

**TASK-BASED INTERACTION
AMONG ADULT LEARNERS OF ENGLISH
AND ITS ROLE
IN SECOND LANGUAGE DEVELOPMENT**

by

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ABSTRACT

The role of classroom interaction in second language acquisition (SLA) has been the subject of extensive research in recent years. The purpose of this study was to investigate the claimed superiority of communication tasks involving required information exchange (split information tasks) over tasks involving optional information exchange (shared information tasks) on the basis of how much negotiation of meaning learners produce when performing each type of task. The study also sought to analyze qualitative aspects of negotiation and to assess the theoretical claims made for negotiation in the light of the analysis.

Subjects for the study included eight adult students from an English proficiency course who were assigned to two groups each containing four subjects. Over a period of six days the groups performed four communication tasks of which two were split information tasks and two were shared information tasks. Full transcriptions of the task performances provided data for the study.

Results confirmed that significantly more negotiation and repetition occurred in split information tasks. There was a small movement towards more even distribution of negotiation among interlocutors in split information tasks although the consistency of the differential contributions of specific interlocutors was noticeable across both types of task.

The qualitative analysis distinguished six main types of negotiating questions in the data, some of which were shown to be more effective than others in generating comprehensible modifications to input or in extending the language output of the subjects. In addition, negotiating questions dealt with five broad dimensions of meaning: the form of the message, grammatical and lexical meaning, content, opinions, and procedures. Of these five dimensions, only the first and second sometimes involved new or unfamiliar linguistic features in the input, thus fulfilling a requirement of the interaction hypothesis suggested by Ellis (1991). Significant post-test gains in the subjects' knowledge of vocabulary embedded in the tasks suggested that the negotiation of lexical meaning results in measurable learning of new words. Overall however, negotiation dealt more with non-target language features of output than with unfamiliar input and it was this which provided the more promising interactional route to language development.

An investigation of other features of interaction revealed no significant difference in the amount of talk produced in split and shared information tasks. Talk was more evenly distributed among interlocutors in the split information tasks although inequalities persisted, with particular interlocutors dominating interaction across all tasks. In the shared information tasks, turns and utterances were significantly longer, and conjunctions were used more frequently. Prepositions on the other hand were used more frequently in the split information tasks. These results suggest that the greater need to express links between propositions in the shared tasks results in discourse of greater syntactic complexity.

While the study supported the claim that split information tasks produced more negotiation than shared information tasks, a qualitative analysis of the negotiation, and of other aspects of interaction, suggested that more negotiation does not necessarily provide superior conditions for language development.

TABLE OF CONTENTS

Acknowledgments	iii
Abstract	v
List of Tables	xiii
List of Figures	xvi
Chapter I INTRODUCTION	1
Interaction and the Negotiation of Meaning	1
The Present Study	1
Chapter II TASK-BASED INTERACTION AND SECOND LANGUAGE ACQUISITION	4
Introduction	4
Communicative Language Teaching	4
Classroom Process Research	7
The Role of Interaction	8
The Input Hypothesis	8
The Interaction Hypothesis	11
A Revised Interaction Hypothesis	15
Output in Second Language Learning	16
The Nature of Negotiation of Meaning	18
Tasks and Second Language Learning Theory	23
Doughty and Pica's Research	27
The Role of Negotiation in Interaction	29
Experimental Design	33
Task Types	33
Subjects and Order of Tasks	36
Sampling of Recorded Segments of Discourse for Analysis	38
Assessment of the Study	39
Summary	40

Chapter III METHODOLOGY	42
Introduction	42
Research Questions	43
Research Questions 1: The Effect of Task Type on Negotiation ..	43
Hypothesis 1	43
Hypothesis 2	44
Hypothesis 3	44
Research Questions 2 and 3: Analyzing Negotiation	45
Hypothesis 4	46
Hypothesis 5	46
Research Question 4: Negotiation of Unfamiliar Vocabulary	46
Hypothesis 6	47
Research Question 5: The Language of Communicative Task	
Performance	47
Hypothesis 7	47
Hypothesis 8	48
Hypothesis 9	48
Hypothesis 10	49
Hypothesis 11	49
Hypothesis 12	49
Pilot Study	50
Subjects	50
The Student Body	51
Linguistic Proficiency of Subjects	51
Gender of the Subjects	52
First Language Background of Subjects	54
Tasks	54
Procedures	59
Design	60
Order of Task Performances	62
Vocabulary Testing	63
Data Analysis	63
Summary	65

Chapter IV	THE EFFECT OF TASK TYPE ON THE NEGOTIATION OF MEANING	66
Introduction		66
The Number of Negotiating Questions Produced under Different Task Type Conditions		66
Hypothesis 1		67
Accounting for Task-Based Variation in the Level of Negotiation		70
Assessing the Differences		72
The Distribution of Negotiation among Interlocutors		75
Hypothesis 2		75
The Number of Non-negotiating Repeats Produced under Different Task Type Conditions		80
Hypothesis 3:		80
Repeats and Negotiation		83
Other Task Variables		87
The Significance of Topic		88
The Form of the Textual Input : Diagrammatic/Non-diagrammatic		88
The Solution Type: Open and Closed Task Types		90
Participant variables		93
Summary		94
Chapter V	THE TYPES OF NEGOTIATING QUESTIONS USED BY LANGUAGE LEARNERS	96
Introduction		96
Background Issues in Interactional Analysis		97
Data Coding Procedures		99
Negotiation Categories		101
Confirmation checks		101
Clarification requests		102
Elaborations		102
Lexical searches		104
Comprehension checks		104
Try-marking modulations (TMM)		105
Issues in the Coding of Negotiation Moves		105
Distinguishing the Negotiating Function in Discourse		105

Negotiating and Non-negotiating Repeats	107
Form/Function Overlaps and Distinctions between Categories	108
Inter-rater Reliability	112
The Proportions of Different Types of Negotiation	113
Discussion	117
The Functions of Negotiating Questions	118
The Potential Value of each Category of Negotiation for Language Development	126
Summary	130
Chapter VI THE TYPES OF INFORMATION NEGOTIATED DURING TASK-BASED INTERACTION	133
Introduction	133
The Types of Information Negotiated during NNS/NNS Task-based Interaction	134
Clarifying the Form of the Message	134
Clarifying Grammatical and Lexical Meaning	135
Clarifying Content	136
Clarifying Opinions or Intentions	136
Clarifying Procedures	137
Inter-rater Reliability	138
Applying the Categorization to Data	139
The Proportions of Negotiating Questions Addressing Different Kinds of Information	142
Hypothesis 4	142
Hypothesis 5	142
.	143
Negotiation and the Interaction Hypothesis	148
Clarifying the Form of the Message	148
The Form of Unfamiliar Input	149
Mis-heard Input	149
Ill-formed Input	150
Clarification of Grammatical and Lexical Meaning	151
Morphology	151
Syntax	151
Lexis	153
Clarifying Content, Opinions and Intentions	154
Output in the Model	155

Assessing the Evidence	158
Summary	161
Chapter VII NEGOTIATION IN RESPONSE TO UNFAMILIAR VOCABULARY	163
Introduction	163
A Comparison of Pre-test Recognition of Task Vocabulary by Different Learners	164
The Accuracy of Responses to Word Clarification Requests	166
Vocabulary Gains as an Outcome of Communicative Task Performance	167
Hypothesis 6	168
The Effect of Task Type on the Treatment of Unfamiliar Vocabulary by Language Learners	172
Implications for the Classroom	173
Directions for Further Research	176
Summary	177
Chapter VIII THE LANGUAGE OF TASK-BASED INTERACTION	178
Introduction	178
Talk on Task	179
The Amount of Talk	179
Hypothesis 7	181
The Relationship between Talk on Task and Negotiating Questions	184
The Distribution of Talk on Task	187
Hypothesis 8	187
Length of Utterances	191
Hypothesis 9	193
The Expression of Intra- and Inter-propositional Coherence	197
Results	199
Hypothesis 10	199
Hypothesis 11	199
Hypothesis 12	200
Comparisons with Native Speaker Data	204

Discussion	205
Discourse Modes	209
Summary	212
Chapter IX CONCLUSIONS	215
Introduction	216
Doughty and Pica (1986) and the Relationship between Tasks, Task Features, and Negotiating Behaviour	216
The Nature of Negotiation of Meaning	217
The Adequacy of the Interaction Hypothesis	218
The Retention of Vocabulary as an Outcome of Task Performance	219
Other Aspects of the Language of Task-based Interaction	219
Implications for Task Design	220
Implications for Language Development	223
Implications for Teaching	225
Possible Further Research	227
Extending Current Frameworks for Analyzing Negotiation	227
Carrying out Post-performance Evaluation and Testing	228
Carrying out Post-performance Evaluation and Testing	228
Investigating the Perceptions of the Learners	228
BIBLIOGRAPHY	231
Appendix A The Four Tasks Used in the Study	242
Task 1: Shared Medical	242
Task 2: Shared Zoo	243
Task 3: Split Medical	245
Task 4: Split Zoo	248

Appendix B	Transcription	251
	Transcriptions Conventions	251
	The Hand-written Layout of Transcripts	252
	The Printed Layout of Transcripts in the Data-base	253
Appendix C	Support Data	254
Appendix D	Description of Subjects	272
Appendix E	Instructions to Supervisors of the Experimental Sessions	273

LIST OF TABLES

Table 1	Components of the Two Tasks Used by Doughty and Pica (1986)	35
Table 2	A Representation of the Experimental Design Used by Doughty & Pica (1986)	37
Table 3	A Component Breakdown of Tasks Used in the Present Study	58
Table 4	Experimental Design of the Present Study	61
Table 5	Time on Task in Minutes and Seconds for Groups 1 and 2	64
Table 6	Summary of Analysis of Variance for the Negotiation Data	68
Table 7	Mean Frequencies (and Standard Deviations) of Negotiating Questions in a Standard Task Time of 28'30"	68
Table 8	Frequency of Negotiating Questions in a Standard Task Time of 28'30"	69
Table 9 (a) & (b)	Distribution of Negotiating Questions among Subjects in Each Group Expressed as Obtained Frequencies (and Percentage Frequencies).	76
Table 10	Number of Non-negotiating Repeats in a Standard Task Time of 28'30"	81
Table 11	The Total Number of Negotiating Questions and Non-negotiating Repeats in Four Task Performances	85
Table 12	Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Task Time of 28'30"	114
Table 13	A Summary of the Functions of Negotiating Questions in the Data	120
Table 14	Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" (Expressed as Mean Values for Two Groups)	143
Table 15	Component Analysis for Analyzing the Roles of Input and Interaction in Language Learning.	159
Table 16	Prior Knowledge of Task Vocabulary	165

Table 17	Responses to Word Clarification Requests (Groups 1 & 2 Combined across all Task Performances)	167
Table 18	Pre/Post-test Results for Recognition of Task Vocabulary (111 Words)	169
Table 19	Post-test Results for Words Negotiated for Meaning and Words not Negotiated: Groups 1 and 2 combined	171
Table 20	Total Time without Talk as Measured by Periods of Silence of 5 Seconds or More (Displayed in Seconds)	180
Table 21	Summary of Analysis of Variance for the Talk on Task	182
Table 22	Mean Frequencies (and Standard Deviations) of Talk on Task in a Standard Task	182
Table 23	Talk on Task Measured in Frequency of Words per Minute in a Standard Task Time of 28'30"	183
Table 24	Distribution of Talk on Task Reported as Obtained Frequencies of Words per Subject (and Percentage of Total Words	188
Table 25	Mean Number of Words per Turn	193
Table 26	Mean Number of Words per Utterance	194
Table 27	A Comparison of the Occurrence of Prepositions in Texts Produced by Second Language Learners	201
Table 28	A Comparison of the Occurrence of Conjunctions in Texts Produced by Second Language Learners	202
Table 29	A Comparison of the Occurrence of Prepositions and Particles Produced by Second Language Learners and Native Speakers of English	206
Table 30	A Comparison of the Occurrence of Conjunctions Produced by Second Language Learners and Native Speakers of English	207
Tables C-8 (a) & (b)	Frequency of Negotiating Questions by Task Type, Topic and Group in a Standard Task Time of 28'30": Groups 1 & 2 Respectively	255
Tables C-12(a)	Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Standard Task Time of 28'30" for Group 1	256

Tables C-12(b)	Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Standard Task Time of 28'30" for Group 2.	257
Table C-14(a)	Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" for Group 1.	258
Table C-14(b)	Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" for Group 2	259
Table C-17(a)	The Quality of Interlocutor Responses for each Word (or Phrase) which was Subject to a Lexical Search	260
Table C-19(a)	Post-test Results for Words Negotiated for Meaning and Words not Negotiated: Group 1	263
Table C-19(b)	Post-test Results for Words Negotiated for Meaning and Words not Negotiated: Group 2	263
Table C-19(c)	The Relationship between the Response to Lexical Searches for Particular Words (or Phrases) and Post-test Gains for these Words (or Phrases)	265
Tables C-23(a) & (b)	Talk on Task Measured in Frequency of Words per Minute in a Standard Task Time of 28'30"	269
Table C-27(a)	A Comparison of the Occurrence of Certain Prepositions in Texts Produced by Groups 1 & 2 Respectively	270
Table C-28(a)	A Comparison of the Occurrence of Certain Conjunctions in Texts Produced by Groups 1 & 2 Respectively	271

LIST OF FIGURES

Figure 1.	The Frequency of Negotiating Questions in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks. . . .	69
Figure 2.	Movement in the Proportion of Negotiation under Shared and Split Information Task Conditions for Eight Individual Interlocutors from Two Groups	78
Figure 3(a).	Proportions of Negotiation across Four Tasks for Individual Interlocutors from Group 1.	79
Figure 3(b).	Proportions of Negotiation across Four Tasks for Individual Interlocutors from Group 2.	79
Figure 4.	The Number of Non-negotiating Repeats Produced in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks	81
Figure 5(a).	A Comparison of the Number of Repeats and Number of Negotiating Questions across Four Tasks for Group 1	84
Figure 5(b).	A Comparison of the Number of Repeats and Number of Negotiating Questions across Four Tasks for Group 2	84
Figure 6.	The Relative Positions of Tasks Used in the Present Study on a Cline Representing Degrees of Openness and Closedness.	91
Figure 7.	Decision Path for Categorization of Moves which Initiate a Negotiation Sequence	100
Figure 8.	The Distribution of Six Categories of Negotiation for Two Groups of Language Learners (Combined) Performing Each of Four Tasks	116
Figure 9.	The Distribution of Negotiation among Hearers and Speakers for Groups 1 and 2 combined.	117
Figures 10, 11, 12 and 13.	The Proportions of Negotiation which Address Different Kinds of Information across Four Tasks	145
Figure 14.	Pre/Post-Test Results for Recognition of Vocabulary (111 words) from Tasks Performed by Eight Learners	170
Figure 15.	The Amount of Talk Produced in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks.	184

Figure 16(a)	A Comparison of the Talk and the Number of Negotiating Questions across Four Tasks for Group 1.	186
Figure 16(b).	A Comparison of the Talk and the Number of Negotiating Questions across Four Tasks for Group 2.	187
Figure 17.	Movement in the Proportion of Talk under Shared and Split Information Task conditions for Eight Individual Interlocutors . . .	190
Figure 18(a).	Proportions of Talk across Four Tasks for Individual Interlocutors from Group 1.	191
Figure 18(b).	Proportions of Talk across Four Tasks for Individual Interlocutors from Group 2.	191
Figure 19.	Mean Number of Words per Turn across Four Tasks for Two Groups of Learners	196
Figure 20.	Mean Number of Words per Utterance across Four Tasks for Two Groups of Learners	196
Figure 21.	The Proportions of Prepositions in the Speech of Two Groups of Language Learners Performing Four Tasks	204
Figure 22.	The Proportions of Conjunctions in the Speech of Two Groups of Language Learners Performing Four Tasks	204
Figure 23.	The Proportions of Prepositions and Conjunctions in Two Corpora of speech by Non-native Speakers of English Compared to Two Native Speaker Corpora	209

Chapter I

INTRODUCTION

1.1 Interaction and the Negotiation of Meaning

The view that interaction has a vital contribution to make to language learning is well established in the study of children acquiring a first language (Wells, 1981). It is a view that has parallels in many areas of education where interaction and experiential modes of learning are an integral part of modern pedagogy (Freeman, 1992; Kohonen, 1992). It reflects the need not only for 'knowledge about', knowledge acquired through methods in which a teacher-expert may hold centre stage, but also skill at using that knowledge in interpersonal contexts.

