposes of this study, unnecessary and perhaps ultimately impossible. What is of interest for the classroom application of the findings is the importance of allowing or encouraging L2 listeners to draw on all the data available to them and not to emphasize the linguistic dimension alone, at least in the case of the input-for-comprehension that has been the focus in this work.

10.1.2. Native/non-native discourse studies

In a discussion of the status of the language environment in second language acquisition theory, Long (1985) emphasized the inherent difficulties facing the researcher wishing to demonstrate a direct causal relationship between the L2 environment and learners' language development. He suggested that an alternative was to adopt an indirect approach to the problem, comprising three stages:

Step 1: Show that (a) linguistic/conversational adjustments promote (b) comprehension of input.

Step 2: Show that (b) comprehensible input promotes (c) acquisition.

Step 3: Deduce that (a) linguistic/conversational adjustments promote (c) acquisition.

(Long 1985:378)

In Long's terms, our narrative experiment is a first-step study, investigating evidence for possible enhancing effects on L2 learners' comprehension of exposure to recordings of NS/NNS discourse. In the same 1985 article, Long outlined the potential value of research into the hypothetical relationship between environment, comprehension and L2 development:

its findings will... have implications for a number of applied concerns, such as bilingual and immersion education, syllabus design, teaching methodology, and the preparation of simplified reading materials.

(ibid:377)

Two points should be made about that comment. Firstly, Long's specific reference to bilingual and immersion education – second-language, rather than foreign-language, applications – may simply have reflected the professional concerns of the audience he was addressing at the time¹. However, it is noticeable that very little research has been rooted in the EFL classroom context such as the Portuguese case investigated here. Given our specific purpose – the potential for foreign language teachers' production of their own graded listening materials – it is important to stress this difference of focus in a substantial majority of NS/NNS studies, compared with that adopted in this study.

Secondly, it is significant that Long makes no mention of simplified listening materials. This omission is perhaps inevitable, given the design of the

relatively few studies that have attempted to investigate learners' comprehension of spoken texts featuring NS/NNS modifications. All the studies of comprehensibility reviewed in Chapter 4 involved recorded scripted L2 texts read aloud, rather than recordings of face-to-face conversation. Yet it is widely agreed by researchers working in the field of native/non-native discourse analysis (including, notably, Long himself) that interaction adjustments are both more consistent and more effective in assisting learners' understanding than modifications to linguistic input.

The reason for the lack of comprehension studies based on live native/non-discourse (of the sort employed in the earlier descriptive work on the nature of such modifications) is a simple one: the researchers have had to weigh up the conflicting demands of degree of control and of verisimilitude of text. Both Kelch (1985) and Long (1985) stated explicitly that the consequence of asking a native speaker to record scripted 'native' and 'non-native' versions of their experimental texts was a degree of artificiality. Kelch expressed the problem as follows:

(the native speaker) made every attempt to sound natural on the recordings, given the limitations of reading from a script. While such artificiality was a requirement of the laboratory conditions needed to control the various features being examined the same conditions did apply equally across all groups.

(Kelch 1985:84)

Our study has investigated the possibility of taking an alternative route, aiming for naturalness of discourse as a priority rather than for an only partially attainable degree of experimental control. It is intended to reflect the conditions of real-life collection and classroom use of materials, rather than to be a laboratory-type experiment. Since its purpose was to explore the use of

recordings of unrehearsed interaction as comprehension material, it was necessary to avoid the sort of explicit control that has been used in constructing graded script-based texts. Any attempt to control the spoken language for the purposes of experimental design would have been incompatible with the aim of the study.

Clearly, the effect of allowing the native narrators in the first-phase data collection described in Chapter 8 to produce spontaneous discourse (and discourse modifications) was to lessen the degree of control over the content of narrative versions. However, although such control was reduced, it can be argued that four specific features of the task environment helped to maintain an acceptable level of comparability:

- (1) each speaker told fundamentally the same story;
- (2) each pair of partners had access to the same visual input;
- (3) the target outcome was identical, namely the listener's completion of a numbering task;
- (4) the interactions were recorded under identical physical conditions.

The uncontrolled, variable elements arising from the procedure of data collection were those that would vary in any real-life application of the procedure as a means of collecting teaching material – the task partners themselves and their effects on their shared discourse. They formed the focus in the study, since my aim was to assess the extent to which their collaboration in discourse contributed to the eventual comprehensibility of the text for secondary listeners remote from the original interaction.

The results of the retelling task in the comprehension experiment seem to justify the decision to adopt this 'natural', i.e. unscripted and unrehearsed,

approach. As in the earlier, highly controlled description-oriented investigations of NS/NNS conversation, the statistical evidence presented here points to the importance of interactional modifications in combination with those of input, and consequently to the central role of the partners' cooperative negotiation. In excluding on-line interaction from consideration, for reasons of experimental control, previous comprehension-oriented NS/NNS studies have omitted precisely the element of realistic native/non-native discourse that matters.

The results of this study appear to bear out my assumption that, left to their own devices, as it were, native speakers would deploy appropriate tactics of adjustment to their non-native listeners and that the characteristics of the communicative situation in which they were placed would lead to successful modification. Given that the data collection procedure was broadly successful in bringing about, unprompted, the sort of modifications reported in the earlier literature, we need now to turn to what Allwright recently called 'the "so what?" issue in applied linguistic research'². In our case, the "so what?" is the possibility of direct pedagogic application, which is discussed in the next section.

10.2. Practice

The perspective informing both stages of the empirical work, (the primary data collection and secondary experiment), is a practical concern with the situation of the many teachers of English as a foreign language who work in professional contexts where commercial listening comprehension materials are either unavailable, unsuitable for their students' level, or prohibitively expensive. All three problems are common complaints, particularly in the case of teachers working outside Western Europe. Our aim has been to assess the feasibility of using the procedure adopted in the data collection stage of this

study as a means of producing – or, more accurately, eliciting – materials suitable for graded classroom listening activities.

The analysis of the NS/NNS discourse data recorded under the conditions specified in this study indicates that it did, indeed, reflect the types of speaker modifications observed in earlier research using more controlled conditions. The results of the experiential study of the comprehension achieved by elementary Portuguese learners of English suggest that those modifications were also helpful to secondary listeners in the L2 classroom.

10.2.1. Task conditions

The conclusion we wish to draw from this study is the feasibility of individual language teachers finding an alternative to commercial listening comprehension courses by designing their own materials on the lines described here, provided they have access to the following:

(1) a native speaker of the target language with experience of foreigner talk discourse – preferably a teacher;

(2) recording facilities, minimally a simple audiocassette recorder with a built-in microphone;

(3) a non-native listener at approximately the same level of L2 proficiency as the students for whom the recorded material is intended.

However, assuming that those three elements are available, it is not simply a matter of turning on the recorder and telling the two people to talk about something for 5 minutes, as some researchers have done (cf. Chapter 4). In order to ensure that their recorded material contains the adjustments needed for comprehensibility, the partners need to have a clearly defined practical task with a specific outcome that can provide for purposeful talk. The speaker needs to receive feedback from the listener in relation to the listener's

progress towards the task solution. The listener needs to be engaged on some sort of concrete task, such as sequencing, numbering, completing a grid, rather than merely being asked to listen to the speaker's story or argument. Making the discourse task-focused in this way is not just a matter of pedagogic fashion, but an essential part of the materials design. The NS/NNS research discussed in Chapter 4 has underlined the fact that conversations with a tangible outcome are more likely to result in an increased degree of linguistic and conversational adjustment than those with no clear concrete goal, since they require active two-way negotiation of meaning.

10.2.2. Task partners

A major element of this present study is the evidence for what we might term a 'carry-over effect' – our finding that the presence of an original listening partner actively engaged at the time on a task whose completion depends on the interaction with a native speaker is likely to elicit modifications geared to their L2 level, which may subsequently be exploited by secondary listeners engaged in carrying out a similar task in the language classroom.

Indeed, we should recall that in the present study this carry-over effect from original partner to classroom learners was brought about despite the fact that the experimental subjects were speakers of a language not represented at all among the non-native participants in the recordings. One might suppose that, if the speaker knows enough of the listener's native language, this might lead to their adopting an alternative form of lexical adjustment to those analysed in Chapter 8 (use of high-frequency lexis and avoidance of idioms), namely the use of vocabulary items whose similarity to a word in the listener's L1 is likely to enhance recognition.

Speaker 25, for example, produced the following sequence in the version of story 3 told to her Italian elementary-level partner: *'the men + take the stones out + and weigh them + as an equivalent for the elephant'*. After the recording, she told me she had made a conscious decision to use the word 'equivalent', since she thought that it would be understood by the listener without difficulty, given its similarity to the word in his native language. Although the word 'equivalent' is of relatively low frequency, (at least in the foreign language course texts that the learner was likely to have encountered), the L1-influenced substitution tactic was successful.

Similarly, though by chance and not a conscious decision, the fact that three of the four speakers selected for the follow-up experiment used the word 'disappointed' no doubt helped the Portuguese subjects to understand the ending of the Ln and La versions of the narrative, since the word is similar enough to Portuguese 'desapontado' for it to be easily recognizable – again, despite being a relatively uncommon EFL teaching item at elementary level. In the pedagogic application of the method I am advocating, I assume that the native speakers most likely to be available and willing to help teachers of English abroad will be other EFL professionals – whether fellow teachers or advisers – working in the local context. This means that the modifications made may be assisted by the speaker's familiarity with the non-native partner's first language.

10.2.3. Task focus

The listeners' task in the test was more demanding than that completed by the original partners. In the first-stage recordings the listener had to number a complete set of pictures; in the follow-up experiment the subjects were asked to retell the story ending. In spite of this substantial difference in task demand, the experimental subjects' comprehension was shown to be assisted

by the discourse modifications made for the original non-native partner. It is worth emphasizing this point, since – as noted in the previous chapter – we may assume that the narrators would have produced a greater degree of modification if the original listener's task had been to retell the story ending and not simply to number the picture sequence. The fact that the versions told to non-native listeners proved more comprehensible despite being produced for a less demanding listening task underlines the substantial effect on comprehensibility established in this study.

10.2.4. Application

The overall approach adopted in this study and now being recommended for use in materials production/elicitation might be used in one of two ways. Firstly, it could be used to create a single set of 'dedicated' listening materials for one particular group, for example, a series of graded comprehension activities for a third-year English class. By setting up recordings involving a native speaker and a learner with the same L2 level as the third-year group, a teacher would be able to ensure that the resulting material was likely to be comprehensible to the target group.

Secondly, it would be feasible to create a library of listening activities on the same set of basic tasks, but with texts geared to a number of levels. This would fully reflect the characteristics of the data collection described in Chapter 8. Materials produced in this way might be regarded as an extension of Brown and Yule's two-way grid of task difficulty (cf. Figure 8 in Chapter 7). This is represented in Figure 10 below.

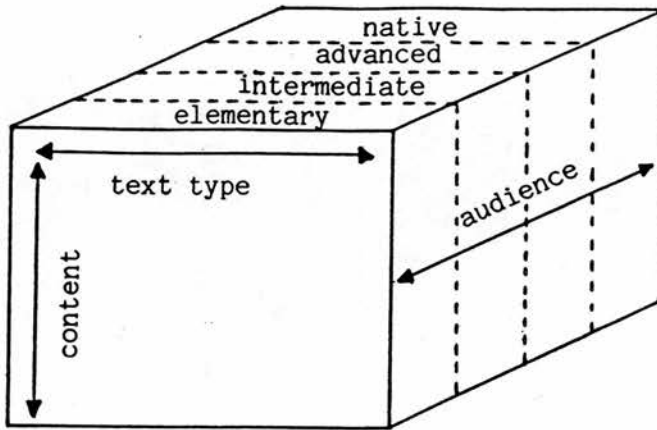


Figure 10. A three-dimensional view of graded listening materials

Our proposed procedure would make the grid three-dimensional, by incorporating the notion of the audience, with the listener's L2 proficiency as a variable; this should result in the deployment of the range of discourse modification characteristics that we have seen typically occur in task-based NS/NNS interaction.

However, we should bear in mind that Figure 10 is an idealized representation. The experimental results suggest that statistically it may not be justifiable to claim that there will be four discrete levels of text; but certainly there are grounds for saying that native and non-native versions were significantly different in their accessibility to the elementary-level L2 learners of English whose performance we have analysed. It is quite possible that the use of other text or task types - for example, a comprehension task based on listening assisted by a smaller amount of visual support than was available to the partners in the narrative recording sessions - would result in more marked differences among the hypothetical levels of text, since the

listener would be likely to request additional information and modification.

10.2.5. Use

It is important to keep in mind that classroom listening comprehension activities represent a means to an end, not an end in themselves. The objective of creating and using materials of the type we have investigated here is to enable foreign language learners to recognise how they can elicit and exploit potentially helpful adjustments in speech addressed to them by native speakers.

This requires that the materials should be used not merely as input to listening exercises, but also as a springboard to productive tasks focussing on tactics and modifications in L2 conversation. We envisage that this objective might be attained through a sequence of classroom activities comprising the following stages:

(i) an initial listening/viewing task;

(ii) a comparison stage in which the students pool ideas and interpretations of the spoken text presented at stage (i);

(iii) follow-up listening/viewing;

(iv) discussion to reject or confirm the learners' answers from stage (ii);

(v) the analysis of instances of discourse repair or modification by the native speaker, either spontaneously or in response to signals from the non-native partner - What did the non-native speaker do to indicate comprehension difficulty? What did the native partner do to assist?

(vi) productive paired practice in conversation tasks incorporating the markers and modifications featured at stage (v).

In short, the recordings of naturally modified target language discourse would be exploited as samples, for classroom learners, of what is possible in L2 conversation with a cooperative partner, and thus as a means of encouraging and enabling them to deploy the sort of tactics likely to result in helpful modifications.

10.3. Recommendations

As a result of the comprehension experiment, our recommendations to teachers who wish to design their own graded listening materials based on NS/NNS recordings are the following:

(1) Use an overall framework for grading difficulty such as that outlined by Brown and Yule, taking into consideration the need to sequence listening texts with regard to their type (description, narrative, exposition) and their content features (number of discourse entities, information sequence, redundancy, etc.).

(2) Design practical communication activities for use in the recording sessions, in which the original listener has a task to complete during the interaction or immediately afterwards. This will require them to take decisions during the interaction about which elements of meaning in the spoken message need negotiation with the native partner.

(3) Find a native speaker who is willing to participate in the recordings. They should if possible be a teacher of English as a foreign language, since there is evidence that language teachers will have acquired expertise in making the sort of discourse modifications that are likely to assist non-native listeners' comprehension.

(4) Provide the native speaker before the recording session with brief guidance as to appropriate ways of coping with communicative breakdown or

difficulty – advise them, for example, to keep an eye on the listener's reactions for signs of difficulty; to use comprehension checks; to reformulate when repetition seems not to be helping the listener. However, they should be asked not to resort to the partner's native language. Particular mention should be made of the need to avoid the sort of simplification of conceptual content that might be perceived by the listeners as talking down to them.

(5) Encourage the listener to intervene and ask for clarification of points they are not confident of having understood. This seems likely to increase the chances of eliciting a more comprehensible form of the message (for both original and secondary listeners) than simply relying on the speaker's perception of what is difficult.

(6) Allow the two task partners time to talk before the recording, so as to enable them to familiarize themselves with the other's English. It is particularly important for the native speaker, who will have to assess the listener's approximate level of L2 competence, but it is also valuable for the non-native partner, who may be unused to the speaker's accent.

(7) Do not allow the partners to practise the communication task. The recorded material is more likely to reflect the modifications characteristic of actual native/non-native interaction if their conversation is taped without prior rehearsal. The native speaker (and the non-native listener) should be required to cope with on-line communication problems that have not been discussed or rehearsed. It is an essential part of this study that materials should be elicited through natural discourse, as opposed to being designed in advance and controlled by the use of a script.

(8) Assess the extent to which the recorded interaction has been successful and is likely to be understood by your students. To do that, you will be able to listen to the recording itself (noting the number of adjustments

made by the speaker and the reactions of the listener, such as requests for clarification or signals of comprehension) as well as the task sheet that the non-native partner has completed. If both the process of communication (the two partners' interaction) and the product of that interaction (the listener's task solution) appear successful, then you have grounds for using the recording as comprehension material with your students.

10.4. Summary

This study has provided an analysis of the types of discourse modification occurring in task-focussed interaction between native speakers and non-native listeners. It has investigated the potential effects of such modified discourse on its comprehensibility for language learners watching a recording of the original interaction in their L2 classroom. The results suggest that comprehension was assisted by the sort of adjustment made to original non-native listeners. The data collection procedure employed in the study offers one way in which foreign language teachers can create or elicit listening materials appropriate to their particular students, provided that certain recommendations made in this chapter are adhered to. The comprehension materials created in this way may be claimed to offer samples of L2 discourse that are both realistic and accessible.

Notes**Notes on Chapter 1**

(1) These were principally telecommunications systems. Nyquist, Hartley and Shannon were all employed by the Bell Telephone System at the time of their research. However, information theory is a statistical theory of the potential efficiency of sign systems in general; these signs may, for example, be realized as dots and dashes, speech sounds or the printed word (Shannon 1951).

(2) Osgood and Sebeok's survey appeared in 1954 and covered the psycholinguistic field of the early 1950s. The 1965 edition includes a supplement (by A.R. Diebold) on the period 1954-64, but our references in this section are to the original period of study.

(3) It is perhaps worth noting the way in which the English expression 'to make sense' encapsulates the active nature of comprehension.

(4) There is a sizeable literature on the procedures of discourse interpretation in relatively structured settings and in less formal contexts such as conversation. Among the most influential conversational analysis studies are those carried out by Schlegloff and Sacks (1973); Sacks, Schlegloff and Jefferson (1974); and Schenkein (ed.) (1978). Relatively structured types of interaction have been analysed in various forms, e.g. classroom interaction (Sinclair and Coulthard 1975), broadcast interviews (Pearce 1973), television discussions (Lynch 1978) and academic seminars (Johns, undated).

(5) For example, it was shown by Anderson et al. (1977) that, even within a group sharing the same first language, sub-cultural differences influenced interpretation of a written text. Two groups of subjects - female music

students and male students from a weightlifting club – were presented with a text about an evening spent at home. The text had been constructed to include several ambiguous lexical items: 'cards', 'notes', 'recorder' and 'diamonds'. The females understood the passage to be about a musical evening; the males interpreted it as a text about playing cards. Similar divergences of interpretation, due to linguistic and cultural background among a mixed group of L2 learners of English were reported in Lynch (1983b), with reference to videotaped materials.

Notes on Chapter 2

(1) Anderson and Lynch (1988) provide a survey of research into the acquisition and classroom development of L1 listening skills. One of the common findings in such studies is the range of listening ability, even among native users.

(2) The research subjects were military personnel, classified into these three mental aptitude groups on the basis of their scores on the US Armed Forces Qualification Test. Sticht's primary interest was in the low mental aptitude subjects.

(3) We might note Lamendella's ironic comment on a similar point: "There are two kinds of researchers who deal with cognition: those who define it erroneously and those who don't define it at all" (Lamendella 'The Early Growth of Cognition and Language', quoted in Oller 1981).

(4) There appear to be parallels between Cummins's separation of cognitive/academic language proficiency and basic interpersonal communication skills, and the notions of formal explicit rule knowledge and informal acquired proficiency proposed by Krashen.