The view that interaction is important for learning is also at the theoretical heart of many recent classroom-based studies involving learners acquiring a second language and accounts for much of the interest in the use of tasks in second language classrooms. Within the field of second language acquisition (SLA) research, a particular aspect of interaction, the negotiation of meaning, has attracted a great deal of attention. Negotiation is said to provide opportunities for learners to modify linguistic input so that it becomes comprehensible and therefore able to be acquired. It also provides opportunities for learners to modify their production in the second language in response to feedback from interlocutors on comprehensibility. Through modifications to output a learner may be guided to use progressively more accurate target language forms.

1.2 The Present Study

Within this context the present study has two general aims. First it seeks to build on an earlier study by Doughty and Pica (1986) which investigated how a requirement for

information exchange affected interactive behaviour in communication tasks. Doughty and Pica's work is carried further through examining the overlapping effects of task and topic on the amount of negotiation by language learners.

Second, the study seeks to provide a detailed case study of the kinds of negotiation that take place when learners perform certain types of tasks and to evaluate these in respect of their possible impact on comprehensible input, on opportunities for more accurate language production and, by implication, on the language acquisition process.

Third, the study extends its analysis beyond negotiation to three other dimensions of task-based interaction: talk on task, turn and utterance length, and the linguistic marking of relationships within and between propositions.

To provide data for the study, a quasi-experimental design was set up whereby two groups of second language learners performed four communication tasks.

Five research questions motivate the study. Each examines a particular aspect of the relationship between tasks, negotiation, comprehension, language production and learning. In particular, the questions are concerned with:

1. The effects of task type on the amount of negotiation among language learners (question 1).
2. The different ways in which learners negotiate meaning (question 2).
3. The kinds of meaning which are negotiated (question 3).
4. The learning which results from a definable subset of negotiation; negotiation of the meaning of unfamiliar vocabulary (question 4).
5. The effects of task type on other dimensions of the language of communicative task performance (question 5).

The research questions are presented in full in Chapter III. Research question 1 is the subject of three experimental hypotheses and is addressed in Chapter IV. Research questions 2 and 3 are made up of a number of sub-questions which are largely

descriptive in intent and are addressed in Chapters V and VI with question 3 the subject of two further hypotheses. Research question 4 is the subject of one hypothesis and is addressed in Chapter VII. Finally, research question 5 is the subject of a further six hypotheses and is addressed in Chapter VIII.

Chapter II

TASK-BASED INTERACTION AND SECOND LANGUAGE ACQUISITION

2.1 Introduction

This chapter examines the role of task-based interaction in second language acquisition with particular reference to the contribution of linguistic input, output and negotiation of meaning.

Learning tasks are discussed in view of their importance both as environments for interactive language use and as settings within which learner behaviour can be measured under clearly stipulated conditions. While group work and task-based learning are well established fields of enquiry within educational and occupational psychology, the discussion will largely confine itself to research on tasks as it occurs within a growing body of writing within applied linguistics.

The survey concludes with a consideration of a major empirical study conducted by Doughty and Pica (1986) into the effects of task types on opportunities for language learning through interaction. The work by Doughty and Pica forms the starting point for the present study.

2.2 Communicative Language Teaching

The communicative approach to language teaching which emerged in the early seventies has had a significant impact in many language classrooms, particularly in North America, Western Europe and Australasia. The hallmarks of this approach are a desire for increased decentralization and learner-centredness in the classroom and a belief that

language learning needs to involve meaningful interaction reflecting the functional and communicative values of language. The activity which takes place in the communicative classroom is thereby authenticated by its proximity to the real purposes of language use and by its reflection of the learner's functional needs (Seliger, 1983; Richards and Rogers, 1986). Through such an approach to learning, learners are said to acquire language processing skills and interactional skills (Bygate, 1987), including the ability to use language in a situationally appropriate manner.

Communicative language teaching (CLT) drew its inspiration from a number of sources. As Howatt (1984) notes in his survey of language teaching since the 1960's, early models for communicative models of teaching and learning were found in the primary school classroom tradition of cooperative, activity-based learning and in the informal contexts of community or adult basic education where, in contrast to earlier approaches "materials and training programmes which reflected a less intensive and more flexible teaching and learning style" were required (221).

In the European context, CLT emerged from work on a functional-notional syllabus (The Threshold Level) sponsored by the Council of Europe in response to the linguistic needs of European integration and an increasing number of immigrants and workers from abroad (Van Ek and Alexander, 1975).

In the North American context, CLT was inspired on the one hand by the development of sociolinguistic models of language use from the late 1960's (Hymes, 1968), and on the other by developments in psycholinguistics arising from Chomsky's work in transformational-generative grammar. Chomsky's work was used to support a cognitive rather than behaviourist model of learning in which hypothesis testing rather than habit formation was seen as a central to the learning process.

Thus, the emergence of CLT was both the outworking of a paradigm shift in theories of language and language use and also a reaction to the perceived inadequacies of earlier teaching methods which often produced students who were simply unable to take part in normal conversation in a second language after spending long periods of time in

language study (Widdowson, 1972; Johnson, 1981).

But in terms of second language classroom practice today, it is not easy to define the parameters of CLT. As Brumfit comments:

Communicative language teaching ... becomes no more than the name for a shared set of general assumptions about the nature of language and language use, and of language learning and teaching (1984:5).

In language teaching classrooms the communicative approach has found various forms of expression. In the field of English for Specific Purposes (ESP), for example, an important emphasis is placed on needs analysis and on the modelling of authentic real-world communicative situations. This emphasis is also seen in the role play techniques advocated by Gubbay and Coghill (1988) in the area of community English language teaching for immigrants and refugees. In many classrooms for adult learners of English as a second language, language use that is contextualized and learner-initiated is a predominant feature of syllabus design and classroom practice.

But it is also true that while changes in teaching and learning theory and practice occurred under the "communicative" umbrella, communication activities often end up as 'side shows' (Howatt, 1984:279) while a more traditionally functional or structural approach informs the hidden curriculum behind a programme. This qualification is supported by a recent critique by Long (1989) which debunks the popular notion of a 'communicative method'. He points out that many so called 'communicative' classrooms are in reality firmly teacher-centred and form-focused with communicative rhetoric no more than a pseudonym for practice that has moved beyond structuralism in name only. Indeed this criticism is part of a larger claim that 'method' is itself an erroneous construct (Crookes, 1986). For those who no longer accept the usefulness of 'method' as a tool for describing and measuring what occurs in the second language classroom there have been suggestions that global method-based curricula and practices, be they ostensibly communicative or not, should be replaced by task-based programmes. Such programmes contain not only the description of a classroom syllabus, but also

details of the actual activities that take place there (Prabhu, 1987). In addition, the tasks used in these programmes provide researchers with tangible units of analysis containing readily quantifiable features for investigating the dynamics of classroom behaviour and for measuring the role of such behaviour in language learning. The capacity of tasks to feature in both syllabus design and the measurement of learning makes them the focal point of the present study.

2.3 Classroom Process Research

Whatever the reality in terms of classroom practice, by the late 1970's the notion of the communicative approach (at least as an ideal) was widely advocated. However, little empirical research had been done to substantiate its claimed superiority over the methods it had apparently superseded. Second language learning theory had not kept pace either with changes in classroom practice or with psycholinguistic research which had made considerable progress in the 1960's and 1970's in the field of children's first language development (e.g. Halliday, 1975). Thus while communicative language teaching was gaining in popularity in both second language pedagogic theory and in classrooms in the 1970's, it was difficult to find empirical evidence that showed that so-called communicative teaching actually improved learning. Subsequently however, a significant body of research into the role of environmental and learner factors in second language acquisition has emerged and is rapidly expanding as new facets of the acquisition process are explored and re-explored. Subsumed under the name Classroom Process Research (Gaies, 1983; Ellis, 1986), much of this research has been undertaken only within the last decade or so by key figures such as Hatch (1978) and Long (1980 through 1989). It represents a rapidly expanding field of enquiry with a broad agenda encompassing descriptive accounts of classroom behaviour and experimental studies on the effects of psychological, social, interpersonal and environmental features of language classrooms on language acquisition.

The idea that language input is in some way a critical ingredient for language learning figures prominently in many studies in which concern has moved away from the learner as a recipient of input and towards ways in which the learner acts upon input. This

change in focus brings together factors from outside the learner (ie. language input) as well as those internal mechanisms or aspects of cognition the learner uses to process the input. As Howatt (1984:287) points out however, there are both weak and strong interpretations of the role of the input and interaction in language acquisition. The 'weak' interpretation assumes the learner already 'knows' the language and that communicative activity provides opportunities to practise and appropriate this knowledge. This interpretation reflects a nativist view of learning (Ellis, 1986:128). The 'strong' interpretation makes fewer assumptions about a priori knowledge and stresses the role of communication in providing the necessary impetus and input for learning. The latter view is influential in much classroom process research and notably the work of Long (1981a, 1985), Krashen (1985) and Swain (1985) which will be reviewed in the following section. Although classroom interaction can be approached from sociolinguistic and educational perspectives, the discussion that follows approaches interaction from a psycholinguistic perspective as is usual in SLA theory.

2.4 The Role of Interaction

2.4.1 The Input Hypothesis

While Ferguson (1975), Larsen-Freeman (1975), Wagner-Gough and Hatch (1976), and Hatch (1978) were among the first to point to a link between target language input, learner production and second language acquisition, it was Krashen (1980, 1982, 1985) who presented the input-acquisition connection in readily accessible terms within a theoretical framework known in part as the input hypothesis. The input hypothesis states that:

humans acquire language in only one way - by understanding messages or by receiving 'comprehensible input'. We progress along the natural order ... by understanding input that contains structures at our next 'stage' - structures that are a bit beyond our current level of competence (1985:2),

and that:

a necessary (but not sufficient) condition to move from stage i to stage $i + 1$ is that the acquirer understand the input that contains $i + 1$, where 'understand' means that the acquirer is focused on the meaning and not the form of the message (1982:21).

Krashen claimed that the presence of input (namely input that is comprehensible, focused on meaning and containing linguistic information slightly beyond the learners competence) is a sufficient condition for acquisition to occur. The theory is further elaborated with an explanation of how comprehensibility is achieved. Comprehensibility, it claims, is the result of three factors: the use of roughly tuned caretaker speech (input modifications) aimed at communicating meaning; extra-linguistic information; and reference to the 'here and now'. To support his position, Krashen presents four sources of evidence: caretaker speech, foreigner talk, the silent period and comparative method studies.

The input hypothesis, as with Krashen's other major claims encapsulated in his monitor theory and learning/acquisition distinction, has been the subject of considerable discussion and criticism and its adequacy questioned at a number of levels in reviews by Gregg (1984), Chaudron (1985), White (1987), Saleemi (1989), and Ellis (1991). As Ellis pointed out, "The role of input in the process of SLA is one of the most controversial issues of current research" (1986:13). Criticism of the input hypothesis has been directed at three levels: at its viability as a scientifically rigorous theory, at the methodological basis of the claims, and at the evidence cited in support of the hypothesis.

At the theoretical level, the comprehensible input model of SLA fails to provide an explanation of the cognitive processes which are brought to bear on linguistic input allowing it to be transformed into 'intake'. Thus, while we can adequately describe both the characteristic input a learner receives in a given environment as well as the output such a learner can produce, less is known of the language processing mechanisms and the organization of language in memory which provide necessary links between the two (Saleemi, 1989). Similarly, the $i + 1$ construct has not been operationalized in an

empirically sustainable way (Larsen-Freeman and Long, 1991:225). Given these problems of descriptive adequacy, critics have argued that the claims made for input are impossible to falsify through empirical testing and therefore do not stand up as a theory of SLA.

In respect to the claims made for comprehensibility, Long (1983a), in a review of studies of caretaker speech and simplified input, points out that these studies were methodologically flawed because they contained inconsistencies, and furthermore, baseline data on native speaker/native speaker (NS/NS) interaction was often absent or was drawn from situations dissimilar to those used for studying native speaker/non-native speaker (NS/NNS) interaction. He argues that in fact "...this kind of modification of the input [i.e. foreigner talk] may not be as widespread or as great as is often assumed" (211).

In addition he adds, there is little evidence that learners actually benefit from input modifications. Logically, it is difficult to see how learner competence can develop if structures and lexical items outside their competence are removed from input directed at them. Such modifications to input "...serve only the immediate needs of communication, not the future interlanguage development of the learner for by definition it denies him or her access to new linguistic material" (ibid:212). Gregg (1984), in a well received critique of Krashen's ideas, makes similar points.

Finally, in respect of evidence cited in support of the Input Hypothesis, Ellis (1991:185-186) suggests that the four sources of evidence Krashen used are at best indirect and at worst are not evidence at all, a point also made by Gregg (1984:87-90) and partially supported in Larsen-Freeman and Long (1991:140-141). First, while caretaker speech and foreigner talk are present in language learning contexts, there is no evidence of a causal link. Second, a silent period has not been consistently observed in children, and even when it does occur, it may be the result of factors other than the need for acquisition time. Third, comparative studies have been methodologically flawed and fail to isolate comprehensible input as a dependent variable. Although Larsen-Freeman and Long (ibid:141) offer two further pieces of evidence in support of the hypothesis, the

superiority of immersion programmes over F/SL programmes, and the lack of successful acquisition where comprehensible input is not present, both these are questioned by Ellis (1991:186). The conclusion reached by Ellis is that evidence in favour of the hypothesis is weak at best, and that "the hypothesis still awaits confirmation."

2.4.2 The Interaction Hypothesis

While it would appear that the input hypothesis in its original form is unsustainable, modifications have been suggested by Long (1985) and Pica (1987). These have been summarized by Ellis (1991) in the interaction hypothesis which states that:

- 1 Comprehensible input is necessary for L2 acquisition.
- 2 Modifications to the interactional structure of conversations which take place in the process of negotiating a communication problem help to make input comprehensible to an L2 learner.
- 3
 - a. Tasks in which there is a need for the participants to exchange information with each other promote more interactional restructuring.
 - b. A situation in which the conversational partners share a symmetrical role relationship affords more opportunities for interactional restructuring.

The first distinction between the interaction hypothesis and the input hypothesis is in the status of comprehensible input which is considered necessary but not sufficient for language acquisition. But as Ellis (1991) points out, there are also problems in sustaining this position. First, evidence has still not been forthcoming to show a direct relationship between comprehensible input and acquisition. While there is indirect evidence such as the use of caretaker speech in first language acquisition and the superiority of immersion and bilingual programmes to other forms of language instruction because they can supply large amounts of comprehensible input, it is questionable whether this is adequate to support the case for the necessity of comprehensible input. For Ellis, the best case that can be made on the basis of the

evidence is that comprehensible input is facilitative for second language acquisition (202).