(5) Oller cites evidence of correlations between language proficiency in L1 and L2: .69 for Fante and English (Bezanson and Hawkes 1976); .65 and .70 for Swedish and English (Johansson 1973); he also reports 'similar findings' in Stendahl (1972) and Truus (1972).

Notes on Chapter 3

(1) This 'either-or' view is, as we saw in Chapter 1, a simplification, since comprehension appears often to proceed on interactive, parallel routes; Faerch and Kasper were presumably wishing to draw attention to the general strategy a listener/reader applies in a particular case – that is, predominantly linguistic or schematic.

(2) This is often the reaction of language teachers, too, and of listening course designers, some of whose materials seem based primarily on syntactic and lexical considerations. We consider this point in detail in Chapter 6.

(3) This is when seen in the West German context. They may well have been very advanced learners, when compared with L2 learners of English in other parts of the world.

(4) Another aspect of 'robustness' may be humour, whether deliberate or unintentional. After mentioning to a group of students of English, in response to a question about the title of a Woody Allen film, that the word 'bananas' meant 'mad', I noticed that they used the adjective persistently over the period I was teaching them. I assume that they found the word amusing and retained it – better, it seemed to me, than other 'teaching' target items – for that reason.

(5) As Ellis (1985) emphasizes, evidence for informal acquisition in the absence of two-way communication tends to be anecdotal, so perhaps I may be permitted one such anecdote. One of the postgraduate L2 learners on an EAP course I worked on in 1976 had to go into hospital for the treatment of hepatitis. During the two weeks or so that he was in isolation, he listened to Radio 4 and read English newspapers; he had limited daily contact with the medical staff. When he rejoined his classmates, both they and his teachers

noticed a marked improvement in his all-round proficiency, compared with the other students, who had had the presumed advantage of some 50 hours of English tuition that he had missed. He was aware of a definite improvement in his level of comprehension, which he ascribed to the fact that, having listened mainly to news, documentary and magazine programmes, he now felt he knew 'what people were talking about' - evidence, perhaps, for the power of increased schematic resources - rather than simply 'what they were saying'.

(6) From his 1987 article, it is not clear whether Wolff believes it is possible for the language teacher to take any positive steps to help develop L2 learners' comprehension proficiency, as opposed to simply waiting until their general L2 systemic knowledge allows them to harmonize bottom-up and top-down processing, in the way that (presumably) they do in listening to their native language.

Notes on Chapter 4

(1) NS/NNS studies have tended to adopt the L2 learner's perspective, terminologically speaking; 'input' refers to what the listener hears (or, more generally, receives). 'Input' to the listener is, of course, 'output' from the native speaker's point of view.

(2) The studies in question are: Henzl (1974, 1979); Steyaert (1977); Dahl (1981); Wesche and Ready (1985).

(3) A number of the references in this table are to research or conference papers which have since appeared in journals or collections. In such cases, I have given the later date of publication of the more accessible version, which may have appeared since Long's (1981c) paper, from which the table is taken.

(4) The 'conversation club' (Freed 1978) involved regular meetings between native American students and ESL students at the University of Pennsylvania, arranged to promote social and interpersonal exchange and informal language learning.

(5) The collection edited by Faerch and Kasper (1983) offers a number of contributions discussing what constitutes 'plans', 'strategies', 'procedures', and so on.

(6) In this study, the control NS assessments of NNSs's pronunciation were obtained by asking 'expert raters' (experienced ESL teachers) to judge the recorded speakers' performance.

Notes on Chapter 5

- (1) 'Nucleation' is explained in section 5.2.2.
- (2) Summarized in Dulay, Burt and Krashen (1982).
- (3) Quoted in Gary (1975).
- (4) In 'A Child's Guide to Languages', a programme in the BBC2 'Horizon' series, broadcast in 1984.
- (5) The distinction was phrased in this way by Nord (1981) but had been also been made by Postovsky (1975a, 1977) and Newmark (1981).
- (6) Quoted in Davies (1980b:462).
- (7) Quoted in Postovsky (1975a:171).
- (8) There had been other listening-first methods before CA. For example, J.R. Firth had run listening comprehension courses in Japanese during the Second World War (mentioned in Winitz 1981c). Also, Gauthier (1963) had invented the Tan-Gau method, in which learners engaged in listening comprehension practice as the initial stage of language learning, responding to questions in their L1, until they were sufficiently confident to attempt L2 production. But CA proper may be dated from Asher's first papers on TPR in Russian and Japanese teaching experiments (Asher 1965, Kunihiro and Asher 1965).
- (9) Asher (1965, 1969, 1972, 1974, 1977a, 1977b, 1981a, 1981b); Asher, Kusudo and de la Torre (1974); Kunihiro and Asher (1965).
- (10) In Asher (1981b).
- (11) Winitz (1973, 1978a, 1978b, 1981b and 19981c); Winitz and Reeds

(1973, 1975); Reeds, Winitz and Garcia (1977).

(12) OHR-type teaching was first developed by Winitz - who was a psychologist by training, rather than a linguist - for use in L1 therapy for language-delayed children (Winitz 1969, 1973).

(13) One assumes that the autonomous listening comprehension course of the type organized by Firth (see note 8 above) is a rare exception, and that language learners will normally require practice in other skills than listening eventually, even if CA forms the initial phase of L2 learning.

(14) Quoted in Davies (1978:15).

(15) B. Segal gave a presentation at the 1983 TESOL Convention in Toronto on the application of TPR methods to ESL in the United States; no published version has appeared.

Notes on Chapter 6

(1) This avoidance of the issue of grading listening difficulty applies equally in the case of mother-tongue teaching. Indeed, Wallace's survey of L2 listening materials was part of his contribution to a research project investigating first language listening. His decision to survey L2 materials resulted from the lack of appropriately graded courses in the L1 field.

(2) One might compare this with the wider picture of foreign language syllabus construction, where taxonomies of learning objectives, communicative functions, etc. (for example, van Ek 1975, Wilkins 1976, Munby 1978) have not, in themselves, suggested optimally efficient sequences of course units or classroom activities.

(3) The construction of 'readability scales' also ignored the crucial interaction between text, reader and context, implying that a given text was equally readable to all readers. As Davies comments, "The numbers attached to texts in terms of readability (by indices or by cloze procedure) are meaningful only in terms of which readers (age for native speakers, years of language exposure for non-native speakers) can cope satisfactorily. To make matters easier for ourselves, we might say that simplicity is a function of the language, readability of the reader" (Davies 1984:187).

(4) Mackey used the term 'gradation' in preference to 'grading', in order to avoid possible confusion with 'grading' in the sense of student assessment, testing and so on (Mackey 1965:204).

(5) In translation (Jellinek 1953), quoted in Mackey (1965:205).

(6) Stern (1983:111) dates the era of communicative language teaching from the mid-1960s and highlights the central role played by Hymes's notion of 'communicative competence', used in deliberate contrast with Chomsky's

'linguistic competence'. Similarly, Brumfit and Johnson's collection of seminal articles (Brumfit and Johnson 1979) includes Hymes's original (1966) paper on communicative competence. However, from the perspective of the L2 classroom, the effects of theoretical analysis and discussion did not really filter through – in the form of teaching materials – until the mid-1970s, and in this present discussion of materials design I assume that we may regard 1975 as the practical start of the CLT period.

(7) On this anomaly, Widdowson makes a helpful distinction between a simplified version and a simple account. The former is an attempt to make meanings in an existing text clearer within a restricted range of usage; the latter involves the 'recasting' of information to suit a particular reader/listener (Widdowson 1978:88–89).

(8) Their suggestions were in fact based largely on data from research into the variation of competence among native users of English. The research involved two projects funded by the Scottish Education Department: the first, on oral competence, is reported in Brown, Anderson, Shillcock and Yule (1984) and the second, on listening comprehension, is summarized in Brown, Anderson, Shadbolt and Lynch (1987). For details of listening training materials resulting from the latter project, see Anderson and Lynch (1988, chapter 7).

(9) Riley (1981) and various contributors to McGovern (ed.) (1983) emphasized the enormous potential of videotape as a teaching/learning medium – in particular, the increased accessibility of contextual cues for the non-native viewer. However, MacWilliam (1986) has pointed out the lack of evidence as to which aspects of L2 comprehension and learning might be enhanced through the exploitation of video materials.

(10) These two studies employed different procedures. Pimsleur et al., investigating the L2 teaching of French, used off-air recordings of idiolectally

slow newsreaders, which follows the pattern of speed grading suggested by Brown and Yule (1983b:81). The alternative way of manipulating the variable of rate of delivery is to use temporally spaced recordings; this was the method adopted by Flaherty (cf. the experimental studies reported in Chapter 2).

(11) Under certain conditions, it may also be the case that native listeners have more difficulty than non-natives in understanding an L1 accent with which they are unfamiliar. On occasions, I have found myself in the position of having to explain to my Brazilian wife what has just been said to her by a speaker of the Portuguese variety of her native language.

(12) This need to make listening activities interesting also applies to the training of L1 comprehension. Indeed, it could be said to be even more important in that context, since the native speakers selected for such training are likely to be academically unsuccessful and consequently relatively demotivated learners, such as those targeted in the Scottish Education Department project in listening comprehension.

(13) A 'referential paradigm task' is an experimental task that requires the listener subject to identify one item from a set of possible candidates being described by the speaker.

Notes on Chapter 7

(1) As regards the use of television commercials, current British legislation makes no explicit reference to videotaping. As the law stands, teachers wishing to make legal use of advertisements as lesson material have to rely on the coincidence of appropriate commercials with a timetabled class. Subtitled programmes are available only to viewers with teletext TV receivers but the subtitle text itself can only be recorded if the viewer has an additional piece of electronic equipment.