In the second distinction, the interaction hypothesis claims that comprehension is achieved not so much through the use of simplified or pre-modified input, but primarily through the learner acting on input through interaction with the speaker and thus prompting the necessary modifications which lead to comprehension. This emphasis on the role of interaction is well established the study of children acquiring a first language (Snow and Ferguson, 1977; Ellis and Wells, 1980). Hatch (1978), in a study of children learning a second language, showed that like children acquiring a first language, these children also used the opportunities afforded by interaction to incorporate and substitute chunks of speech from interlocutors. Hatch suggests that when investigating language acquisition, it is important to look not only at input and frequency but to "examine the interactions that take place within conversations to see how that interaction, itself, determines frequency of forms and how it shows language functions evolving" (1978:403). Hatch's premise was that "language learning evolves out of learning how to carry on conversations", and that in both first and second language acquisition "one learns how to do conversation, one learns how to interact verbally, and out of this interaction syntactic structures are developed" (404).

Long, an influential advocate of interaction, also claims that interest in the role of input in SLA tended to ignore "the other side of the page" (1980:49) by not taking adequate notice of the NNS's contribution to the input received. In a study of NS/NNS interaction he pointed out that "modifications in interaction were more consistently observed than modifications in input" (1981b:132). Thus comprehension is achieved not only by pre-modifying input, but by modifying "the interactional structure of conversation through such devices as self- and other repetition, confirmation and comprehension checks and clarification requests..." (Long, 1983a:211).

In recent years the claims found in the interaction hypothesis have generated a number of studies seeking empirical evidence for a relationship between interaction and comprehensible input. Results from these studies indicate that in both natural and

classroom settings, increased comprehensibility occurs as a result of interaction between NS and NNS (Scarcella & Higa, 1981; Long, 1981b, 1983a; Pica, Young & Doughty, 1987) and between NNS and NNS (Naimen, Frohlich, Stern, and Todesco, 1978; Schwartz, 1980; Varonis & Gass, 1985; Porter, 1986). Studies have also found that NNS/NNS interaction can be superior to NS/NNS interaction in both the amount of negotiation and the amount of useful negotiation that it generates (Long, Adams, McLean and Castanos, 1976; Varonis & Gass, 1985). Porter (1986) concludes from a study of NS/NNS and NNS/NNS interaction that NNS are as capable as NS of providing the necessary interactional features that promote language acquisition although learners do not learn appropriacy from each other.

Only two studies have sought direct evidence for the claim that interactional modified input is superior to pre-modified input. (Pica, Young and Doughty, 1987, and Pica, 1991a). In the first of these studies, comparisons were made between the comprehension of eight non-native speakers of English doing a task in which directions to the task were presented in pre-modified form, and a further eight non-native speakers doing the task with opportunities to interact and negotiate with the native speaker presenting the instructions. The study found significant differences in favour of the group who modified the input they received through interaction. However, this group elicited not just qualitatively different input, but also more input than the group receiving pre-modified input, thus confounding the results. In a further study, Pica (1991a) overcame this problem by adjusting the quantity of pre-modified input presented to the control group to the same level as that produced by a group who had performed the task interactively. In this case, the differences in comprehension between the two groups were not statistically significant although a beneficial effect for interaction was noted for lower proficiency students.

A further problem with the second part of the hypothesis is that few studies have examined the varying quality of different kinds of interactional modification, instead opting for largely quantitative analysis. Those that have looked at quality have shown the differential effectiveness of various kinds of interactional modification as well as modification occurring for reasons other than to improve comprehensibility (Varonis and

Gass, 1985; Aston, 1986). The qualitative distinctions made in these studies suggest that caution is required in making broad claims about the role of negotiation in SLA. Thus, Chaudron (1988:109) cautions "...the effect that negotiation arising from interaction has on eventual language acquisition is unknown at this time." Similarly, Ellis suggests that "when and how interactional modifications work for comprehension is still poorly understood, but it is becoming clear that it is the quality rather than the quantity that matters" (1991:197). This call for greater concern with the quality of negotiation is addressed throughout Chapters V and VI of the present study. The call for more precise qualitative analysis has also been addressed in a recent study by Holliday (1992). The author shows that negotiating moves by NS provide valuable syntactic information for NNS in the form of cross-sentential cues or sentence constituents which are isolated and recombined in the negotiating moves in ways that highlight and make transparent the relevant grammatical relationships between and within constituents.

The third and final part of the hypothesis specifies the kinds of tasks and interlocutor roles which promote interaction. Evidence supports the view that tasks which require the exchange of information produce more negotiation than tasks without such a requirement (Doughty and Pica, 1986), although studies have also shown other dimensions of tasks to have an effect. Among these are the degree of planning and the degree to which the task goal is open or closed (See Long, 1989 and sections 2.6 and 2.7.2.1). Evidence also shows that tasks in which interlocutors share symmetrical roles (two-way tasks) produce more negotiation than tasks in which roles are asymmetrical (one-way tasks) (Long, 1980). While evidence supports the second and third parts of the hypothesis, the hypothesis itself fails to provide the necessary detail by which interactionally modified input can be linked to second language acquisition. Given this problem, Ellis has proposed revisions to the hypothesis.

2.4.3 A Revised Interaction Hypothesis

The revised version of the interaction hypothesis as proposed by Ellis (1991) states that:

- 1 Comprehensible input facilitates L2 acquisition but is neither necessary nor sufficient.
- 2 Modifications to input, especially those which take place in the process of negotiating a communication problem, make acquisition possible, providing that the learners:
 - a. comprehend the input
 - b. notice new features in it and compare what is noticed with their own output.
- 3 Interaction that requires learners to modify their initial output facilitates the process of integration.

In the first modification to the original hypothesis comprehensible input is claimed to be *facilitative* but not *necessary* for SLA. In the second, three processes, comprehending, noticing and comparing are said to provide the necessary links between input and acquisition. Third, Ellis integrates into the hypothesis claims for the role of output in acquisition. Each of these claims is closely examined in Chapter VI in the light of results from the present study.

The first series of steps in the hypothesis, linking input and comprehension via interaction, have been discussed in sections 2.4.1 and 2.4.2. Evidence points (though with some qualifications) to improved comprehensibility as an outcome of interactional adjustments.

There remain certain unresolved issues pertaining to the remainder of the hypothesis. While Ellis suggests that the preliminary processes of acquisition - noticing and comparing - are testable through introspection, this is not the case for integration. This process needs to be operationalized in such a way that it can generate testable hypotheses. One possible test of the extent to which items subject to negotiation are

integrated into interlanguage is to measure the accuracy of subsequent use of these items by interlocutors in a longitudinal study.

Secondly, Ellis (1991:199) claims that all three processes - noticing, comparing and integration must occur for acquisition to take place. It seems feasible however that noticing is in itself a form of acquisition synonymous with an increment in somewhat shaky receptive knowledge of a new item being noticed for the first time, while integration is synonymous with the ability to use the item productively in an expanding range of contexts. Viewed this way noticing, comparing, and integration are not so much the conditions which presuppose acquisition as the hypothesis would suggest, but are in fact progressively higher levels of complexity and as such represent levels of acquisition.

Finally, as with Ellis's view of the input hypothesis, sections 2(b) and 3 of the revised version still await empirical confirmation from studies designed explicitly to provide the necessary evidence. The present study attempts to address these issues.

2.4.4 Output in Second Language Learning

A noticeable weakness in both the input hypothesis and the original interaction hypothesis was their failure to recognize benefits that might accrue to NNS through producing language in an interactive context and not just through receiving input. While this weakness is addressed in the revised hypothesis presented above, it was addressed much earlier by Swain (1985) who offered an alternative model of acquisition based on learner output or production known as the 'comprehensible output hypothesis'. (See also Corder, 1978 and Ellis, 1984.)

Swain pointed out that a problem with input-based explanations of SLA is that learners can often extract meaning from input without necessarily understanding its morphosyntax. In other words, the language they hear is processed semantically but not syntactically making it difficult to see how unfamiliar syntactic structures could be

easily acquired. When required to produce language on the other hand, the learner moves from semantic to syntactic processing and in this way structural aspects of the language are raised to prominence.

The output hypothesis also redressed the imbalance in input theory by proposing that speaking in an interactional context exposes learners to negative input (Schachter, 1986) and to feedback on their production. This in turn forces them to adjust their production towards comprehensibility which, for at least some of the time, is achieved through greater accuracy. In this way learners are said to test their hypotheses about the target language against the comprehension of interlocutors. Through the refining and re-testing of these hypotheses against the perception of interlocutors, it is claimed that interlanguage is destabilized. Target language forms replace interlanguage forms and result in improved linguistic competence (Bley-Vroman, 1986), although in a study of NS/NNS task-based interaction, Pica, Holliday, Lewis and Morgenthaler (1989) found that the degree to which NNS modified their speech was dependent on the kinds of moves used by NS to initiate negotiation. Thus, confirmation checks typically resulted in fewer and less global modifications to their output by NNS since the confirmation check itself often modelled the correct form. Clarification checks on the other hand were much more successful at prompting NNS interlocutors to restructure their utterances.

The availability of avoidance strategies in oral communication may also work against the effectiveness of output in SLA. Some counter evidence has been provided by Sato (1986) in a study investigating the acquisition of past tense reference by two Vietnamese learners of English in communicative situations. She found that in such situations, past tense markers were not acquired because the learners were able to refer to the past in other ways such as through time adverbials and past lexical verbs, and because at times, context or utterances by interlocutors provided the necessary time reference, allowing it to remain unmarked in utterances by others. In this case, language use in communication worked against the acquisition of certain morphological forms.

In a perspective that complements Swain's output hypothesis, Hatch (1978) proposed

that conversational structures and the mutually supportive nature of conversation are important ingredients in successful SLA. In her study, 'scaffolds' or vertical conversational structures provide the impetus for language development. These structures, comprised of alternating turns by conversational partners, allow the learner to borrow salient chunks from preceding utterances and to build on them with small additions to meaning. By thus constructing progressively more complex linguistic forms (syntactic, or horizontal structures) and using them in repeated interaction, she argues that language development occurs. The same conclusion was reached by Wells (1981) in an extensive study of children learning their first language. Wells argued that the quality of learning depends on the ways in which adults develop and expand children's utterances. Long and Sato (1984) point to a similar phenomenon in SLA in their discussion of collaborative discourse between native and non-native speakers. Similarly, Ellis (1986) shows how expansion strategies (through which interlocutors build their utterances on the basis of prior utterances) can help learners overcome their lack of linguistic resources when communicating in oral interaction. Evidence of the usefulness of conversational structures is also provided by Bygate (1988) who claims that because small group interaction typically contains dependent units below the level of finite clauses and involves 'joint elaboration of discourse', it encourages structural manipulation which can aid language development.

2.5 The Nature of Negotiation of Meaning

The preceding section examined some of the roles ascribed to interaction in second language acquisition. But the term 'interaction' requires clarification since, as a superordinate term, it encompasses a range of verbal and non-verbal phenomena and as such is somewhat vague and ill-suited to empirical investigation. For this reason the research literature commonly refers to a sub-set of interactional phenomena known alternately as negotiation of meaning, interactional modifications or conversational adjustments.

But even within this narrower definition there is variability. In the fields of

conversational and discourse analysis for example, a number of different terms have been used to describe the processes by which input is modified. Jefferson (1972) introduces the notion of 'side-sequences', sequences of turns which are dependent on prior utterances but do not change the direction or topic of the conversation. Schegloff, Jefferson and Sacks (1977), focusing on the problems in speaking, hearing and understanding during face to face interaction, refer to negotiation as 'repair' and discuss preference for 'self' rather than 'other' correction in NS conversation. (See also Schwartz, 1980). Garvey (1977), concerned with the relationship of dependency between utterances, introduces the term 'contingent query' to refer to questions contingent on previous utterances. Much of this work in conversational analysis attends to the way interlocutors construct and negotiate social relationships through interaction.

However, negotiation has come to have a more restricted use in second language research where, as Pica et al point out, it is used here to refer to the way learners 'resolve communication breakdowns and work together towards mutual comprehension' (1989:65). Similarly, Richards, Platt and Weber define negotiation as "what speakers do in order to achieve successful communication" (1985:190), and Ellis describes it as occasions when speakers "simplify and clarify [their utterances] in accordance with the feedback and response they receive" (1986:137). "Pardon?" or "What did you say?" are simple examples of utterances that might trigger a sequence of negotiating moves.

Breen, broadens the concept to encompass not only the spoken interaction between learners working together on a task, but also the silent processing of new information by each learner as they attempt to make sense of it. As he points out in relation to performance of communicative tasks:

Negotiating is the central ability, and learners will always be involved in negotiating in a covert way when relating personal meanings to the meanings they can derive from reading or listening. Some tasks may expect overt, interpersonal negotiating - the further sharing of meaning and joint creation of meaning through conversation and discussion. Regardless of some stated task instruction, therefore, every learner will have to undertake negotiation... (1987:32)

Typically though, the term negotiation is restricted in Pica's sense to actual turn-taking behaviour in conversation where it involves retrospective or contingent reference to a prior utterance in which trouble is located. In most cases this then leads to modification of that utterance (usually by the speaker) followed by a response to the modification by an addressee (Gass & Varonis, 1985).

In terms of operationally defined units for use in the analysis of conversational data, negotiation is typically represented by three categories: confirmation checks, comprehension checks and clarification requests (Long, 1980; Pica & Doughty, 1985a & b; Varonis & Gass, 1985; Porter, 1986; Pica, 1987). These are discussed in Chapter V. Other units of negotiation such as repetitions (Doughty and Pica, 1986) and expansions (Long, 1980) are found less frequently across studies. The three initial categories effectively distinguish between the more discrete forms of negotiation and thus remain central to a description of negotiating behaviour.

A rather more holistic view of negotiation is found in a model of 'non-understanding routines' developed by Varonis & Gass (1985). They describe the sequence of initiating, processing and resolving moves which typically occur as a result of an interlocutor expressing a lack of understanding. The model includes four standard moves: a trigger (the utterance that has not been understood); an indicator (the signal of non-understanding); a response by the original speaker to the indicator; and finally, a reaction to the response which 'ties up' the routine before the main flow of the conversation continues. These moves can be seen in the following example from the present study where the trigger (utterance 1) is followed by an indicator (2), a response (3) and a reaction (4).

- 1 *a public /s/elter*
- 2 *a public centre?*
- 3 *sorry, shelter*
- 4 *ahh shelter*

The initial 'trigger' or 'push-down' causes a halt in the linear progress of discourse while a misunderstanding is resolved. At the point of resolution a 'pop-up' occurs and linear progress continues. The Varonis and Gass model (elsewhere known as a 'push-

down' (Varonis and Gass, 1985:152) or 'side sequence' (Jefferson, 1972)), is useful in that it allows interactional modifications to be examined along with the responses they generate and the relative success of the resolutions that occur.

In classroom studies with a psycholinguistic motivation, a standard procedure for quantifying the amount of negotiation involves recording subjects as they complete communication tasks. Interaction by the subjects is coded and counted using a functionally defined set of interactional moves and the results are analyzed. Finally the researcher considers the value of the variables under review using these interactional modifications as the yardstick by which learning utility is measured.

Until recently, studies in the area of task-based interaction between NNS have typically followed a conventional analysis of the frequency of negotiating moves occurring in various types of tasks or under various conditions (Long, 1980, 1981b, 1983a; Chun, Day, Chenoweth and Luppescu, 1982; Doughty & Pica, 1986; Porter, 1986), but often with limited discussion of issues concerning the variable quality of different types of negotiation and of the pragmatic dimensions of negotiation. Yule and Tarone (1991) note this limitation, suggesting that studies of negotiated input have been too concerned with one side of interaction, with the requests and questions that initiate negotiation. An alternative view they present involves studying interlanguage communication strategies which by definition involve 'both sides of the page' - the contributions of all interlocutors to the resolution of a negotiated problem.

A number of studies have pointed out that apparent negotiation moves may have functions or roles other than to improve the quality of input. Thus Varonis & Gass (1985) in their study of negotiation in NS/NS, NS/NNS and NNS/NNS interaction show that negotiating moves were at times not necessarily concerned with modifying input but were also used to encourage the interlocutor to continue (e.g. 'Oh really?'). Negotiating moves functioning in the latter role are described as conversational continuants.

Aston (1986) in an important qualitative discussion of 'trouble shooting procedures' presents an extensive critique along these lines. First, he points out that interactional coding categories used in many studies are 'fuzzy' with a degree of overlap between formal (e.g. repetitions) and functional (e.g. confirmation checks) categories. Second,

he claims that negotiation is not necessarily concerned with meaning or with improving understanding of a previous utterance. He claims that negotiation (trouble-shooting) has the potential to be concerned with both accessibility (comprehension) and acceptability (social integration) (Widdowson, 1983). It can also be used to focus not only on the 'faultable' but also on the remarkable (Goffman, 1981). According to Aston then, not only does the presence of trouble (i.e. input pitched higher than the ability of interlocutors to decode) not guarantee negotiation, but negotiation may occur for other reasons. It may function outside the bounds of actual trouble by providing a ritual of understanding or solidarity, 'celebrating agreement' without actually facilitating it. In addition, trouble-shooting routines may not succeed even when confronting a problem so that formal but not substantive understanding is achieved (Aston, 1986:133). These points will be addressed in Chapter V.

There have been a number of other attempts to distinguish different types of negotiation. For example, Rulon and McCreary (1986) in an empirical study of teacher-fronted and small group interaction distinguish two types of negotiation - negotiation of meaning (concerned with unclear or misunderstood words) and negotiation of content (concerned with the content of the task). Similarly, Antony (1986) distinguishes between two types of functions in interaction: meta-communicative (procedure and organization/language problems) and task-solving. In an analysis of learner performance on a single task he notes that most of the language was of the task-solving variety. Making a parallel distinction, Pica and Doughty (1985b), in a discussion of the role of repetition, discuss repetitions which function as classroom-related moves on the one hand, and repetitions that function as modifications to interaction on the other.

Young (1984) distinguishes between negotiation of outcome in which a predetermined outcome is the focus of attention (as in display questions by a teacher), and negotiation of meaning in which there is scope to negotiate a mutually satisfactory outcome (as in open-ended questions).

A promising trend in recent empirically-based studies by Pica and associates (Pica, Holliday, Lewis, et al; 1989, 1991) is the construction of rather more complex

frameworks for coding negotiation than had previously been in use. These frameworks not only allow for coding of the triggering utterance and contingent signal, but also of the follow up response and subsequent continuation moves. In addition they distinguish between different kinds of negotiation signals on the basis of first, whether they do or do not include the trigger and second, what aspect of the trigger (morphology, syntax etc) the signal attempts to modify.

In sum, negotiation has received considerable attention in recent years and plays a pivotal role in many psycholinguistic studies of SLA. It provides the means whereby messages are made comprehensible and more finely tuned to the competence of interlocutors, and results in reformulations which are closer to the target language model than language without this interactional component. However, until recently, qualitative analysis of negotiation was neglected in many interaction studies. Both Larsen-Freeman and Long (1991) and Ellis (1991) suggest that closer examination of the quality of negotiating behaviour is a promising area for further research.

2.6 Tasks and Second Language Learning Theory

Tasks feature prominently in recent developments in the theory of communicative language teaching. They are seen to represent both the goal of learning (using the language to communicate successfully), and the means to achieve that goal (the appropriate classroom activity - Nunan, 1989:13). As Prabhu states in regard to one of the early second language syllabuses built around a task construct, "Communicative teaching in most Western thinking has been *for* communication ... whereas the Bangalore Project is teaching *through* communication ..." (1987:70).

This fusing of what are traditionally separate aspects of curriculum design has led some writers in the field to suggest that task is a useful planning tool in programme design (Candlin, 1987; Prabhu, 1987; Nunan, 1989), possibly making a distinction between syllabus and methodology redundant (Long, 1989).

The notion of 'task' is also a focal point for research within interactionalist studies of

SLA as well as across a number of disciplines within the human sciences including psychology, education and occupational studies. In SLA studies, experimentally controlled performances of tasks are used to provide information on the relationship between the interactive behaviour of learners in different task arrangements and learning. Tasks are claimed to provide opportunities for the negotiation of meaning and for "stretching learners interlanguage...pushing them to operate at the outer limits of their current abilities" (Long, 1989:17). Seen in this way, the task is capable of linking what is actually prescribed in the classroom with claims made for the role of meaning-based interaction in SLA as well as with the desired goal of many language learners - to use the language effectively in communication (Long, 1989; Long and Crookes, 1991). These links represent a convergence of interests including those of the learner, the researcher and the teacher. By way of contrast, structural syllabuses prescribe units and systems for grading these units that bear little relationship to what we know of the content and progression of language acquisition (Crookes, 1986:19-22) or with authentic communication.

But the term 'task', like the term 'interaction' discussed above, encompasses a range of meanings and requires some specification. At a general level a task has been described as "a piece of work or an activity, usually with a specified objective, undertaken as a part of an educational course, at work, or used to elicit data for research" (Crookes, 1986:1).

Long (1989) makes a basic distinction between two types of tasks: target tasks (things learners will eventually do in English) and pedagogic tasks (problem-solving activities on which teachers and learners work in the classroom). Breen defines a task as used in language classrooms as:

any structured language learning endeavour which has a particular objective, appropriate content, a specified working procedure, and a range of outcomes for those who undertake the task. 'Task' is therefore assumed to refer to a range of work plans which have the overall purpose of facilitating language learning -

from the very simple brief exercise type to more complex and lengthy activities such as group problem solving or simulations and decision making (1987:23).

Narrowing the focus further, Nunan discusses communicative tasks which he defines as:

piece(s) of classroom work which involve learners in comprehending, manipulating, producing or interacting in the target language while their attention is principally focused on meaning rather than on form (1989:10).

This definition excludes activities that are form-focused or traditionally teacher-directed so that the notion of a task is restricted to activities that learners perform themselves (though not excluding teacher input and assistance) using language for authentic communicative purposes.

The concept of task has been further refined through various task classifications. Frameworks for classification have been proposed both for the purpose of grading and sequencing tasks for classroom use, and for distinguishing those components of tasks which are analyzable for the purposes of SLA research. The terminology and the systems for classification are varied and take as their point of departure a number of different components and perspectives. Thus as Breen points out:

A typology is bound to be fuzzy-edged and at most a managerial convenience, however necessary that is. Moreover any such typology will itself be refined in the process of task use and task-evaluation. Tasks thought particularly congenial to the promoting of this or that behaviour will become valued ... for some other effect than that originally conceived (1987:15).

Overviews of selected classifications from both within and outside applied linguistics are presented in surveys by Crooks (1986), Candlin (1987), Long (1989) and Nunan (1989). These classifications appear to take two approaches to the description and distinguishing of tasks. In the first, the obligatory features common to all tasks are idealized to provide task component frameworks which might include such things as

settings, input, goals, activities, roles, and outcomes. Nation (1976), Fleishman (1978), Doyle (1983), Candlin (1987) and Nunan (1989) are among those who have proposed such frameworks. Those proposed by Candlin and by Nunan have been adapted for use in the present study to tease out and compare the essential features of specific tasks (see Tables 1 and 3).

In a second approach, tasks are categorized as belonging to certain task types on the basis of the prominence of a given feature such as the kind of outcome, the way textual input is presented, or the kind of activity required of learners. Thus tasks have been described as: planned or unplanned (Ochs, 1979 & Crookes, 1989); one-way or two way (Long, 1980); convergent or divergent (Duff, 1986); open or closed (Long, 1989); and having a required or optional exchange of information (Long, 1980; Doughty and Pica, 1986). Long (1989) presents a summary of findings relating to these task types in which he notes that two-way tasks produce more negotiation work and more useful negotiation work than one-way tasks, planned tasks 'stretch' interlanguage further and promote destabilization more than unplanned tasks, and closed tasks produce more negotiation work and more useful negotiation work than open tasks. As discussed below, Doughty and Pica found more negotiation and more repetition in required information exchange tasks than in optional information exchange tasks. This task-type distinction provides one of the starting points for the present study and is therefore worth discussing in some detail. In required information exchange tasks, information is split so that each group member has a unique portion of the text for the task which *must* be exchanged in order for the task to be completed. In optional information exchange tasks on the other hand, information is shared by all group members, and so the contribution of each group member is optional. In the present study, this distinction is referred to as a distinction between split and shared information tasks (Nation and Thomas, 1988). The split/shared distinction is used in preference to Doughty and Pica's terms, since how information is distributed among participants (i.e. whether it is divided equally among group members or shared by all) is the key factor determining the optionality of interaction and is therefore a more fundamental distinction to make. In practice however, both pairs of labels make identical distinctions between actual tasks.

2.7 Doughty and Pica's Research

The themes discussed so far in this chapter have been central to the work of Doughty and Pica and their collaborators in a series of studies beginning in 1985. Of particular interest is their 1986 study which investigates the roles of information gap tasks and participant relationships in encouraging interactional modifications to input. This study is part of a body of research exploring the link between interaction and second language acquisition as well as the mediating effect of task type on this relationship. The study draws on both Krashen's Input Hypothesis (1985) and on Long's claims regarding interactionally modified input (1981a and 1985) for its theoretical rationale, and makes claims relevant to methodology through its focus on task types.

This study by Doughty and Pica is a significant one for three reasons: (i) their results have been repeatedly cited in subsequent studies and so provide a part of the empirical evidence used to make claims about the benefits of particular types of group work for learning; (ii) the kinds of communicative language teaching it discusses are currently accepted classroom practice and so it is relevant to current pedagogy; (iii) the contribution of classroom organization and learner behaviour to language learning is receiving considerable focus in current applied linguistics research.

The purpose of Doughty and Pica's research was to "determine the effects of task type and participation pattern on language classroom interaction" (ibid:305). Two hypotheses were tested:

- (i) ... that activities which required an information exchange for their completion would generate substantially more modified interaction than those in which such exchange was optional
- (ii) ...that more modification would occur in the dyad situation than in the group situation, which in turn would provide more opportunity for interaction than the

teacher-fronted situation ¹ (310).

Data was collected from three adult classes of second language learners of English doing a required information exchange task and a further three classes doing two different optional information exchange tasks. The required information exchange task presented each member of a group (or class) with a different incomplete model garden (constructed on felt boards) which was to be completed as individuals shared information verbally from each of their boards. Information held by each learner was unique so that completing the model of the garden required all group members to participate and negotiate the outcome of the task.

In the first of the optional information exchange tasks, the learners were presented with a list of patients requiring heart surgery and asked to reach consensus on an appropriate priority ranking for the operations. The second involved a similar task but dealt with a child adoption decision. Negotiation was 'optional' in the sense that each learner had identical information and the task could be completed even if one or more learners opted not to speak, or to say very little. Each class completed the tasks under three different participation patterns - teacher-led groups consisting of the teacher and three students, groups of four students, and student-student dyads. Ten minute audio-taped samples of interaction were analyzed.

The results indicated that:

1. Modification of input was significantly higher among groups of students than in teacher-fronted groups, although the difference between group and dyad interaction patterns was non-significant (316).
2. When both task and participation pattern are independent variables, task type has the overwhelming influence on the amount of modification (316).
3. For each participation pattern, the total amount of speech increased when the exchange of information was required. The increase for the groups of students was ten times that of the teacher-fronted groups (319).

¹ The present study focuses on the effects of task types, the subject of Doughty and Pica's first hypothesis, but not on participant patterns, the subject of their second hypothesis. This will be discussed only as it relates to the overall design of their study.

In conclusion Doughty and Pica made the following points:

- (i) presence of the teacher can limit the amount of modification (especially on optional exchange tasks).
- (ii) students will interact less and modify less in groups unless there is a requirement for information exchange.
- (iii) a required information exchange task will only increase modified interaction when students are working in groups.

While the study by Doughty and Pica has been widely cited, it contains a number of problems which need to be addressed before we can be confident that the results will generalize to other contexts. The major issues concern underlying theoretical assumptions about the role of negotiation in interaction, and the design of the study. We will consider each of these in turn.

2.7.1 The Role of Negotiation in Interaction

Doughty and Pica assume that it is possible to evaluate the value of communicative tasks as vehicles for language learning by measuring the amount of negotiation they generate since where we find negotiation we also find difficult input being made comprehensible. Certainly, the case for negotiation is a strong one. However, in the context of communication task performance, difficult input can be made comprehensible in a number of other ways. From a teacher's perspective these include:

- i. *Pre-teaching unfamiliar language.*
- ii. *Providing language support through glosses, use of dictionaries, pictures, etc.*
- iii. *Modifying the input.* Pica, Young and Doughty (1987) and Long (1981a) argue persuasively for the superiority of interactionally modified input over pre-modified input (foreigner talk). However, various studies have also provided evidence of improved comprehension in L2 as a result of pre-modified input. Larsen-Freeman and Long (1991) present a summary of the findings of these

studies while Ellis (1991:188) discusses some problems associated with them.

For the learners, difficult input might also be made comprehensible through:

- i. *Utilizing contextual support.* The learners can link words to the 'here and now', that is to visible aspects of the task such as diagrams and pictures, as well as to prior work on the task.
- ii. *Drawing on background knowledge.* Learners can use their background knowledge and schemata to improve their comprehension of unfamiliar language.
- iii. *Reading non-linguistic signals.* Non-verbal communication (gesture, facial expression, and other types of body language) is an important vehicle used to convey meaning in face-to-face communication. A lack of feedback or a puzzled expression can, as effectively as a question, result in the speaker repeating or recoding incomprehensible input.

These ways of achieving comprehensibility without overt negotiation must be accounted for unless we are to assume that where negotiation is absent, input is too simple to provide new or unfamiliar material for the learner. Indeed, given adequate background knowledge and plenty of contextual support, it is entirely possible that interaction occurring with a minimum of negotiation might not only be running smoothly but might also be providing a wealth of primary linguistic data for language acquisition (Aston, 1986). However, when tasks are assessed purely on the amount of interaction they generate, no allowance is made for alternative routes to comprehensibility such as those suggested above, or of the ability of different tasks to provide learners with a greater or lesser amount of support in guessing meaning.