Notes on Chapter 8

(1) These institutions were: Basil Paterson College; the Edinburgh Language Foundation; the Institute for Applied Language Studies, University of Edinburgh; and Stevenson College of Further Education.

(2) For details of these ten alternative incorrect solutions, see Appendix B (story 2, Le).

(3) The total of native listener stories mentioned in this table is 23, while the number for each of the NNS listener versions is 24. This discrepancy arose because speaker 7 referred to the barge as a 'vehicle' in his initial Ln version; this seems to have been an aberration, as opposed to a positive listener-oriented modification.

(4) One narrator (speaker 10) resorted to gesture when her elementary listener seemed to have difficulty understanding the phrase 'so he shook his fist'. Whether this was a conscious attempt to avoid the ambiguity of lexical approximations such as 'he waved his hand' is unclear. It could be that the man's action happens to be one that lends itself naturally to an accompanying gesture. On the other hand, there are no instances in my data of a speaker using accompanying or clarifying gestures to their native partner; so gestures seem to be a marked feature of modification to the non-native listeners only.

(5) Chaudron (personal communication) has pointed out that earlier research has produced evidence for modification of information choice, for example, strategy S2 in Long (1983a) - "Select salient topics". (see Table 4 in Chapter 4). However, this was a modification type observed in conversations in which the native partner decided what topics to talk about. In the present study the overall discourse topic and structure is largely outside the narrator's control, since it is determined by the picture series. What is of particular

interest is that, despite these constraints, some narrators nevertheless select information differentially by listener-level, by referring to different aspects of the pictures available to both task partners.

(6) It is worth noting, in passing, that one of the linguistic features differentiating Ln and La from Li and Le versions is the more frequent use of metacomments such as 'naturally', 'of course' and 'obviously' in narratives told to the two higher-level partners. This suggests at least a tendency for speakers to assume that lower-proficiency listeners have fewer intellectual and/or cultural resources to draw on, in addition to their linguistic disadvantages.

(7) My assumption about the transparency of these two gestures seems to have been confirmed by the reaction of members of the audience at the 1986 IATEFL Conference in Brighton, when I gave a paper arising out of this research (Lynch 1987a). They represented a reasonably broad cross-section of languages and cultures (coming from four continents), yet were unanimous in interpreting fist-shaking as a sign of anger and head-scratching as a sign of puzzlement.

(8) For further discussion of the non-native listener's affective response to 'overmodified' foreigner talk discourse, see Lynch (1987a, 1988a), which offers limited support for Wesche and Ready's (1985) speculation that such talk could be perceived as 'talking down' to the NNS listener.

Notes on Chapter 9

(1) The test used was the British Council 'Mini-Platform' test.

(2) The oral and written production tasks outlined in the matrix refer to L2 production tasks (Chaudron, personal communication). This leaves open the issue of how we might incorporate the notion of L1 versions of such tasks. For example, we might assume that an L1 written recall task would be considered easier than one in the target language – but how much easier? In terms of the matrix, how far leftwards would we wish to move it?

In response to an informal query on this issue of the relationship between L1 and L2 versions of comprehension tasks, Chaudron provided the following comment:

...in general, on the production dimension, L1 responses should fall to the left of L2 responses but not further to the left of the non-verbal responses. Whether or not L1 written recall of an L2 piece requires less encoding than an L2 listening cloze oral response is a strictly empirical question – I see no intuitive way to decide this, nor do I know of any solid research demonstrating where it should go.

(Chaudron, personal communication, original emphasis)

(3) The editing and captioning was carried out in the Language Learning Centre at the University of Edinburgh, by the late Bill McDowall.

(4) Portuguese instructions for the various test elements were given by my wife, who acted as unpaid but highly appreciated research assistant.

(5) Although the literature on story grammars is dominated by discussion of (and in) English, one would expect the nature and sequence of the grammar components to be different in other languages or speech communities (cf. Tannen 1980). However, from the evidence available to me from native

Portuguese informants, it seems that the underlying story grammar of Portuguese is not significantly different from that of English. The issue of the role of schematic information in narrative processing is discussed further in section 9.6.3.

(6) A native speaker made a similar visual misinterpretation involving the door handle shown in picture 4 of story 1. As speaker 26 was looking at the pictures in preparation for her initial Ln recording, she said she was puzzled as to why the rich woman should choose to drop a banana into the beggar's tin.

Notes on Chapter 10

(1) The immediate context for Long's comments was the 1983 University of Michigan Conference on Applied Linguistics. The majority of the contributors and participants were involved in teaching and/or research in the second-language field, as opposed to EFL. Of the 26 papers published in the collection arising from the conference (Gass and Madden eds 1985) only three deal with foreign-language contexts.

(2) Allwright used the phrase at a seminar on classroom-oriented research at the University of Edinburgh in June 1988.

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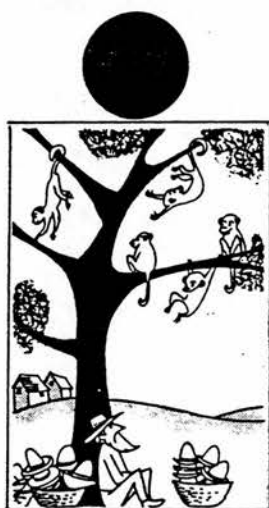
Appendix A

NARRATIVE TASKSHEETS

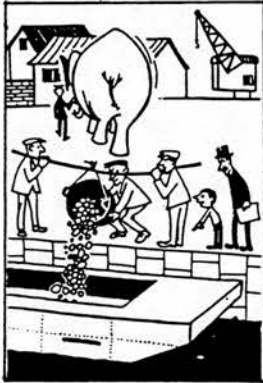
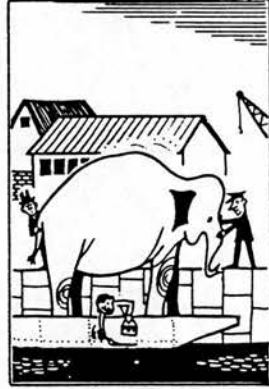
STORY 1



STORY 2



STORY 3



Appendix B

PARTICIPANTS AND SOLUTIONS IN DATA COLLECTION

SPEAKER		LISTENERS				
No.	Initials	level	LI	Story 1	Story 2	Story 3
				624135	351642	634215
1	RH	Ln	-	ok	ok	ok
		La	German	ok	ok	624315
		Li	Arabic	ok	ok	624315
		Le	Arabic	634215	ok	ok
2	RM	Ln	-	ok	ok	534216
		La	French	ok	ok	ok
		Li	German	634125	ok	624315
		Le	Arabic	634125	341562	642315
3	NV	Ln	-	543126	461352	635214
		La	Italian	ok	ok	624315
		Li	Arabic	ok	241536	ok
		Le	French	ok	ok	ok
4	IMW	Ln	-	ok	ok	ok
		La	German	ok	ok	ok
		Li	Arabic	ok	ok	624315
		Le	Japanese	ok	ok	ok
5	RMk	Ln	-	614235	ok	624315
		La	Spanish	ok	ok	624315
		Li	Turkish	ok	ok	624315
		Le	French	634125	ok	624315
6	JH	Ln	-	ok	ok	ok
		† La	Spanish	634215	ok	625413
		Li	Korean	ok	ok	624315
		Le	Italian	524136	ok	624315
7	JA	Ln	-	ok	ok	ok
		La	German	614235	ok	ok
		Li	Japanese	425136	ok	624315
		Le	Italian	ok	ok	ok
8	LHL	Ln	-	ok	ok	635214
		La	German	ok	ok	ok
		†† Li	Japanese	ok	ok	ok
		Le	Arabic	645231	ok	634125
9	RB	Ln	-	ok	641532	ok
		La	Danish	ok	ok	ok
		Li	Italian	634215	ok	ok
		Le	Italian	ok	361542	624315

Notes: † = La recording made last

†† = Li story 3 failed to record

SPEAKER		LISTENERS				
No.	Initials	Level	L1	Story 1	Story 2	Story 3
				624135	351642	634215
10	CW	Ln	-	634125	ok	624315
		La	Japanese	634125	ok	ok
		Li	Japanese	ok	ok	ok
		Le	Spanish	631245	142563	624315
11	HK	Ln	-	ok	ok	ok
		La	Tamil	634125	ok	ok
		Li	French	634125	ok	ok
		Le	Arabic	564132	231465	423516
12	SG	Ln	-	ok	ok	ok
		La	Korean	ok	ok	ok
		Li	Korean	634125	ok	624315
		Le	Korean	563124	246531	ok
13	BC	Ln	-	ok	ok	ok
		La	Korean	ok	ok	624315
		Li	Korean	ok	341652	ok
		Le	Korean	624315	ok	624315
14	TH	Ln	-	ok	ok	ok
		La	Italian	ok	ok	ok
		Li	Spanish	ok	ok	ok
		Le	Indonesian	ok	ok	624315
15	RG	Ln	-	ok	ok	ok
		La	Farsi	634125	ok	624315
		Li	Spanish	563124	ok	ok
		† Le	Cantonese	634125	ok	-
16	IC	Ln	-	ok	ok	624315
		La	French	ok	341652	624315
		Li	German	ok	ok	624315
		Le	Catalan	ok	ok	624315
17	RH	Ln	-	634125	341652	ok
		La	Wolof	ok	ok	ok
		Li	Thai	ok	ok	ok
		Le	Italian	125346	351246	514623
18	JMcC	Ln	-	634125	ok	ok
		La	Arabic	634125	251643	ok
		Li	Japanese	634125	ok	ok
		Le	Japanese	634125	ok	624315

Note: † = Le story 3 not told, as the listener already knew it.