The assumption by Doughty and Pica that negotiation necessarily generates input that is more comprehensible than it was prior to negotiation can also be challenged by showing first, that only under certain conditions is negotiation in fact concerned with unfamiliar linguistic material, and second, that even where a gap in comprehension is

the issue, it may result from factors other than a gap in the knowledge of listeners. Thus, the reasons for which an interlocutor might initiate a negotiating sequence include:

- i. *Maintaining group cohesion.* Varonis and Gass (1985) make the point that negotiating questions are used as 'conversational continuants' in which the intention of the speaker is not to clarify or improve the comprehensibility of input, but is to maintain the social dimension of conversation. As Aston (1986) puts it, "They allow the participants to perform a ritual of understanding or agreement" (139).
- ii. *Dealing with ill-formed input.* It is essential that a distinction is made between input that is incomprehensible because the listener does not have the language knowledge to deal with it, and input that is incomprehensible because of something in the speaker's production (e.g. incorrect or unclear pronunciation). If it is the latter, it is difficult to see how it can lead to improved comprehensible input of the '+1' variety for the listeners. They are likely to end up with nothing more than 'i' in a comprehensible form.
- iii. *Dealing with comprehensible input that lacks adequate contextual meaning.* Negotiating questions are used by learners to get more information on the broader significance of a previous utterance rather than on the language within it. Thus 'why?' questions for example assume comprehensibility at a linguistic level and seek further contextual information.
- iv. *Dealing with input that is not comprehensible because of inattention, hearing or background noise.* Negotiation for this purpose does not necessarily involve input that is linguistically unfamiliar or difficult. It presupposes only that attention or perception has been a problem. Færch and Kasper (1986) refer to this as a 'gap in input' which they distinguish from a 'gap in knowledge'. Only when negotiation is activated by the latter do they claim that learning can occur.

- v. *Dealing with different kinds of information.* To some extent this is covered by the previous points. But it goes further by suggesting that even if for example comprehension is a problem, this tells us very little about the type of information that is raised to prominence through negotiation. The different types of information may include the content of a task (Rulon & McCreary, 1986), the procedures associated with a task, ideas from other learners and so on. If tasks are evaluated according to amount of negotiation they generate then the various kinds of information being negotiated should be distinguished when doing such an evaluation.

It is clear then that negotiation is used by learners to modify input which is both within and outside of their present competence. Some of the uses of negotiation discussed above may in fact be the first step towards further negotiation focused on unfamiliar linguistic material, such as when inattention leads a learner to request a repeat which is then further negotiated for meaning. But overall we can make no assumption that the presence of negotiation represents modification of input ready to be acquired. In contrast, the supposition implicit in Doughty and Pica's study is that negotiation, by virtue of its concern with comprehensibility, leads to learning.

Studies such as that by Doughty and Pica seem to assume implicitly that measuring the amount of negotiation produced during a task performance is a way of measuring the learning potential of that task. However, the points already addressed suggest that there are problems in a quantitative measure of negotiation which fails to account for the nature of different types of negotiating utterances. There are further reasons why we might want to question the value of a purely quantitative measure. Gaining a satisfactory outcome from the negotiation of a single piece of information from a previous utterance may require multiple negotiating questions all concerned with that single piece of information. But the outcome of these negotiating questions (that outcome being the comprehension of the previous utterance through its repetition, paraphrasing etc) may be relatively insignificant compared to the amount of work (i.e. the number of negotiating questions) required by learners to extract the required information. Thus an account of negotiation may need to acknowledge the distinction

between questions that repeat the request for a particular piece of information and questions that request a new piece of information. The distinction is between the total number of negotiating questions and the number of pieces of information negotiated. Learning value may be as much a product of the latter as the former.

Second, there is no guarantee that where negotiation occurs, prior input is successfully modified toward comprehensibility. A large amount of negotiation may in fact indicate that the material being worked on by the learners is simply too demanding in which case negotiation may not always lead to resolution. Negotiation in large quantities can in fact, halt forward progress on the task, revealing a breakdown in the flow of communication. Where a comprehension problem is resolved there still remains the question of how much and what information was made comprehensible and how much negotiation was needed to achieve comprehension.

In sum it is necessary to ask how the number of negotiating questions compares to the number of pieces of information being negotiated, and how successfully negotiation is resolved. While not denying the potential value of negotiation as a vehicle for language learning, the issues discussed above suggest a need for increased precision in the way negotiation is analyzed and caution in making claims on its behalf.

2.7.2 Experimental Design

With respect to the design of the study by Doughty and Pica (1986), issues which warrant discussion include: the control of task type variables other than that which acted as the independent variable in the study, the use of different subjects to perform different tasks, the order of task performance and practice-on-task effect, and sampling of recorded segments of discourse for analysis

2.7.2.1 Task Types

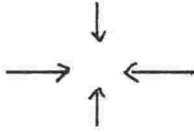
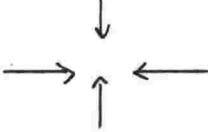
Doughty and Pica's claim that "a requirement for information exchange generated more modification of interaction than did a task with no such requirement" (314) assumes that

the single important factor distinguishing their tasks was the optionality of information exchange as defined by whether the text for the task was divided among group members (i.e. split information tasks), or was shared by all (i.e. shared information tasks). But an analysis of Doughty and Pica's two task types indicates that the information exchange variable does not account for other important differences between the tasks. Table 1 is an attempt to break down Doughty and Pica's tasks into components which highlight the differences between the tasks. This utilizes Nunan's typology of task features (1989:11).

A number of variables presented in Table 1 appear not to have been systematically controlled and for this reason they act as confounding variables with unspecified effects on the results of the study. To take an example using media and activity type, Doughty & Pica fail to acknowledge that in comparing the optional and required tasks they are also comparing the interaction of a group of learners discussing a written list of items on the one hand, with the interaction of (a different group of) learners manipulating material objects (motor activity) on a felt board in response to directives from other learners on the other. Gass and Varonis (1985) recognise this problem when comparing different types of tasks and suggest that "future research in this area must control for input/output medium in addition to considering carefully the amount and type of information exchange" (159).

A further example involves the topics of the tasks. Doughty and Pica's tasks are characterized by two topics: one ethical involving a medical decision, and the other spatial involving the layout of a garden. These topics match Doughty and Pica's optional and required information exchange distinction, and yet are treated as having no bearing on the talk generated by the different tasks. Thus, the level of interaction occurring in either task may be a product not only of the way the information is distributed (Doughty and Pica's independent variable), but also of any combination of these other factors which account for some major differences between the tasks and which may therefore have equal claim to the status of independent variables in the study.

TABLE 1
Components of the Two Tasks Used by Doughty and Pica (1986)

TASK TYPES ²		
TASK DIMENSIONS	Optional Information Exchange Task	Required Information Exchange Task
<u>SETTINGS</u>		
Group size ³ :	<i>four members</i>	<i>four members</i>
Seating arrangement:		
<u>INPUT</u>		
Media:	<i>written</i>	<i>objects and symbols</i>
Topic/subject matter:	<i>ethical: a list of patients and details</i>	<i>spatial: a felt board flower garden</i>
Distribution:	<i>shared</i>	<i>split</i>
<u>OUTCOMES</u>		
Activities:	<i>read think discuss rank</i>	<i>transfer (orally) information motor activity: move objects</i>
Solution type:	<i>open</i>	<i>closed</i>
<u>GOALS</u>		
Task goal:	<i>agreement</i>	<i>completion</i>
Learning goal:	<i>fluency</i>	<i>fluency</i>
<u>ROLES</u>		
Learner roles:	<i>unspecified</i>	<i>unspecified</i>
Teacher role:	<i>facilitate</i>	<i>facilitate</i>

² As mentioned in section 2.6, the present study uses the term *shared information tasks* in preference to optional information exchange tasks, and the term *split information tasks* in preference to required information tasks.

³ Three different participation patterns were used by Doughty and Pica. Only the group pattern is being compared here.

2.7.2.2 Subjects and Order of Tasks

The selection of student subjects and their use in repeated performances both present problems in Doughty & Pica's study. First, with regard to selection, the subjects who performed the required-interaction tasks were not only from different classes but also from classes selected in different years from those who did the optional-interaction tasks. Thus the assignment of subjects to different treatments was non-random. In theory, use of multiple groups (three for each task type) allows the data for these groups to be collapsed and generalized and so allows the use of different subjects across the dependent variable without corrupting the data. But where a case is to be made for generalizability, selection of subjects must be random. In Doughty and Pica's study, random selection of subjects only occurred within each of the two groups of three classes and not from among the six classes.

The second problem relates to the use of the same subjects in three different participation patterns. Each of the six classes performed first in teacher-led groups then in groups of four and finally, for three of the classes, in dyads (see Table 2). Doughty and Pica took two precautions to ensure this order did not have a practice-on-task effect which could distort the data. First they ran a demonstration lesson to familiarize students with the content of the tasks and second they only collected data from a point twenty minutes into the task (by which time it was assumed the interlocutors would be familiar with the content).

They claim that as a result of these controls, a practice-on-task effect was eliminated. This was demonstrated by an increase rather than a decrease in the number of modifications occurring in the second and third performances. In this regard they maintain that:

Assuming that experience does affect NNS-NNS interaction, the NNS students who completed all three tasks would have been better at modifying interaction on the third task than on the second (ibid:317).

TABLE 2

A Representation of the Experimental Design Used by Doughty & Pica (1986)

Occasion	Classes 1-3 (1985 study)	Classes 4-6 (1985 study)
1		
Task type:	Optional interaction	Required interaction
Topic:	Adoption decision	Flower garden
Participants:	Teacher B + class	Teacher A + class
2		
Task type:	Optional interaction	Required interaction
Topic:	Medical decision	Flower garden
Participants:	Groups n=4	Groups: n=4
3		
Task type:	(not included in study)	Required interaction
Topic:		Flower garden
Participants:		Dyads

However, their claim can be queried on three grounds. First, the precautions they took related only to familiarity with task content⁴ and not to the practice of and improved use of communication strategies and skills specific to the two task types. These are learned behaviours with which the expertise of interlocutors would be expected to improve through repeated practice.

⁴ But even here, Doughty & Pica do not account for the effect of improvements in recognition and production of both the items in the tasks and the phrases or directives used to place items over successive performances. To expect no improvements when the same materials are being used over three successive performances (as in the flower garden tasks) is unrealistic.

Second, consideration is not given to issues such as maintaining learner interest in the tasks over the repeated performances, and the effects of reduced novelty, boredom, lack of cognitive challenge etc on the amount of interaction produced on successive performances using the same materials.

Finally, Doughty and Pica rely on post hoc justification in arguing their case which only serves to mask the effects of practice, making it impossible to determine its impact on the differing levels of interaction. In fact the third performance (in dyads) did not result in a significant increase in interaction over the second performance (in groups), a result for which the order of tasks may be responsible. The fact that order of performance and participation pattern are bound variables makes it difficult to disentangle the effects of one from the other.

2.7.2.3 Sampling of Recorded Segments of Discourse for Analysis

Doughty and Pica extracted ten minute samples of interaction from a point twenty minutes into each task performance and tabulated data from these samples. However cycles of interaction occur within the space of a task performance that may not be accounted for in a ten-minute segment of interaction taken from a pre-determined point. In other words a ten-minute sample is likely to capture a section of a cycle that may not be representative of the discourse as a whole. This point is particularly pertinent in the required information exchange tasks in which at any one period of time, one person will be 'holding the floor' as they present their share of the information to the rest of the group.

While as this discussion suggests, the sampling procedure has questionable external validity because it assumes linearity and disregards possible cycles or internal patterns of interaction *within* a whole task performance, the fact that it also assumes the acceptability of comparing segments *across* task types is even more questionable. It takes no account of the fact that the pattern of interaction characteristic of one task type is likely to be different from another, irrespective of the quantities of whatever phenomenon is being measured. Thus it may be that in optional information exchange

tasks such as those used by Doughty and Pica, the most intense interaction occurs in the last 10 minutes at which time earlier discussion is culminating in a series of decisions and compromises. In contrast, the required information exchange tasks may be characterised by a more cyclic ebb and flow of interaction as has already been suggested. They may also be characterized by fewer high points as the transfer of discrete pieces of information maintains a more regular need to interact and negotiate. None of these suggestions have empirical support, yet they seem reasonable enough to warrant explanation and to throw some doubt on the sampling procedure used by Doughty and Pica.

2.7.3 Assessment of the Study

Research of the kind undertaken by Doughty and Pica requires some compromise between the need to maintain the authenticity of the phenomena under investigation - external validity - and the inevitable artificiality required of an experimental design which guarantees accurate measurement - internal validity. The discussion in the preceding sections, suggests that Doughty and Pica's study tends to compromise internal validity without noticeable improvements in the external validity or generalizability of the study. Of particular concern is the lack of control over order of task performance in the assessment of the independent variable - participation pattern, and the lack of control over group composition and over features of the tasks (noticeably materials and topic type) in the assessment of a second independent variable - task type. For these reasons the experimental design of the study can be improved without a corresponding decline in external validity.

With respect to the theoretical issues addressed earlier there is also a need for discussion of and investigation into the various dimensions of interaction and negotiation and an attempt to move beyond a mere count of interactional forms. It seems possible that more can be done with the data and that a more critical approach can be taken to the study of negotiation.

2.8 Summary

A large and expanding field of research has presented evidence in respect to the claims of input and interactionist theories of SLA. Given the size and complexity of the field, the present discussion was primarily limited to a survey of research concerned with the role of task-based interaction in SLA. Underlying this role, there are a number of different perspectives. In the first, interaction is said to provide the highly contextualized and roughly-tuned input which the input hypothesis claims is necessary for SLA. A second perspective, while not denying the role of input, emphasises opportunities that non-native interlocutors have through interaction to generate and modify the input they receive so that it is reshaped towards comprehensibility, and thus made available for acquisition. A third perspective focuses on the ways in which output in interactional settings aids language development. It proposes that when 'pushed' to produce language, learners switch from a semantic to a syntactic processing mode through which their attention is drawn to structural features of the target language. Furthermore, when learners produce language in interaction, their linguistic competence is tested by the comprehension of interlocutors. In response to negative feedback on comprehensibility, learners must modify their output, and in the process, may adjust their hypotheses about the nature of the target language. Linked to this perspective is the suggestion that interaction provides a framework for supportive construction of meaning whereby learners can produce meaningful units of language below the level of the finite clause and have these expanded and elaborated by interlocutors.

To some extent, these perspectives on interaction represent progressively greater understanding of ways in which SLA occurs in interactive contexts. The initial interest in comprehensible input broadened to include investigations into the actual interactional processes by which greater comprehension might be achieved. While early emphasis on input excluded a direct role for output, it was perhaps inevitable that moves to study interactionally derived input would also draw attention to the 'other side of the coin'; to output. With this expansion of interest has come attempts to specify in greater detail, and to obtain direct evidence on the relationship between interaction and second language acquisition. Recent studies such as that by Holliday (1992), are promising in

this regard and reflect the call by prominent researchers for a greater concern with qualitative research in SLA motivated studies of interaction.

The value assigned to interaction in SLA theory is mirrored in pedagogy by the use of tasks which encourage learners to negotiate meaning. The recent growth of interest in tasks is motivated both by theory and also by the demands of pedagogy, and so represents a very close convergence of interests. The notion of task is multidimensional and this has led to various classifications and task type descriptions being used, often with overlapping or problematic distinctions. In a number of studies, claims have been made about the intrinsic superiority for learning purposes of one task type over another. One such study by Doughty and Pica (1986) made claims regarding the superiority of required information exchange tasks over optional information exchange tasks. It provides the starting point for the present study which is designed to re-examine the findings of Doughty and Pica's study, and to examine further the relationship between pedagogic tasks, interaction and language learning. But while interactionist theories of SLA provide an important link between communicative approaches to teaching and our current understanding of the learning process, debate continues on the adequacy of an interactionist theory of SLA which risks inheriting many of the well-rehearsed flaws of its antecedent, the original input hypothesis. Given the presence of these uncertainties, direct pedagogic applications must be made with caution.

Chapter III

METHODOLOGY

3.1 Introduction

The present study was undertaken to examine the relationship between task types and negotiation of meaning on the one hand, and between negotiation and learning outcomes on the other. In investigating the effects of task types on classroom-based group interaction, the study attempts to redress the problems inherent in Doughty and Pica's study by employing a more precise design and going beyond a quantitative analysis of the data. Specifically, the study seeks to control variability due to task and performance factors and to re-examine systems commonly used to identify and code interactional moves, as well as to investigate the various purposes for which learners appear to use such moves. The various functions for which negotiation was used during communication tasks was not investigated in the Doughty and Pica study although it has received attention elsewhere (Staab, 1983; Aston, 1986; Pica, Holliday, Lewis and Morgenthaler, 1989).

In this chapter the research questions and hypotheses which motivate the study are introduced and the design of the study, including the subjects, tasks, procedures and data analysis is described.

3.2 Research Questions

3.2.1 Research Questions 1: The Effect of Task Type on Negotiation among Language Learners

To what extent does the form of information distribution in a communication task influence the negotiation of meaning?

This question is similar in focus to the first of Doughty and Pica's research questions which sought evidence for a relationship between task type and negotiation of meaning. While research question 1 is principally concerned with split and shared task types, consideration is also given to the effect of the topic of the tasks. Three predictions were made as to what would be found in pursuing an answer to this question. These are expressed in Hypotheses 1, 2, and 3.

The quantity of negotiation

Hypothesis 1 *A split information task will generate a higher frequency of negotiating questions¹ in a given time than a shared information task based on topically similar material.*

This hypothesis parallels a central hypothesis in Doughty and Pica's study and predicts that a large amount of negotiation will occur in the split tasks in which information is divided among participants and must be described orally without recourse to other strategies for communicating meaning. In exchanging this information, interlocutors need to maintain a high degree of comprehensibility in their expression and perception of the content of the task. The shared information tasks on the other hand, provide interlocutors with access to the same information and require only agreement on a common response to this information, agreement which may be reached without the need for interlocutors to be always mutually comprehensible.

¹ The term question also includes negotiating moves such as 'I don't understand', since, like actual negotiating questions, these moves also express a need for further clarification of a preceding utterance.

The distribution of negotiation among interlocutors

Hypothesis 2 *Negotiating questions will be more equally distributed among group members in split information tasks than in shared information tasks as shown by comparisons of the proportion of negotiating questions for each group member across the different tasks.*

Where each interlocutor has an equal amount of unique information to share and a prescribed need (also equal) to receive information from other interlocutors, as in the split information tasks, it is predicted that there will be a more equal sharing of negotiation among interlocutors than in circumstances where none of these conditions exist, as in the shared information tasks.

Repeats

Hypothesis 3 *Excluding 'negotiating repeats' such as those that function as confirmation checks, a split information task will generate a higher frequency of self- and other-repeats per task in a given time than a shared information task.*

The motivation for this hypothesis is similar to that for Hypothesis 1 in that both repeats and negotiating questions, the subject of the earlier hypothesis, are produced in similar circumstances - where there is a need for accurate transfer of information and where, by implication, there is a greater need for clarification of meaning. Repetition, like negotiation, is therefore expected to be used often in the split information tasks, but less often in the shared information tasks.

3.2.2 Research Questions 2 and 3: Analyzing the Negotiation of Meaning among Language Learners

Research Question 2

- a. *What types of moves do learners use to negotiate meaning during communication tasks?*
- b. *In what proportions do these occur?*
- c. *To what extent might particular types of negotiating moves increase comprehension and contribute to learning?*

Research Question 3

- a. *What dimensions of meaning are negotiated by learners during communication tasks?*
- b. *How are these dimensions affected by task type?*
- c. *To what extent might each of these dimensions increase comprehension and contribute to learning?*

These questions are a response to the need for closer analysis of negotiating behaviour raised in Chapter II. Question 2 leads to a description of the range of negotiating questions produced in the present study. On the basis of this description, the adequacy of standard negotiation categories will be reassessed. Question 3 will clarify the range of information and dimensions of meaning which learners in the study seek by means of negotiation and is intended to classify these dimensions into definable categories. Both questions seek to examine more closely the kinds of qualitative changes to input and output which result from various types of negotiating questions. By implication the two questions also call for a reassessment of the relationship between negotiation and incomprehensible input, and the role of negotiation in language acquisition. Hypotheses 4 and 5 are associated with question 2.

The meaning focus of negotiation

Hypothesis 4 *A split information task will generate more negotiation concerned with clarifying the form of the oral message than a shared information task. This will be shown by comparative frequencies and proportions of negotiation which attempt to clarify form, lexical and grammatical meaning, content, opinions and procedures.*

Hypothesis 5 *A shared information task will generate more negotiation clarifying lexical and grammatical meaning than a split information task. This will be shown by comparative frequencies and proportions of negotiation which attempt to clarify form, lexical and grammatical meaning, content, opinions and procedures.*

The nature of split information tasks is such that they often require learners to transfer discrete pieces of information which interlocutors must accurately record. This in itself is likely to require considerable negotiation of expression and perception as predicted in Hypothesis 4. But the ensuing focus on the form of the message (i.e. correct perception) may be at a cost to deeper consideration of the content of a task such as when the meaning of unfamiliar words needs to be negotiated so that information can be used to reach a decision or solve a problem. Since the shared tasks typically generate meaning-focused discourse modes (expressing ideas and opinions, discussing the relative value of items in the textual input and negotiating consensus), Hypothesis 5 predicts that these tasks will also contain more negotiation of the meaning of unfamiliar language than the split tasks.

3.2.3 Research Question 4: Negotiation in Response to Unfamiliar Vocabulary

To what extent do vocabulary gains occur during communicative task performance, either as a result of incidental exposure to unfamiliar words, or through the active negotiation of the meaning of these items?

This question narrows the focus on negotiation down to one particular type - the negotiation of word meaning. The purpose of the question is to subject the claims made for negotiation to scrutiny through an investigation of the relationship between negotiation of particular vocabulary items and learning outcomes for those items.

Vocabulary gains

Hypothesis 6 *Learners will make significant vocabulary gains (measured in pre- and post-testing of recognition of task-vocabulary) as a result of performing communication tasks and of negotiating unfamiliar words with other learners.*

3.2.4 Research Question 5: Other Aspects of the Language of Communicative Task Performance

In what ways might specified features of the language of communicative task performance by learners be influenced by task type and topic? These features are: the amount of talk, the length of turns and utterances, the expression of intra- and inter-propositional relationships, and the modes of discourse.

Claims have been made for the superiority of certain tasks over others on the basis of comparison between the amounts of negotiation produced by learners under different task conditions. Question 5 seeks to test whether the same conclusions about tasks are reached when a range of quantitative and qualitative measures are used.

Talk on task

Hypothesis 7 *Split information tasks will encourage learners to talk more than shared information tasks as shown by the number of words spoken in a given time.*

The structured division of information among interlocutors in split information tasks ensures that all interlocutors have something to talk about and a clear need to talk. The shared information tasks on the other hand do not provide each interlocutor with unique information and so there is not the same requirement for any one interlocutor to participate. As a result, more talk - fewer gaps and silences - is likely to occur in the split information tasks and less in the shared information tasks.

The distribution of talk

Hypothesis 8 *Talk on task will be more equally distributed between group members in split information tasks than in shared information tasks as shown by a comparison of the proportion of total words spoken by each group member across the different tasks.*

This hypothesis is motivated by the same argument presented with Hypothesis 2.

The Length of turns and utterances

Hypothesis 9 *The mean length of turns and utterances as measured in words per turn and per utterance will be greater in shared information tasks than in split information tasks.*

It was predicted in earlier hypotheses that the split information tasks would produce more negotiation and more repetition than the shared information tasks. Since both repetition and negotiation involve interruptions and rapid interchange of turns, then where they are present in large amounts, turns and utterances are likely to be shorter in length. Turns and utterances are also likely to be shorter in split information tasks because learners often need to present information in short manageable chunks so that it can be written down by other group members. If, as the hypothesis suggests, split and shared tasks produce substantially different kinds of turn-taking behaviour and sentence constructions, then in addition to our understanding of ways to encourage negotiation,

this provides an alternative rationale for task-based pedagogic decisions.

Inter and intra propositional marking

Hypothesis 10 *Tasks involving discussion of spatial dimensions (such as placing animals on a plan of a zoo) will elicit more use of prepositions than tasks without such dimensions.*

Hypothesis 11 *A split information task with spatial dimensions will elicit even more prepositions than the shared information task with such dimensions.*

Hypothesis 12 *Shared information tasks will elicit more conjunctions than split information tasks.*

The split tasks used in the study require learners to describe relatively simple information presented in textual form without a requirement to transform that information in any major way. The shared tasks on the other hand require learners to use the information with which they are presented to explain, to reason and to influence the other interlocutors. Since the latter requires greater transformation of information, it might also be considered more sophisticated and challenging.

The three hypotheses predict that the differing demands of using spatial and non-spatial language and of using split and shared information tasks will produce differences in certain grammatical features of the language of the task performances and in particular, differences in the marking of relationships within and between propositions. More specifically, these differences are expected to show that the marking of relationships between propositions is more consistent in the shared tasks than in the split tasks.

3.3 Pilot Study

Prior to the final design of the present study, a pilot study was carried out with four students from the Pacific and South-East Asia. The students were recorded performing a split and a shared information task and segments of their performances were transcribed and analyzed. The pilot study had three main purposes: (i) to test the compatibility of the recording equipment with the physical structuring of the groups; (ii) to allow for observation of learners performing the two new tasks designed for the purposes of the present study; and (iii), to provide data for a sample analysis.

3.4 Subjects

Crookes (1986) makes the point that "SL [second language] studies which attempt to predict discourse characteristics from task characteristics, do so on the assumption that individual difference variables are not strong enough to eliminate such effects" (1986:18). But in the design of the study by Doughty and Pica (1986), the use of non-randomly constituted groups results in interpretive difficulties since without random assignment to groups and tasks, it becomes difficult to rule out the possibility that within-group differences contributed to the outcome of the study. To avoid this problem, the present study uses a repeated measures design in which the same subjects performed all tasks. By counterbalancing two groups of subjects, the practice-on-task effect which results from repeated task performance was taken into account. In addition, subjects were selected by stratified sampling in order to provide a control of differences between subjects. In the following sections the selection of subjects is discussed in the light of recent research into individual and interpersonal effects on group interaction and task performance. Increased familiarity with comprehending the speech of other constant interlocutors, (Gass and Varonis, 1984) was controlled through counterbalancing the order in which tasks were attempted by the two groups.

3.4.1 The Student Body

The subjects for this study were taken from a lower intermediate class participating in an English Proficiency Course at the English Language Institute, Victoria University during the summer of 1988/89. The class contained twenty three students. These students had been studying together in this intensive course for 25 hours per week for eight weeks at the time of the study. Thus they were familiar with each other. In addition they were accustomed to performing interactive tasks with a variety of different partners. Two groups of four students were chosen from the class using a random sampling method to control for gender, ethnicity, and language proficiency. The remaining students made up further groups, two of which were used to provide backup data in case it was needed. A summary of student details is provided in Appendix D. All groups were audio-recorded and treated equally except for the presence of video cameras in the rooms of the two research groups. The following sections deal with the selection process in more detail.

3.4.2 Linguistic Proficiency of Subjects

An investigation into the issue of proficiency level and interaction by Nation (1985) found that homogeneous groups of lower proficiency learners doing a strip story task produced a more even spread of talk with many more clarification requests than either an advanced homogeneous group or mixed proficiency groups. A somewhat different result was gained in a study by Porter (1986) of how learners talk to each other. Porter concluded that learners received:

more input and better quality input from advanced learners than from intermediates suggesting an advantage for practice with a higher level partner from the perspective of quality and quantity of input (219).

But while the results of these studies appear contradictory, in fact each was dealing with different phenomena in terms of group size (eight subjects in Porter's group compared to four in Nation's groups), proficiency levels (low and high proficiency learners in

Nation's study compared to intermediate and advanced in Porter's study) and task types (Porter used open ranking tasks while Nation used closed ordering tasks). Clearly, discussion on the advantages or disadvantages of mixed proficiency groupings for communicative task work must clarify the kinds of heterogeneity under examination so that the conclusions are not misrepresented.

In the present study stratification of the population for proficiency was determined by the procedure for class placement at the outset of the English Proficiency Course (EPC). Eight classes were grouped on the basis of performance in the EPC Placement Test² used at the English Language Institute. Scores for the class chosen for the study ranged from 86 -114 which established the class at a lower intermediate level (see Appendix D). Selecting students from a single streamed class put immediate constraints on control or randomization of the subject proficiency variable. However since the placement procedure did not take account of oral proficiency criteria, a range of levels of speaking fluency existed in the class. These differences were further accentuated by the wide range of first language (L1) backgrounds of the students. Thus, despite being a streamed class, there was considerable heterogeneity in spoken English proficiency.

Of the twenty three students in the class, four were excluded from the sampling population on the basis of proficiency. Two had very high communicative proficiency in spoken English and were in the class because of weaknesses in their writing and academic English. The other two, recently arrived from South-East Asia, had difficulties with English pronunciation which sometimes made communication difficult.

3.4.3 Gender of the Subjects

There are relatively few studies of sex differences in classroom interaction between non-native speaker learners of English. This is evidenced by the fact that a recent survey of interaction in second language classrooms (Chaudron, 1988) neglected mention of sex of interlocutor as a learner variable worthy of attention.

² The test battery included a written multi-choice vocabulary test, a dictation, and a C-test.

The few studies that have taken place in this area (Gass and Varonis, 1986; Munroe, 1987; Holmes 1989; Gilbert, 1990; Pica, Holliday, Lewis, Berducci, and Newman, 1991) confirm well-established findings from sociolinguistics and education that significant gender-based differences in language use are prevalent both in and out of the classroom.

In a study of sex differences in NNS/NNS interaction, Gass and Varonis (1986) found that men signal unacceptable input more often than women (1985:159) and dominate male/female conversation (1986:341) although women tend to initiate more meaning negotiations than men in mixed dyads (*ibid*:350). Similarly, Holmes notes in reviewing a study of Australian ESL classes by Munroe (1987) that:

women tend to be 'good' listeners, supportive and cooperative conversationalists, creating a comfortable environment for other's talk, while men by contrast tend to compete for the floor and use a range of conversational control devices to ensure they keep it. Female students are providing an ideal context for their conversational partners. In mixed sex interaction, however, they are clearly receiving less than their fair share of conversational encouragement (1989:17).

The sampling population for the present study included ten males and nine females and this made equally mixed groups - two males and two females - a logical decision. Assuming that many ESL classes are of mixed gender, this balance also represents an authentic and therefore generalizable form of group composition. In addition, the counterbalancing of the two groups for order of task performances meant that the same gender mix for both groups avoided confounding gender and order of task performance variables given that different interactional dynamics occur in mixed-gender and same-gender groups as suggested above. The way the particular students in this study interacted in class tended to support this decision. They had been encouraged to work in groups that reflected ethnic diversity and mixed gender. In addition, both their seating in class and their informal interaction during non-class time showed an easy mixing of female and male students. Balancing the gender mix in each group had the added practical advantage of making voice differentiation easier during transcription.

3.4.4 First Language Background of Subjects

The relationship between ethnicity and classroom behaviours has been the subject of a growing number of studies. Chaudron (1988:105) provides a summary of investigations in this area. Findings include differences in the turn-taking styles of Asians and Non-Asians (Sato, 1982) and Chinese dominance in Japanese and Chinese dyads (Duff, 1986).