SPEAKER		LISTENERS				
No.	Initials	level	L1	Story 1	Story 2	Story 3
				624135	351642	634215
19	GW	Ln	-	ok	ok	624315
		f La	Nepali	635124	ok	624315
		Li	Korean	564123	ok	624315
		Le	Arabic	563124	341562	523164
20	DW	Ln	-	ok	ok	ok
		La	French	ok	ok	ok
		Li	Japanese	524135	ok	523614
		Le	Bengali	546123	651432	645213
21	PR	Ln	-	ok	ok	ok
		La	Hungarian	ok	ok	ok
		Li	Spanish	634125	ok	ok
		Le	Japanese	634125	ok	ok
22	BH	Ln	-	634125	ok	624315
		La	French	634125	ok	ok
		Li	Arabic	423156	152634	624153
		Le	Arabic	563124	342561	ok
23	AR	Ln	-	ok	ok	624315
		La	German	634215	ok	ok
		Li	Arabic	634125	ok	ok
		Le	Korean	536214	261543	614325
24	GMD	Ln	-	ok	ok	ok
		La	Japanese	ok	ok	ok
		Li	Greek	ok	ok	ok
		Le	French	563124	ok	ok
25	JML	Ln	-	634125	ok	ok
		La	German	634125	ok	ok
		Li	German	635124	ok	ok
		Le	Italian	635124	ok	ok
26	JN	Ln	-	ok	ok	ok
		La	Japanese	ok	361452	635214
		Li	German	ok	ok	ok
		Le	Thai	ok	ok	624315
27	DH	Ln	-	ok	ok	ok
		La	Somali	ok	ok	ok
		Li	French	ok	ok	ok
		Le	Arabic	ok	ok	6624315

Note: f = La recording made last.

Appendix C

Transcripts of experimental narratives

Speaker S14

Ln version - Experimental story A

- S: so this is uh + the story + a young boy + in front of a + toyshop + yeah? /2.5/ with some coins in his hand obviously deciding uh + what he's going to spend his money on + presumably he's thinking of going in + and buying one of the articles in the shop window 46
- L: hmhm
- S: um + just + as he's about to uh + enter the shop + he turns round + and sees over + the other side of the street /1.5/ a blind man /1.5/ who is uh + begging for money he has a tin in his hand + yeah? 36
- L: hmhm
- S: and uh he's + obviously thinking what to do what shall I do + do I go in the shop + come over + come across to the blind man + hesitation + is in his face /1.0/ uh + he eventually decides + to cross over the road /1.0/ yeah? 40
- L: hmhm
- S: and /1.0/ as he's halfway across the road + a lady comes up + in a car + gets out + closes it + very posh well dressed lady + near the blind man the blind man + hears the door banging + sort of turns round 38
- L: hmhm
- S: and uh /1.5/ just then the + the young boy approaches the blind man puts uh + some coins in the tin + very pleased that he's um + made the right decision 26
- L: hmhm
- S: and then uh + to his horror + the boy's horror that is uh + the blind man takes off his cap in the direction + of uh /1.0/ the bl-- + of the lady who has slammed the door /1.0/ obviously thinking + the blind man um + thinking it was the lady who gave the money and not the young boy /2.0/ ok? 49
- L: right fine

Total: 235

Speaker S14

La version - Experimental story B

S: so the first story /1.5/ concerns a young boy

8

L: hmhm

S: who uh /1.0/ is thinking about uh + buying some toys + he's standing in front of a toyshop window + looking at the coins in his hand and looking in the shop window and deciding what uh + things he's going to buy + so + he's just about to go in + to the toyshop + but then he looks over his shoulder turns round + and sees + on the other side of the street + a blind man + yeah? + who is uh + begging + he's collecting + holding a tin asking for money /1.5/ and you can see the doubt + the hesitation + on the boy's face about what he should do + should he go into the shop should he go over th-- + to the blind man and give him his money + he eventually decides to cross over the street /2.0/ to + supposedly with the intention of giving money to the blind man + and just + at that moment + a lady + in a car arrives gets out + slams the door + and the blind man /1.0/ turns round + yeah? + 'cos he hears the noise /1.0/ and just then the + the boy + the young boy + with a smile on his face puts his coins into the tin + but to his horror /1.0/ the boy's horror + the blind man turns round + and takes off his cap + probably says thank you + but in the direction of the lady + 'cos obviously + it's the blind man who thinks it's the lady + who's given the money

225

L: hmhm

S: ok + that's the story

4

Total: 237

Speaker S14

Li version - Experimental story C

- S: so the first story is uh + about this young boy /1.5/ who uh + has some money + he's got coins in his hand + and he's looking in a shop window + a toyshop window + obviously uh + thinking that uh + he's going to buy + some + object 38
- L: hmhm
- S: that he sees in the shop window /1.0/ so he's just about to enter + the toyshop + when he turns round + looks over his shoulder + and sees on the other side of the street + a blind man + yeah? 36
- L: hm
- S: a blind man who is + collecting money 7
- L: hmhm
- S: in a tin + so + you can see + the doubt + the hesitation + on the boy's face + as he's holding the money and he's + thinking should I + go into the shop should I cross over + and he eventually decides to + cross the street + he doesn't go into the + toyshop + and um /2.0/ just as he's halfway across the street + a car + draws up + and um + a rich + lady + gets out + well dressed lady + gets out of the car + closes the door with a bang 78
- L: uhuh
- S: and uh /1.5/ obviously the + blind man hears this + looks round /1.5/ doesn't see anybody 'cos he's blind but he hears the sound + and + just then the uh the young boy + goes up to the blind man puts + some + of his coins on the tin + but to his shock and horror + the + blind man doesn't + acknowledge + the young boy + but turns + takes off his hat + and + probably says thank you + to + the rich lady + of the car /1.5/ and that is the story 76

Total: 235

Speaker S14

Le version - Experimental story D

S: ok + story one + it's about a young boy /1.5/ who is um + standing in front of a toyshop + he has money in his hand + and he's obviously /1.5/ intending to go + into the toyshop and buy something + yeah? buy a football a + helicopter + or something like that + but just + as he is about to enter + the toyshop + he looks over his shoulder + turns round + and sees + across the road + a blind man + yeah? + who is holding a tin + obviously collecting + money for himself + and then you can see that there is + hesitation + doubt + on um the young boy's face + he's thinking + what shall I do shall I go into the shop + shall I + go across the road + and give my money to the blind man /1.5/ well + he eventually decides + to cross the street + and to give his money to the blind man + but + he is halfway across the street + when a woman + in a car + drives up + gets out + closes the door + and the blind man obviously hears this + and + probably looks around + and then + just then + the young boy /1.5/ approaches the blind man and puts some coins + into his tin + yeah? /1.5/ but to the boy's horror + and surprise /1.5/ the blind man doesn't + say thank you + to the boy + but takes off his hat + in the direction of the uh + of the woman + obviously thinking that it is the woman + who uh + has given him + the money

227

L: yes

S: ok?

1

Total: 228

Speaker 16

Ln version - Experimental story E

S: I'll start telling you the first story /1.0/ the first story's concerned with a little boy + who + is thinking of buying a toy in a toyshop + and he's just deciding how much money he has and whether it would be enough to buy it + just when he thinks he has got enough money + um he + uh + looks across the street + and he sees a blind man collecting from the other side of the street

71

L: hmhm

S: um and he thinks twice about whether he should + spend his money on himself + and buy the toy + and decides he should give it to the blind man + so he crosses over the street to + the blind man to give him the money and just as he's + putting the money into the blind man's collecting can + uh + someone getting out of a car + slams the door + and the blind man + misunderstands this + and thinks that + uh + the person who got out of the car + gave him the money

83

L: hmhm

S: and + not the little boy /2.5/ and the little boy of course is + um very disappointed

14

Total: 168

Speaker 16

La version - Experimental story F

- S: the first story + uh is about a little boy + and this little boy + wants to buy a toy 18
- L: hmhm
- S: and he's standing outside a + uh toyshop + counting his money to see if he's got enough to buy the toy he wants /2.0/ he's just going to go into the toyshop when he looks across the street and sees a blind man + who's collecting money /1.0/ on the other side of the street + um then it occurs to him that perhaps + uh his conscience tells him that he should not um spend the money on himself buying a toy + but give it to the blind man + and he decides to give it to the blind man + and + he goes across the street to + uh to put into into his collecting tin + um just as he gets across the street to the blind man /1.0/ a + a lady gets out of her car + and slams the door shut + just as he's putting the money into the blind man's tin 138
- L: may I interrupt you ? sorry
- S: yes hm 2
- L: ok + so just as he crosses the street
- S: hm 1
- L: he sees a lady
- S: he sees a lady getting out of a car 8
- L: hmhm
- S: and um + when he gets across the street he's just /1.5/ putting his + money + into the blind man's tin + after the lady has + slammed the door hmhm? 24
- L: hmhm
- S: with a bang + uh + and the blind man turns around + and thanks the lady who's just going away + and not the little boy + who is very disappointed /6.0/ is that all right? have you got it? 33
- L: yeah

Total: 224

Speaker 16

Li version - Experimental story G

S: the first story + the first story is about a little boy + um who + uh at the beginning of the story is standing outside a + toyshop + thinking + about buying a toy and seeing if he has enough money + to buy it for himself + he's looking in the shop window + thinking about buying a toy /1.5/ um he's about to go into the shop + when he sees + a blind man on the other side of the street + collecting money /2.5/ and uh + he stops for a moment and thinks twice about whether + he should spend the money on the toy for himself + or whether he should perhaps + give it to the blind man + and so his conscience makes him think twice about spending money on himself + on himself + he wonders whether he shouldn't perhaps spend it on the blind man /1.5/ um and he decides + not to spend it on himself + but + to give it to the blind man + and so he + goes across the street + uh to where the blind man + is standing /2.0/ as he reaches the blind man + a lady + uh is getting out of a car + at the side of the road + and she + slams the door /1.5/ just after she slams the door + the little boy gives the + money to the blind man by putting it in his can + and + to his astonishment + and to his chagrin + uh + the blind man + thinks it's the person who got out of the car who gave him the money + and takes off his hat to thank her + doesn't realise that there's someone else there + that the little boy + has + um given him the money /4.5/

263

L: that's the story?