As with gender, ethnicity is controlled in this study, not by accounting for all the possible ethnic permutations but by limiting the research to a single generalizable option - that of mixed ethnicity (see Appendix D). An ethnic mix in each group ensured that members used English as the medium for information exchange during task performance. Thus subjects were denied access to first language negotiation which could have different characteristics. Obviously, since negotiation is an independent variable, this limitation is important. The ethnic groups in the population included Chinese, Korean, Ni-Vanuatu, Iranian, French, Malay, Vietnamese, Cambodian, and Indonesian.

3.5 Tasks

Although Doughty and Pica were investigating the effect of the distribution of information, a shortcoming in the design of their study was the selection of tasks which differed across other features such as topic and activity type. In effect, their results were the product of all the differences between the tasks including, but not exclusively limited to, the distribution of information. While it would be unrealistic to even recognize, much less control the variables that make up a task performance, the present study attempted to avoid the shortcomings of the study by Doughty and Pica by controlling a number of the more obvious task variables (see Table 3).

Four different tasks were used in the study. The tasks were designed to instantiate two task types distinguished by either:

- (i) the division of information between participants (split information tasks)

(ii) the sharing of information among participants (shared information tasks)

In the first, textual input is divided equally among the learners and must be exchanged through communication in order to reach the task goal. In the second, the textual input is shared by the group as a whole and so the group works together using this input to reach the task goal. Because the participants all begin with the same information, there is no requirement for the exchange of information. In other words, a group member can simply play a silent role and can do so without preventing the other members of the group from reaching the task goal. The division of input among group members leads to what is often known as an information gap or a split information task. The shared type does not have a clearly defined label in the literature. Doughty and Pica characterize this split/shared information distinction as a required/optional information distinction. As discussed in section 2.6, the split/shared distinction is used in the present study in preference to Doughty and Pica's terms since how information is distributed among participants is the key factor determining the optionality of interaction and is therefore a more fundamental distinction to make. In practice however, both pairs of labels make identical distinctions between actual tasks.

One of the split and one of the shared tasks used a list of hospital patients and a medical, ethical situation as the basis for interaction, while the other pair of split and shared tasks used a zoo map. The use of similar topics across both task types allows task type comparisons while keeping topic constant. The use of two kinds of topic within each task type also allows for comparison of the effects of different topics while keeping task type constant. Thus, this design allows consistent comparisons *across* task type and also *within* task type.

Task 1: **Task Type:** **Shared information**
 Topic: **A medical dilemma**

In this task the students are given a list of critically ill patients with various personal details about the patients and they are asked to discuss the patients and then to rank

them according to their eligibility to receive the next available heart transplant. Information about the patients in the textual input is shared by the whole group (see Appendix A).

Task 2: **Task Type:** **Shared information**
 Topic: **A plan of a zoo layout**

The object of this task is to rearrange the layout of a zoo given a plan of its present layout, a list of problems inherent in this layout and some new developments facing the zoo. The task is taken from Penny Ur's book *Discussions that Work* (1981). Subjects are requested to do the task in three stages. First they look at the problems and new developments and decide what changes these necessitate in the present layout. Second they rank the problems in order of urgency. Finally they rearrange the zoo taking account of as many of the problems and developments as possible. Subjects make decisions via consensus among the group. Each subject has a copy of the present layout and a list of the problems. Members of the group also share a large single copy of the zoo plan (with empty areas) which they fill in as they solve each problem (see Appendix A).

Task 3: **Task Type:** **Split information**
 Topic: **A medical dilemma**

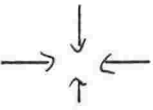
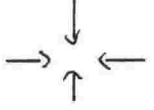
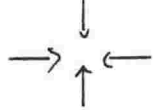
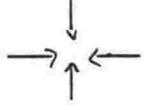
Each group member is given incomplete records of four patients whose lives depend on receiving special surgery. The task has two parts. First, the students fill in the incomplete records by exchanging information. Having done this, the information on the patient records is checked against eight criteria which represent the doctors' ideas on the ideal patient characteristics. These criteria are also divided equally amongst the participants (two each) and so they also must be exchanged orally. As each criterion is exchanged, it is checked against the patients' records so that each patient ends up with a series of ticks and crosses according to whether they meet the criteria. The patient with the most ticks is given priority for the operation by the group (see Appendix A).

Task 4 **Task Type: Split information**
Topic: A plan of a zoo layout

In this task each member of the group is provided with an incomplete plan of Groveland Zoo and a key containing symbols that represent amenities and miscellaneous objects in the zoo. By sharing information from each incomplete plan, members are able to complete their plans, to name the animals in each area, to name other buildings and amenities, to relate the key symbols to particular amenities or objects and to place these in the correct places on the maps. All information transfer takes place verbally and not until the activity is complete are members permitted to show their plans to each other (see Appendix A). Table 3 provides a breakdown of the components of each of the tasks described above.

TABLE 3

A Component Breakdown of Tasks Used in the Present Study

TASK DIMENSIONS	TASKS			
	Task 1	Task 2	Task 3	Task 4
<u>SETTINGS</u>				
Group size:	four members	four members	four members	four members
Seating arrangement:				
<u>INPUT</u>				
Media:	written	written & diagram	written	written & diagram
Topic/subject matter:	a list of medical patients and details	a zoo map and list of problems	a copy of incomplete patient records and two criteria	an incomplete zoo map and subset of key items
Information distribution:	shared	shared	split	split
<u>OUTCOMES</u>				
Activity:	read, think, discuss, rank	read, think, discuss, rank	transfer and order given information (orally), write	transfer and order given information (orally), write
Solution type:	open	mostly open	mostly closed	closed
Genre:	judgement, explanation	judgement, explanation	description	description
Task goal:	agreement	agreement	completion	completion
Learning goal:	fluency	fluency	fluency	fluency
Learner roles:	unspecified	unspecified	unspecified	unspecified
Teacher role:	facilitate	facilitate	facilitate	facilitate

3.6 Procedures

The class members were told of the study some weeks prior to data collection and asked if they were willing to participate. All were willing. They were told the reason for the study was to assess the effectiveness of some new communication activities. They were assured the study would not unduly disrupt their lessons since the sessions fitted easily into the class programme, and the activities were similar to group discussion tasks which were already a regular part of the daily timetable.

On the day prior to the collection of data, two practice sessions, one in the morning and one in the afternoon, were undertaken using the procedures, rooms, supervisors and equipment from the data gathering phase of the study. VHS video recorders and portable cassette recorders were used to record the interactions of the groups during both the practice sessions and the experimental sessions (although the two backup groups were recorded on audio tape only).

Prior to each recorded session the whole class met together in their normal classroom where they were divided into groups and assigned to various rooms. Each group went to the same room for each session. When they arrived at the rooms they were greeted by the supervisor given the materials and introduced to the task. After giving instructions (see Appendix E) the supervisor reminded the students of the 30 minute completion time and let them begin. The supervisor then sat to one side and allowed the group to work their way through the task only intervening when requested to do so by the group or if redirection was needed.

The group sat in a square formation around a table. Low barriers shielded each individual's information from the rest of the group during the performance of the tasks in which visual separation of textual input was essential (these barriers had also been used in some other class activities and so were familiar to the subjects). For the ranking tasks the subjects were moved closer together to facilitate visual access to shared information.

The presence of video recording equipment was obviously necessary but could have had an inhibiting effect on task performance. To minimize this, a video camera was used in the classroom several times on randomly selected days prior to the recording sessions. Although the students had at first been intrigued by the video, by the time the experimental sessions took place they were so accustomed to it that they appeared not to notice its presence. To further avoid any undue attention being paid to the cameras, the equipment was set up unobtrusively in a corner and was loaded and prepared for filming prior to each session so that when the session began the supervisor was only required to press a button to activate the recording.

Supervision of the two experimental groups used in the study was carried out by the language laboratory assistant, with whom the class worked twice a week, and the class teacher. These familiar members of staff were chosen to avoid the possibility that subjects would be inhibited when performing the tasks in the presence of supervisors with whom they were not familiar.

On the day after the final performance the subjects met together again for a feedback session at which the four tasks were discussed. The subjects were encouraged to ask questions, to look back over the texts for the tasks and to give their retrospective impressions on the tasks. This session was audio-taped and relevant comments were transcribed.

3.7 Design

Table 4 summarizes the design of the study. A repeated measures design was used in which each group of subjects performed under all four conditions. Order effects were counterbalanced by the second group performing the tasks in reverse order. Task performances took place on four separate days with a two day break separating performances one and two from performances three and four.

TABLE 4

Experimental Design of the Present Study

EXPERIMENTAL DESIGN		
DAY	GROUP 1 (N=4)	GROUP 2 (N=4)
1	Familiarization: Split and shared information tasks	Familiarization: Shared and split information tasks
2	Task 4 Split information Zoo	Task 3 Split information Medical
3	Task 1 Shared information Medical	Task 2 Shared information Zoo
4	Break	Break
5	Break	Break
6	Task 2 Shared information Zoo	Task 1 Shared information Medical
7	Task 3 Split information Medical	Task 4 Split information Zoo

3.7.1 Order of Task Performances

Scarcella and Long (1985) have shown that familiarity with a task reduces the need for negotiation. Since the present study required the performance of similar task types utilizing similar topics, it was essential to minimize the possibility of a practice effect. This was done in two ways, one utilizing class work prior to the study and the other using the design of the study itself. First, following Doughty and Pica's example, the subjects were familiarized with both types of activities before the study began. They had performed at least one shared and one split information task during the normal class programme and had undertaken an additional familiarization session with each of the task types on the day before data collection began. This reduced the likelihood of improvement in task performance being a product of familiarity. Second, within the experimental design, time between tasks and the order of tasks reduced the familiarizing effects of prior performance in the following ways:

- i There was a gap of four days between performances of tasks that utilized the same kind of topic (9:15 a.m. day one - 9:15 a.m. day five) .
- ii There was a three to five day gap between performances of tasks utilizing the same distribution of information (9:15 a.m. day two - 9:15 a.m. day five for the shared information task and 9:15 a.m. day one - 9:15 a.m. day six for the split information task),
- iii Where two tasks utilized the same kind of topic, different vocabulary was used in the content of each task. Thus, for the zoo tasks the animals in the split information task were all different from those used in the shared information task. In the two medical tasks, the patient characteristics were different in each task.
- iv The task order undertaken by Group 2 was the reverse of that for Group 1. This ensured that the combined data from the two groups for any one of the tasks or task types included performances that both preceded and followed performance

of the other version of the same task or task type.

- v Finally where split information tasks were compared to shared information tasks, the effect of order was controlled by a time separation between the first two sessions in which the split information task preceded the shared information task and in the final two sessions in which the shared information task preceded the split information task. Thus when the data from the four performances of either task type are put together they include two performances that preceded the other task type and two that followed it.

3.8 Vocabulary Testing

A vocabulary list including all the content words in the written instructions and material for each task was used as the basis for pre- and post-test vocabulary evaluation. This testing was designed to provide information on the acquisition of vocabulary from the tasks. This list was given to each student two days before the recording sessions. They were asked to go through the list and either illustrate using pictures, provide examples, or write mother tongue or English translations for all the words they knew or recognised and to ignore the words they could not recognise. They were asked to do this quickly and without talking or sharing information with other members of the class. This took about 30 minutes. The lists were taken immediately from each student as they were completed. To measure post-test performance each student was given a copy of the same list on the day following the final session and asked to go through it in the same way as the first session. Where subjects had used L1 translations in the test, the papers were marked by bilingual speakers of the subject's L1.

3.9 Data Analysis

In order to obtain comparable data from task performances of different lengths of time, frequencies were calculated using a standard task time of 28'30". The standard task time was calculated by averaging the times of the eight task performances (see Table 5).

The four hours of recorded data from the eight task performances was transcribed in full. The transcription was carried out using a Sony Dictator-Transcriber BM80. The initial transcription was completed by hand and comprised 135 pages of data. All utterances including parts of words and fillers were transcribed with overlaps and co-occurring turns displayed visually. No attempt was made to transcribe suprasegmental features although phonetic transcription was used occasionally where a referent was unidentifiable or where a phonetic variant was of notable interest. An example of a handwritten page which shows the transcribing layout is included in Appendix B.

The handwritten transcription was later redone using the word processing facility of a computer. The typed version made up 132 pages and involved a further full check of the hand-written transcript against the recordings. The typed pages were laid out somewhat differently with no indications of overlapping speech. An example of a typed page of transcript is also included in Appendix B.

TABLE 5

Time on Task³ in Minutes and Seconds for Groups 1 and 2

Task type:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1 (n=4)	23'12"	31'29"	29'34"	34'20"	118'35"
Group 2 (n=4)	16'40"	35'00"	22'17"	35'39"	109'36"
Total	39'52"	66'29"	51'51"	69'59"	
Total	106'21"		121'50"		228'11"

The video recordings provided visual aid in interpreting certain segments of discourse where gestures were used to express meaning. They were also included to provide a

³ Time as measured from the point at which interlocutors began talking independently of the supervisor to when they stopped.

backup recording of each performance.

The primary analysis of the data involved finding and classifying negotiating questions. The procedures used to do this as well as the classification framework which evolved provide an important part of the response to research question 2, and for this reason will be fully described later in Chapter V alongside other aspects of the analysis which pertain to this question. Similarly, details of the analysis of the 27,969 word corpus from the tasks can be found in section 8.4 of Chapter VIII.

3.10 Summary

The study was designed to facilitate the intensive study of two groups of students performing a series of classroom-based communication tasks. The subjects, tasks, and performances were carefully chosen so as to allow comparative data to be gathered from the different task performances. At all stages in the design of the study attempts were made to minimize the artificiality of the experimental conditions.

Chapter IV

THE EFFECT OF TASK TYPE ON THE NEGOTIATION OF MEANING

4.1 Introduction

Following the approach taken by Doughty and Pica (1986), Long (1980, 1983) and others, this chapter investigates the effect of different task conditions on the amount of negotiation produced by language learners. Implicit in this line of research is the claim that the value of a task can be measured by the extent to which it encourages interlocutors to negotiate for meaning. The research question motivating the chapter is as follows:

Research Question 1

To what extent does the form of information distribution in a communication task influence the negotiation of meaning?

The data and results cover three areas: the amount of negotiation (Hypothesis 1), the distribution of negotiation among interlocutors (Hypothesis 2), and the amount of repetition (Hypothesis 3).

4.2 The Number of Negotiating Questions Produced under Different Task Type Conditions

In split information tasks each group member has unique information which they must give to other members in order to complete a task. In shared information tasks each group member has common access to a central pool of information which they use to solve a problem (see section 3.5 of Chapter III for a more detailed description of these

task types). In the split tasks, individual contributions are considered necessary for successful completion of the task. In the shared tasks, individual contributions are optional, that is, it is conceivable that such a task could be completed without any particular group member saying anything. Hypothesis 1 predicted that in keeping with Doughty and Pica's (1986) results, split information tasks would produce more negotiating questions than shared information tasks.

Hypothesis 1 *A split information task will generate a higher frequency of negotiating questions in a given time than a shared information task based on topically similar material.*

The hypothesis was evaluated in its null form using a SAS (1989) statistical package for a three way factorial arrangement of the data with subjects nested under the group factor. The resulting analysis of variance is summarized in Table 6. Relevant means and standard deviations are shown in Table 7. Frequency data based on a standard task time can be found in Table 8 and are displayed visually in Figure 1. Frequency data for each subject can be found in Tables C-8(a) and C-8(b) in Appendix C.

The analysis of variance showed that the distribution of information and the topic of the task both had a main effect on the frequency of negotiation. Inspection of the means in Table 7 indicates that the split information tasks produced significantly more negotiating questions than shared information tasks ($F_{1,6} = 21.16$; $p < .01$), and the zoo topic produced significantly more negotiating questions than the medical topic ($F_{1,6} = 14.88$; $p < .01$). The group factor (representing the order of tasks) was not significant at the five percent level.