S: that's the story

3

266

Speaker 16

Le version - Experimental story H

S: this is the story of a little boy + who + um + has some pocket money + and is thinking about buying a toy + for himself + in a toyshop + so uh at the beginning of the story + he is standing outside the toyshop + counting the money + in his hand + uh + to see if he has enough money and he's just + going into the shop + in order to buy the toy + when he looks across the street + and sees a blind man + standing beside a lamp post + collecting money + yeah? + blind man collecting money + beside a lamp post

89

L: hm

S: uh + and when he sees that + he thinks twice about whether + he should spend the money on himself + and to buy the toy + his conscience + worries him about whether it wouldn't be better + to give the money to the blind man + than to buy a toy for himself + and + in fact + he changes his mind + and walks across the street with the money /1.5/ to give it to the blind man /1.0/ while he's walking + across the street to the blind man + um a car arrives + and a lady gets out of it /2.0/ and uh + slams the door /1.5/ and the blind man hears this + and turns round + and at that moment + the boy arrives + beside the blind man and + drops + his money + into the can

130

L: hm

S: but the blind man /1.0/ uh + thinks + that the person who got out of the car gave him the money + and takes his hat off + in that direction /1.5/ while the little boy + realises that he doesn't know + that it was him + and of course is um very disappointed + very unhappy /4.0/

47

L: it's all?

S: that's all I'm afraid

4

Total: 270

Speaker 4

Ln version - Experimental story I

S: um ok this is + story number one + um + there's a little boy + um who seems to have um + some money to spend + and um + he looks in a shop window + and + he sees some + something perhaps that he likes /1.5/ and he then decides to go in + but uh + just as he's going in + um he turns round + and on the other side of the road + he sees + a a blind man + um with a sort of begging + um /1.5/ bowl + and uh + he + seems to have a sort of twinge of conscience /1.5/ uh you know he wants to uh + he wants to buy + one of the toys that he's been looking at + but uh + it seems that his conscience is very strong + and so /1.5/ he uh + crosses the road /1.5/ and uh + just as he's crossing the road + there's a rather smart looking lady who seems to have got out of a car + and + she + bangs the door of the car + the little boy arrives at the blind man + and uh + drops the coins + into the tin + but the blind man + thinks that it's the + smart lady + who's given the + coins to him and so + he raises his hat to her + and the little boy is very disappointed /1.5/ ok that's the end of the story

Total: 209

Speaker 4

La version - Experimental story J

S: um + ok + so story number one + um there's a + small boy + um who seems to have some + money to spend + and um + he + decides that he + well he thinks he might buy + a toy and so + he um looks in a toyshop + window + and sees a few things things there /2.0/ helicopter football and so on + and um + I suppose he + decides + um + that he will buy one of those things + but + just as he's + about to go into the shop + um he notices that there's a + a blind beggar + on the opposite side of the road /1.5/ um who's + um /1.5/ well he's got a can + um + in a tin + you know to collect money in + and uh it seems that uh the boy + then is stricken with conscience + he doesn't know + whether he should buy /1.5/ a toy + or give the money + to the blind man + and he starts + he goes across the road + however as he's crossing it /1.5/ um a rather smart + and um snooty looking + woman (LAUGHS) gets out of a car + and bangs the door /2.0/ um + now the little boy arrives with at the blind man + and drops his coins + into the blind man's tin + but the blind man /1.5/ who + had heard the bang of the car door /1.5/ thinks that the money was being given by this rather snooty looking woman + and he takes his hat off + in her direction + and the little boy is very disappointed that he's not received any kind of + uh show of gratitude I suppose + for his righteous act

250

L: fine

S: ok?

1

L: got it

Total: 251

Speaker 4

Li version - Experimental story K

- S: ok + um + all right + now the story is like this + um + there's um + a little boy 13
- L: yes
- S: who's got some money to spend 6
- L: hm
- S: and + um + he goes to + a toyshop /1.0/ a shop that sells toys 11
- L: yes
- S: right? + um + and he looks in the window + and /1.0/ he sees some things + a helicopter + football + some other things 19
- L: hm
- S: right + now + he's just going to + go into the shop 10
- L: yes
- S: when + he sees + on the other side of the road + a blind man 13
- L: hmhm
- S: uh + the blind man is begging you know 6
- L: yes
- S: he's asking for money 4
- L: hm
- S: and he's got a tin in his hand 8
- L: hm
- S: ok? 1
- L: a coin in hi-- + he has coin in his hand?
- S: n-- ah the boy has a coin in his hand + the blind man 11
- L: has
- S: has a tin + a can 5
- L: yes
- S: all right? /1.5/ now the little boy looks back at the blind man

L: hm	12
S: and he /1.0/ looks a bit worried + because he thinks maybe he should + give the coins + give the money + to the blind man	22
L: hmhm	
S: right?	1
L: yes	
S: /1.0/ so + he decides + to give the money + to the blind man + and he crosses the road	17
L: he cross the road	
S: yeah	1
L: ok	
S: but /2.0/ while he's crossing the road	6
L: hm	
S: a rather um smart woman + uh gets out of a car + and shuts the door + with a bang	16
L: strongly?	
S: yeah + right + he shuts it + uh he shuts it strongly + with a loud bang /2.0/ just after that + the the little boy + puts the money + into the tin + that the blind man is holding	32
L: yes	
S: but + the blind man + thinks that + it was the woman + (LAUGHS)	10
L: hm	
S: who gave him the money + and + she she's walking away from her car + and he takes his hat off + because he thinks she /1.0. gave him the money + and the litle boy looks a + quite disappointed /1.5/ quite unhappy	38

Total: 262

Speaker 4

Le version - Experimental story L

- S: so um + there's a little boy /1.0/ and he's got some money to spend 12
L: yes
- S: um + and he sees some toys /1.0/ helicopter + football 7
L: ah
- S: um + some other toys /1.0/ ok? /2.0/ 4
L: ok
- S: and + he + sees them + and he decides + he decides to buy one of them 14
L: ah
- S: but /1.5/ just before + he goes into the shop /2.5/ he sees + a blind man /1.0/ on the other side of the street 20
L: ah + the other side + yeah yeah
- S: yeah + the blind man is um + holding a tin + for money 10
L: oh yes
- S: he's colle-- he's collecting money 5
L: yeah yeah
- S: he's begging 2
L: ah yes
- S: all right? /2.0/ so + the little boy + uh + he he + thinks + shall I give the + shall I buy a toy + or + shall I buy + shall I give the money + to + the blind man? 32
L: ah
- S: you see? + he's got a + a problem 7
L: problem yeah
- S: ok /1.5/ but then he decides + to give the money + to the + blind man /1.0/ and he + crosses the road 18
L: oh yes
- S: ok? 1
L: ok

- S: /2.5/ but before he gets to the blind man /2.0/ there's a woman who gets out of a car 17
 L: ah
- S: and she shuts the door + with a bang 8
 L: bang
- S: /2.0/ ok? 1
 L: ok
- S: /2.0/ right + the little boy /1.5/ gives the money + to the blind man + he drops the money into + the blind man's tin 20
 L: oh yeah + ah + yeah + ok
- S: yeah? 1
 L: yes
- S: but 1
 L: but blind man then uh
- S: yeah 1
 L: uh uh the woman
- S: that's right 2
 L: give to
- S: he thinks that the blind + he thinks that + the woman + gave him + the money 14
 L: oh yeah yeah
- S: so he takes his hat off 6
 L: oh
- S: because he's grateful 3
 L: ah
- S: and the little boy is um + very 6
 L: um a wrong + wrongly
- S: he's a bit disappointed 4
 L: bit + bit?
- S: yes + he's unhappy he's um + sad

L: yes

Total:221

Speaker 27

Ln version - Experimental story M

S: right + the hero of the first story is a small boy + and + he's got a certain amount of pocket money + and wonders + what he can buy with it + and he goes to a toyshop + looks at the window of the toyshop + and + sees lovely things in it /1.0/ and he's about to go into the toyshop + presumably to buy one of the things + when he notices + on the other side of the road + a blind man + wearing dark spectacles and + holding a tin /1.5/ and he thinks and he thinks and he wonders whether he should buy + um /1.0/ the toys or should he perhaps not + give his money + or some money + to the blind man /1.5/ he decides that he'll go over to + the + blind man + and he crosses the road + and + just as he crosses the road + to the blind man + um + a rather posh lady + um + bangs the door of her car + and + the blind man is attracted + to the noise of the car /1.5/ the boy + goes up to the blind man + and puts + in fact all his money + into the tin /1.0/ and uh + the old man /1.5/ takes off his hat + and bows in the direction of the car + much to the boy's disappointment /1.5/ ok?

L: hmhm

209

Speaker 27

La version - Experimental story N

S: now um + the hero of the + first story + is a small boy + and + one day
he + had a little bit of pocket money + and wanted to know how to spend
it + and + he decided to go to a toyshop + and he looked at the window
of the toyshop to see + the wonderful toys + that he might be able to
buy

60

L: hmhm

S: and + after some time + he'd made up his mind + what to buy + and + he
went + into the toy-- + he began to go into the toyshop + but just as
he was going into the door /1.5/ he turned round + and saw + a blind
man + who had just been crossing the road /1.5/ and he saw the blind
man and felt very sorry for him /1.5/ and he wondered + whether he
ought to /1.0/ buy uh + the toys + a toy + or whether he should give
his money to the blind man

84

L: yes

S: and after some time + after thinking + he decided that he'd go across
the road + and + give his money to the blind man + and just as he was
crossing the road + and approaching the old man + the blind man + a car
+ stopped + and a rich lady + got out + and banged the door of the car
/2.5/ however + the little boy + ran up + ran up to the blind man + and
put his money in the + box + in the tin /1.5/ the blind man + thought +
that it was the lady + uh of the rich car + who had given him the money
+ and so + he took his hat off + and bowed in her direction + ignoring
the small boy + who had given him the money + and who + was very
disappointed

124

L: yes

S: all right?

2

L: all right

Total: 270

Speaker 27

Li version - Experimental story O

- S: so the + let me tell the story + the first story + uh + the hero + of
the first story + is a small boy 20
- L: hm
- S: he's a small boy + with uh + who is not very rich /1.0/ but he has a
little bit of money + a little bit of money + not very much money 27
- L: hm
- S: but some + and he wants to spend + this money 9
- L: hm
- S: so + he goes to a toyshop 6
- L: hm
- S: and he stands outside the window 6
- L: hm
- S: and he looks at the lovely things he can buy 10
- L: hm
- S: and after some time + he decides to go into the shop 11
- L: hm
- S: but + just as he goes inside 6
- L: hm
- S: he sees + a blind man 5
- L: hm
- S: on the other side of the road + and + the blind man + was wearing
spectacles + and he's carrying a stick 19
- L: hm
- S: and a tin + in his hand + for money 8
- L: hm
- S: and the + little boy is very sorry to see + the blind man 12
- L: hm
- S: and he decides + I can't + spend my money on toys + I must give it to

the blind man	18
L: hm	
S: so he crosses the road + because he wants to give his money to the blind man	16
L: hm	
S: /1.0/ now just + as he is coming to the blind man	10
L: hm	
S: a lady + gets out of a car	7
L: hm	
S: and shuts it with a bang	6
L: hm	
S: and she is a rich lady	6
L: hm	
S: and perhaps she is very proud + and the blind man hears + the lady + shut the car + the door of the car	21
L: hm	
S: then + the small boy comes + and puts his money + all his money + into the blind man's tin /2.0/ and the blind man thinks + that the lady + has given him the money /1.5/ and uh + the lady in the rich car + and so he takes off his hat + and uh + says thank you + with his hat + to the lady + and the small boy + is very sad	63
L: yes	
S: because the blind man has not seen him at all + has not noticed him	13
L: hmhm	
S: ok?	1
L: yes	

Total: 300

Speaker 27

Le version - Experimental story P

- S: so um + this story + is about + a small boy + and one day + uh he had a little money /1.0/ and he went to look + at a toyshop + to see that he could buy + and he looked in the window of the toyshop + and saw + lovely things + he saw a football + he saw a helicopter + he saw a doll and a puppet + and something else /2.5/ he decided to go + into the shop /2.0/ and just as he looked into the shop as he went into the shop + he was almost walking in + he turned round + and saw + a blind man
- L: ok
- S: he saw a blind man on the other side of the street /3.0/ the blind man was wearing spectacles + black spectacles
- L: excuse me mister /1.0/ can you repeat it?
- S: when he was going into the shop + he saw a blind man
- L: yes
- S: and the man had + black spectacles + he had a + uh + a piece of paper + on his coat + saying + blind
- L: yes
- S: he had a stick in one hand + and a tin in the other /2.0/ the small boy + did not know what to do + he wanted to buy some + toys /2.0/ but he also + felt sorry + for the old man + the blind man + he was very sorry + for the old man + the blind man + he was very sorry + he didn't know what to do /2.0/
- L: hm
- S: he looked at the toys + he looked at his money + he looked at the blind man /1.5/ he was + very worried /1.5/ after some time /1.5/ he went across the road /1.5/ and went to the blind man /3.0/ but just at that moment + a lady + got out of a car /1.5/ and she was very rich
- L: yes
- S: and the blind man + heard + the car door shut /3.0/ then + the little boy /1.5/ put his money + into the + tin + which was + the blind man was + carrying /1.0/ the blind man could hear the money + and + he took off his hat + and he + bowed + his head
- L: excuse me + if I correct the number is it...?
- S: yes of course yes /1.0/
- L: yes
- S: he bowed + at the lady + and the small boy + was very disappointed + very sad + because the blind man + didn't see him
- L: yes

21
Total: 327

Appendix D

OVERALL DATA FROM RECORDINGS

no.	native listener			advanced listener			intermediate listener			elementary listener			Total D
	C	P	D	C	P	D	C	P	D	C	P	D	
1.	4	14	5,48	3	23	9,58	10	48	11,37	14	45	10,44	38,07
2.	5	15	4,46	5	16	6,15	8	23	7,48	7	51	10,00	28,49
3.	0	37	8,20	6	58	12,30	3	53	10,30	7	98	11,00	42,20
4.	11	41	11,45	10	44	10,47	30	71	15,00	41	85	16,25	53,57
5.	7	27	5,10	10	19	5,26	35	41	15,40	34	33	12,00	38,16
6.	2	20	5,30	7	30	8,43	8	20	7,07	11	19	8,45	32,05
7.	4	30	6,03	9	33	7,13	11	22	6,29	15	33	6,45	26,30
9.	5	19	5,16	5	23	5,10	7	24	4,45	12	45	7,43	22,54
10.	7	26	11,03	4	42	10,40	11	69	15,26	17	54	17,20	55,29
11.	2	13	6,38	6	25	4,40	8	26	5,40	8	30	8,36	25,34
12.	10	28	10,42	16	31	8,05	27	96	17,55	20	79	11,00	47,42
14.	23	27	7,02	24	39	7,40	30	38	9,40	31	56	11,10	35,32
16.	3	8	4,50	7	25	7,41	10	22	9,36	27	44	16,05	38,12
17.	7	32	6,25	53	17	11,20	39	30	7,42	46	38	9,32	34,59
18.	4	6	6,40	12	22	7,35	13	16	6,55	16	11	5,20	26,30
19.	4	12	6,30	6	22	9,20	8	18	5,10	11	57	10,44	31,44
20.	13	31	9,38	6	32	7,05	18	50	12,25	18	36	11,09	40,17
21.	3	28	8,23	5	28	6,08	6	40	8,35	11	28	7,42	30,48
22.	5	42	8,01	13	62	9,40	31	71	10,53	36	46	11,50	40,24
23.	5	35	8,45	6	32	7,25	13	44	10,20	16	172	28,39	55,09
24.	3	52	9,30	5	105	13,55	3	96	11,36	2	106	13,50	48,41
25.	2	21	4,55	5	20	4,50	5	26	4,35	8	41	7,00	21,20
26.	4	50	10,22	2	36	7,50	2	36	7,50	9	21	9,30	35,32
27.	4	16	6,00	8	16	8,35	13	22	11,51	6	46	9,05	26,31
Tot	137	630	178,21	233	800	198,31	349	1002	235,05	423	1233	271,54	

Key: C = comprehension checks
 P = pauses of 1,00 sec or longer
 D = duration in minutes and seconds

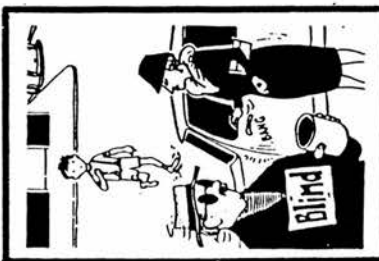
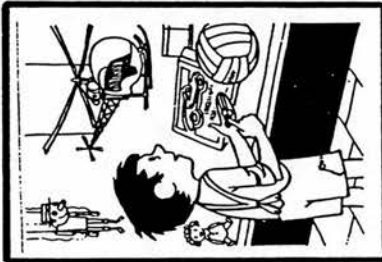
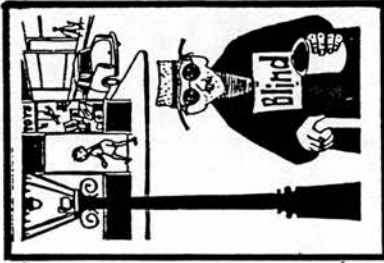
Note: data for sessions 8, 13 and 15 are not included in this table, as some or all of the narratives were affected by technical recording faults (see section 7.2.4)

Appendix E

ELBA SUB-TEST AND VIDEO TASKSHEET

1	heat	hit	hat	26	sawed	sad	sewed	1	top	shop	chop	26	ridge	ride	rich
2	mess	mece	mass	27	fool	full	foal	2	zip	ship	slip	27	seize	seeds	slimy
3	luck	lack	lurk	28	hole	hurl	howl	3	chain	Shane	Jane	28	wrath	rot	rot
4	ahad	ahied	shared	29	stock	stoke	stalk	4	falls	vella	Wales	29	reeve	reef	wreathe
5	calf	cough	cuff	30	patch	pouch	porch	5	bug	dug	tug	30	sib	slieve	slip
6	luck	lack	lark	31	Bert	boat	bought	6	tree	free	three	31	carp	calf	curve
7	ward	wood	woed	32	us	as	errs	7	latch	lass	lash	32	lopes	loaves	lozes
8	choke	chalk	chock	33	led	laird	laid	8	birds	barge	bars	33	southern	sudden	Sutton
9	tart	tot	taught	34	raioin	reason	risen	9	buds	budge	buzz	34	hamed	hard	hurjed
10	pool	pull	pole	35	hid	heed	head	10	lil's	edge	etch	35	chock	shuck	sock
11	rot	root	wrought	36	Mary	merry	marry	11	lease	leaf	leath	36	yard	charred	jarred
12	war	woe	woo	37	heck	hack	huck	12	north	gnawed	naught	37	feel	veal	weal
13	oord	oud	ood	38	cud	oared	cad	13	grebe	grief	grieve	38	why	file	vie
14	fuzz	faces	furs	39	pus	pass	purse	14	dub	dove	Duff	39	thought	sought	fought
15	burrs	buzz	bears	40	buzz	bores	bars	15	players	place	plays	40	zan	then	den
16	haze	hies	hairs	41	mock	mark	muck	16	latter	lather	ladder	41	mass	match	mash
17	bee	beer	bare	42	cord	cord	code	17	barren	barrow	barrel	42	cads	cadge	catch
18	phase	fee	fares	43	cart	cot	caught	18	shoot	cheat	teat	43	sirs	search	surge
19	fill	fell	fall	44	foal	foul	fall	19	score	shores	chores	44	dredge	dreads	dressed
20	bug	bag	bag	45	shood	should	shoed	20	weir	fear	veer	45	boys	base	bathe
21	pad	paired	paid	46	bull	bowl	ball	21	wet	bet	wet	46	forth	force	four
22	fused	fast	forced	47	coal	call	cool	22	think	slink	zinc	47	odd	off	of
23	ban	ban	burn	48	hoe	haw	how	23	wipes	wife's	wives	48	rope	rove	robe
24	done	dawn	dan	49	fares	fes	furs	24	leash	lease	leech	49	offer	otter	anchor
25	cock	cock	coke	50	shire	showet	Shah	25	bash	bodge	batch	50	others	udders	utters

Video tasksheet



Escreva em português o que aconteceu no fim da história.

Qual foi
o final
da história ?

6

Appendix F

COMPREHENSION TEST RESULTS, BY GROUP

Group 1 - story version A

speaker 14

subject number	ELBA scores			ordering	ending (max,7)
	vowel	cons	total		
1	30	39	69	5	6
2	29	33	62	5	0
3	27	31	58	5	3
4	27	37	64	5	1
5	27	26	63	5	4
6	27	31	58	5	1
7	27	33	60	5	0
8	25	29	54	5	0
9	25	30	55	5	3
10	24	33	57	5	4
11	22	37	59	5	0
12	18	36	54	5	0
13	17	31	48	5	4

Group 2 - story version B

speaker 14

subject number	ELBA scores			ordering	ending (max,7)
	vowel	cons	total		
14	26	33	59	5	4
15	24	34	58	5	0
16	22	35	57	5	4
17	22	31	53	5	4
18	22	28	50	3	1
19	22	24	46	2	5
20	20	26	48	5	0
21	20	28	48	5	0
22	18	32	50	5	5
23	18	22	40	3	2
24	16	30	46	3	2
25	16	30	46	3	0
26	15	33	48	3	0
27	15	31	46	4	0
28	15	29	44	5	0

Group 3 - story version C

speaker 14

subject number	ELBA scores			ordering	ending (max,6)
	vowel	cons	total		
29	28	34	62	5	0
30	25	33	58	5	0
31	24	28	52	5	0
32	22	36	58	3	3
33	22	29	51	2	1
34	20	27	47	5	3
35	20	29	49	3	0
36	19	32	51	3	2
37	18	38	56	2	3
38	18	26	44	3	0
39	17	33	50	3	0
40	16	28	44	3	1
41	15	33	48	5	3
42	14	32	46	3	4

Group 4 - story version D

speaker 14

subject number	ELBA scores			orderin g	ending (max,6)
	vowel	cons	total		
43	27	32	59	3	0
44	26	33	59	5	2
45	24	38	62	5	2
46	24	30	54	3	4
47	24	30	54	5	0
48	23	39	62	2	2
49	23	35	58	2	2
50	21	31	52	3	3
51	21	36	57	5	4
52	20	30	50	2	0
53	20	31	51	5	3
54	18	24	42	2	2
55	17	36	53	3	0

Group 5 - story version E

speaker 16

subject number	ELBA scores			ordering	ending (max, 5)
	vowel	cons	total		
56	34	34	68	2	3
57	29	42	71	4	2
58	27	33	60	5	2
59	26	31	57	4	2
60	25	36	61	2	4
61	25	34	59	4	4
62	23	33	56	5	1
63	22	34	56	5	4
64	22	35	57	5	1
65	21	31	52	4	1
66	20	37	57	3	4
67	20	32	52	2	1
68	19	35	54	5	3
69	19	33	52	3	1
70	14	35	49	3	3

Group 6- story version F

speaker 16

subject number	ELBA scores			ordering	ending (max, 6)
	vowel	cons	total		
71	34	42	76	5	4
72	32	36	68	5	3
73	26	33	59	5	3
74	23	36	59	3	4
75	20	38	58	3	3
76	19	37	56	5	4
77	27	29	56	3	0
78	20	35	55	5	2
79	22	33	55	3	3
80	20	34	54	5	1
81	18	34	52	3	0
82	22	30	52	5	4
83	18	33	51	5	2
84	18	33	51	2	0
85	16	33	49	5	4
86	20	28	48	5	3
87	16	25	41	5	4

Group 7 - story version G

speaker 16

subject number	ELBA scores			ordering	ending (max,6)
	vowel	cons	total		
88	24	39	63	3	0
89	20	40	60	3	0
90	24	33	57	5	0
91	20	37	57	5	2
92	22	33	55	5	3
93	21	31	52	5	1
94	15	36	51	1	0
95	20	31	51	5	1
96	19	31	50	5	3
97	19	31	50	5	2
98	18	31	49	5	1
99	19	30	49	2	0
100	15	30	45	5	0
101	17	26	43	4	0
102	15	24	39	3	1

Group 8 - story version H

speaker 16

subject number	ELBA scores			ordering	ending (max,5)
	vowel	cons	total		
103	27	35	62	5	3
104	20	40	60	3	1
105	27	32	59	5	2
106	22	33	55	5	2
107	19	35	54	5	3
108	23	31	54	5	2
109	22	30	52	5	3
110	15	36	51	3	1
111	21	30	51	4	0
112	13	36	49	5	3
113	20	27	47	4	2
114	19	28	47	5	2
115	15	31	46	5	0
116	15	29	44	5	2

Group 9 - story version I

speaker 4

subject number	ELBA scores			ordering	ending (max, 5)
	vowel	cons	total		
117	29	39	68	5	1
118	24	35	59	5	3
119	24	35	59	5	2
120	22	36	58	5	1
121	24	33	57	5	2
122	24	31	55	5	2
123	20	34	54	2	1
124	19	32	51	4	1
125	17	32	49	5	1
126	18	29	47	5	3

Group 10 - story version J

speaker 4

subject number	ELBA scores			ordering	ending (max, 8)
	vowel	cons	total		
127	28	40	68	5	4
128	26	34	60	5	5
129	22	38	60	5	3
130	21	34	55	3	2
131	19	35	54	5	5
132	21	32	53	5	1
133	21	31	52	5	4
134	22	30	52	3	4
135	20	31	51	3	4
136	16	35	51	5	1
137	22	29	51	3	0
138	20	30	50	3	3
139	16	33	49	3	0
140	21	27	48	2	1
141	19	28	47	5	3
142	17	29	46	5	1
143	18	28	46	3	2

Group 11 - story version K

speaker 4

subject number	ELBA scores			ordering	ending (max, 5)
	vowel	cons	total		
144	33	42	75	5	4
145	28	38	66	5	3
146	24	35	59	5	2
147	26	32	58	5	3
148	26	32	58	3	2
149	22	36	58	2	0
150	26	31	57	3	3
151	19	37	56	3	2
152	22	33	55	3	3
153	16	35	51	3	3
154	17	32	49	1	0
155	23	25	48	5	3
156	19	28	47	5	2

Group 12 - story version L

speaker 4

subject number	ELBA scores			ordering	ending (max, 4)
	vowel	cons	total		
157	26	35	61	3	2
158	28	32	60	3	2
159	26	32	58	3	4
160	23	33	56	5	1
161	17	39	56	5	2
162	22	33	55	1	1
163	21	32	53	3	2
164	19	33	52	5	3
165	20	30	50	5	2
166	22	25	47	5	2
167	21	24	45	5	2
168	14	29	43	5	2
169	14	28	42	3	1

Group 13 - story version M

speaker 27

subject number	ELBA scores			ordering	ending (max. 5)
	vowel	cons	total		
170	28	37	65	5	3
171	23	40	63	3	0
172	25	32	57	3	1
173	23	32	55	5	1
174	21	33	54	5	0
175	20	34	54	5	1
176	19	34	53	5	0
177	19	31	50	5	4
178	20	30	50	5	0
179	23	27	50	3	0
180	18	31	49	5	1
181	18	31	49	5	1
182	19	30	49	5	0
183	16	32	48	5	0
184	13	32	45	4	1
185	14	30	44	2	0

Group 14 - story version N

speaker 27

subject number	ELBA scores			ordering	ending (max. 7)
	vowel	cons	total		
186	27	40	67	3	2
187	22	40	62	5	4
188	28	33	61	2	4
189	25	34	59	3	1
190	27	32	59	5	0
191	21	35	56	3	2
192	24	31	55	5	2
193	26	28	54	3	1
194	27	27	54	3	3
195	24	29	53	5	5
196	22	26	48	3	4
197	15	30	45	5	3

Group 15 - story version 0

speaker 27

subject number	ELBA scores			ordering	ending (max,6)
	vowel	cons	total		
198	30	35	65	3	5
199	29	35	64	3	6
200	22	37	59	3	3
201	24	35	59	2	0
202	25	29	54	4	5
203	21	31	52	2	5
204	17	34	51	5	5
205	18	33	51	3	0
206	18	32	50	2	0
207	19	30	49	3	6
208	16	30	46	2	5
209	16	28	44	5	4
210	20	24	44	2	0

Group 16 - story version P

speaker 27

subject number	ELBA scores			ordering	ending (max,6)
	vowel	cons	total		
211	22	34	56	3	3
212	22	33	55	3	4
213	24	30	54	5	2
214	20	34	54	5	6
215	19	33	52	5	5
216	20	31	51	3	1
217	20	30	50	3	3
218	23	26	49	5	3
219	20	28	48	3	2
220	19	29	48	3	3
221	18	27	45	5	1
222	14	27	41	3	1