A visual inspection of Figure 1 provides a strong confirmation that split information tasks tend to increase the frequency of negotiating acts relative to shared information tasks, and independently of topic and of group. Not unexpectedly, choice of a topic, and to a lesser extent, group, also have an effect on the frequency of negotiating behaviour.

TABLE 6

Summary of Analysis of Variance for the Negotiation Data

Source of variance	SS	df	MS	F
Groups	1339.0	1	1339.0	5.12
Task type	5538.8	1	5538.8	21.16**
Topic	3894.0	1	3894.0	14.88**
Task type x topic	830.3	1	830.3	3.17

**p < .01

TABLE 7

Mean Frequencies (and Standard Deviations) of Negotiating Questions in a Standard Task Time of 28'30"

Task type: Topic: Task code:	Shared		Split	
	Medical 1	Zoo 2	Medical 3	Zoo 4
Group 1	38.8 (20.4)	55.5 (32.4)	59.8 (40.0)	82.3 (44.6)
Group 2	28.3 (19.9)	37.8 (18.7)	39.5 (13.8)	81.5 (29.5)

TABLE 8

Frequency of Negotiating Questions in a Standard Task Time of 28'30"

Task type:	Shared		Split		Total
Topic:	Medical	Zoo	Medical	Zoo	
Task code:	1	2	3	4	
Group 1	155	222	239	329	945
Group 2	113	141	158	326	738
Total	268	363	397	655	1683
	631		1052		

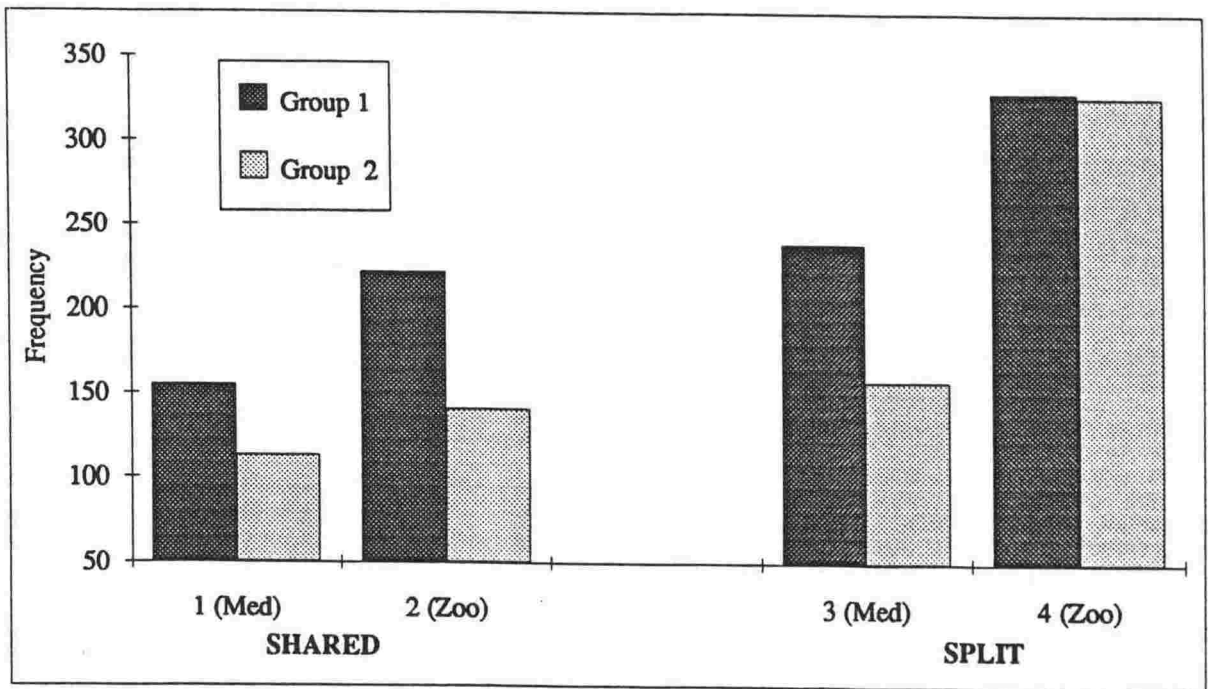


Figure 1. The Frequency of Negotiating Questions in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks.

The finding that split tasks produced more negotiation than shared confirmed the results of earlier studies of a similar nature (see Doughty and Pica, 1986 in particular). The mean number of negotiations in a 10 minute segment of interaction data from Doughty and Pica was 64 for the split task, and 40 for the shared task. In the present study, the figures for a ten-minute segment were 92 and 55 respectively. While the direction of the difference between the tasks is consistent across both studies, there are obvious differences between the studies in the absolute numbers of negotiations. A range of factors including interlocutor variables (of which sex, age and ethnicity have all been shown to influence negotiating behaviour in previous studies) and choice of topic can account for the differences between the studies. A further explanation lies in the use in the present study of a more extensive system for coding and counting negotiations.

4.2.1 Accounting for Task-Based Variation in the Level of Negotiation

In the split information tasks (Tasks 3 & 4) the need for a high level of accuracy in transferring discrete pieces of information is likely to account for the large amounts of negotiation which occurred. This kind of information transfer demands considerable concentration of the learners who must regularly 'backtrack' to check and confirm that (from the speaker's perspective) what was said was what was heard, and (from the listener's perspective) what was heard was what was said. Checking and crosschecking involved adjustments to fine points of language production and perception (e.g. how a word is spelt, or whether a speaker said "pond" or "bond") in order to progress on a task.

Similarly, the element of a jigsaw solution (Gibson, 1975) in these tasks in conjunction with the equal division of unique information amongst interlocutors (a two-way rather than a one-way flow of information - see Long, 1980), prevents interlocutors from short-cutting the negotiation process by either settling for a reduced level of comprehension or foregoing comprehension for the sake of personal face and social acceptability (Aston, 1986:139). Since strategies such as writing or sharing diagrams are also not available, learners are forced to rely on verbal negotiation supported by gesture and

other non-verbal signals to ensure the accurate transfer of information. This in turn puts greater strain on memory and in so doing brings into operation memory constraints where the processing of information is occurring at the same time as new information is arriving. As Ellis (1989) points out:

Speech that uses extensive memory space limits the operational flexibility of control processes; conversely, speech requiring complex control decisions restricts the space available for memory. Production involves a constant trade-off between the competing demands on memory and control mechanisms (34).

The outcome of this 'trade-off' is shortened turns and an increased rate of turn-taking requiring more checking and confirming, and thus, as the results show, more negotiation.

In contrast, the shared information tasks (Tasks 1 and 2), are not bound by the need to exchange information verbally nor by the need to deal in small exchangeable chunks of information. For this reason the discourse characterizing the performance of these tasks includes longer turns and frequent pauses for thought. In addition, the nature of these tasks, with no one learner having to provide the group with unique information, means that learners are not required to interact or understand what is happening if they chose not to. In fact the shared tasks allow group members, if they wish, to take the option of feigned comprehension, agreement or silence without actually halting progress or apparent successful completion of the task. Thus, as we might expect, learners frequently use avoidance strategies, overlooking ill-formed input or comprehension problems and showing much less concern for detail than in the split information tasks. Learners can also avoid negotiating when faced with trouble (especially where perception or language meaning might otherwise cause problems) by using a wide range of non-verbal coping strategies including pointing, sketching, and reading.

An additional factor which may contribute to the different levels of negotiation is the nature of the topic. When the topic requires learners to express opinions on ethical

issues, it brings into operation rules of politeness and restraint pertaining to issues of a personal or sensitive nature. Such rules were hardly necessary in the two split tasks in which learners were not required to make decisions of an open or personal kind but only to pool certain information units. Where the topic might constrain negotiation or discussion as with the ethical dilemma posed by Task 1, then a lower amount of negotiation might even be entirely appropriate to the context.

4.2.2 Assessing the Differences

If we are to take the interactionalist view of negotiation at face value, the greater amount of negotiation occurring in the split information tasks would lead to the conclusion that these tasks provide a better environment for SLA than the shared information tasks. This may not be so when we look more closely at the types of negotiation occurring and the communicative implications.

The fact that so much negotiation was required to complete the split tasks (an average of 9 negotiating questions per minute) shows perhaps just how inefficient this descriptive oral mode is as a means of information transfer. In the following example only two pieces of information are being transferred, one, the position of the rose garden (above the playground) and two, the position of the kiwis (in the top circle).

(1)

S6 a rose garden yeah ro-
 S7 rose garden? -rose garden
 S5 near the botanic garden?
 S6 yeah yeah yeah yeah [low the mid the middle and above playground, yeah / ?
 S7 [above the above the play ground mmm rose garden
 S8 [ohh above mm ro- rose garden rose garden
 S6 [yeah, so a rose garden yeah that's alright?
 S7 [mmm rose garden mmm yep
 S6 and ah next to right circles and the top? you separate top?
 S5 ahh
 S7 yeah
 S6 kiwi, kiwis, k i w [i mmm k i w
 S7 [k i? mm
 S8 where? where
 S5 which?
 S6 [mmm the circle? -circle, top circle top top
 S7 [the circle? yeah the top one
 S5 [which? top circle or-? half circle, yeah
 S7 yeah, the big, the big circle?

achieve greater comprehension. Even assuming that their vicarious involvement in the negotiation of others is of value, the smaller amount of such negotiation in such tasks would still work against these less confident or competent group members.

However, it is also true that, as mentioned above, learners performing shared tasks have access to other means of achieving comprehensibility besides negotiation. To the extent that they use these means (including pointing, drawing, writing, reading and using contextual clues in the textual input), a reduced level of negotiation does not presuppose a corresponding drop in comprehensible input.

Finally, while the results show a large amount of negotiation is typical of the activity of transferring information or describing something in detail, in fact authentic interaction has been shown to be more concerned with social cohesion and with maintaining interpersonal relationships (Brown, 1978) than with transferring information. If learners are to develop competence in this type of interaction, then the tasks they work on may need to reflect the social and discursal demands of communication and not just its linguistic demands. Indeed, frequent breaks to negotiate in many discursive rather than descriptive communicative contexts may be not only counter-productive but also inappropriate (Aston, 1986:130-131).

In conclusion, it is not necessarily the case that a large amount of negotiation is a positive attribute of task performance. While there may be a psycholinguistic rationale for encouraging negotiation between learners, negotiation may not always be appropriate or pedagogically useful. In the first instance, while frequent negotiation may be appropriate in a descriptive mode of discourse such as that produced by split tasks (though not necessarily common in everyday language use), it may not be appropriate in other more discursive modes with which learners will need experience. Second, a large amount of negotiation can indicate difficulties in task performance and an unhelpful preoccupation with language forms.

4.3 The Distribution of Negotiation among Interlocutors

If as has been claimed, opportunities for meaningful language production play a vital role in language learning (Swain, 1985; Ellis, 1991), then an important benefit of task-based group work is that it provides opportunities for active language use from all participants. By way of contrast teacher-fronted classroom activity tends to provide very few opportunities for learners to talk and interact (Long, Adams, McLean and Castanos, 1976).

However, even in group work, equal involvement of all participants in a task performance is unlikely given individual variations in confidence, proficiency and interactive style. But if it is to be encouraged, if the weaker or more self-effacing learners are to be 'pushed' to extend themselves in the target language, then the task needs to have some component which ensures interaction by all. This is in fact a key feature of split information tasks in which each learner has responsibility for transferring an equal share of the divided textual input to the other learners in a group. The prediction that this requirement to interact will in fact lead to even distribution of negotiating questions is expressed in the following hypothesis.

Hypothesis 2 *Negotiating questions will be more equally distributed among group members in split information tasks than in shared information tasks, as shown by comparisons of the proportion of negotiating questions for each group member across the different tasks.*

Data for the distribution of negotiating questions between the subjects in each group for all tasks is shown in Table 9 (a) & (b). In contrast to previous results, the data shown here represents obtained frequencies (question counts which are not adjusted to a standard task time). These figures are converted into percentages in the second column for each task. These percentages provide the necessary information on distribution. The results lend only weak support to the hypothesis.

TABLE 9 (a) & (b)

Distribution of Negotiating Questions among Subjects in Each Group Expressed as Obtained Frequencies (and Percentage Frequencies).

(a) Group 1

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S1	48 (38)	94 (39)	122 (49)	134 (34)	398 (39)
S2	21 (17)	86 (35)	53 (22)	141 (35)	301 (30)
S3	43 (34)	48 (20)	43 (17)	100 (25)	234 (23)
S4	14 (11)	16 (6)	29 (12)	23 (6)	82 (8)
Total	126 (100)	244 (100)	247 (100)	398 (100)	1015 (100)
	370 (36)		645 (64)		

(b) Group 2

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S5	6 (9)	33 (19)	18 (15)	68 (17)	125 (16)
S6	26 (39)	40 (23)	34 (27)	136 (33)	236 (31)
S7	27 (41)	76 (44)	44 (35)	133 (32)	280 (36)
S8	7 (11)	23 (14)	28 (23)	73 (18)	131 (17)
Total	66 (100)	172 (100)	124 (100)	410 (100)	772 (100)
	238 (31)		534 (69)		

While for most comparisons across performances there was a trend towards more equal sharing of negotiation in the split tasks, the share of negotiation held by subjects S1, S2, S4 and S5 changed only slightly in favour of the hypothesis across performances of the zoo tasks whether they were of a split or shared design. In the case of S1 there was a clear movement against the direction of the hypothesis across the split and shared task with a medical topic. Figure 2 displays this information visually. The weak support for the hypothesis can be seen in the tendency for the circles representing negotiation in the split tasks to be in closer proximity to the 25% mark (\diamond) representing equal sharing for all subjects except S1. However, most of the movement occurs in a horizontal direction representing change between split and shared tasks with a *medical* topic. The lack of strong vertical movement (except for S7) shows a smaller effect for split and shared tasks using a *zoo* topic.

Even allowing for the movement that did occur towards more even distribution of negotiation between interlocutors in the split tasks, there remains a persistently wide gap across all tasks between the interlocutor who contributed the smallest share of negotiating questions and the interlocutor who contributed the largest share. This is particularly clear in the case of S1 who contributed no less than 34% of the negotiating questions in any one task performances for Group 1, and of S4, who contributed no more than 12%. In fact when each interlocutor is ranked according to their share of negotiation on each task performance the result shows very little movement in the relative positions of any of the interlocutors across the four tasks. This can be seen in the positioning of interlocutors in relation to each other in Figure 3 (a) & (b).

That the strengths and weaknesses of the interactive behaviour of individual interlocutors tended to persist across all tasks suggests that it is individuals themselves and the dynamics of a group which have a stronger effect on determining how negotiation is distributed than the equal division of information. Thus, the extent to which interlocutors will negotiate in a given task appears to be strongly effected by their proficiency, confidence, and the interpersonal dynamic of the group. Less proficient interlocutors for example, may simply have to ask more questions in order to maintain comprehension. Alternatively, more confident interlocutors may do the negotiation - the

checking and the confirming - on behalf of other interlocutors who may have similar comprehension problems but not the same willingness or confidence to negotiate meaning.

Whatever the explanation for the differences, the persistent patterns of large and small shares of negotiation for various individuals appear to support Seliger's (1983) distinction between high and low input generators, the former being learners who take an active role in interaction the latter those who do not. It appears to be true even in tasks designed to give all group members equal opportunities to participate.

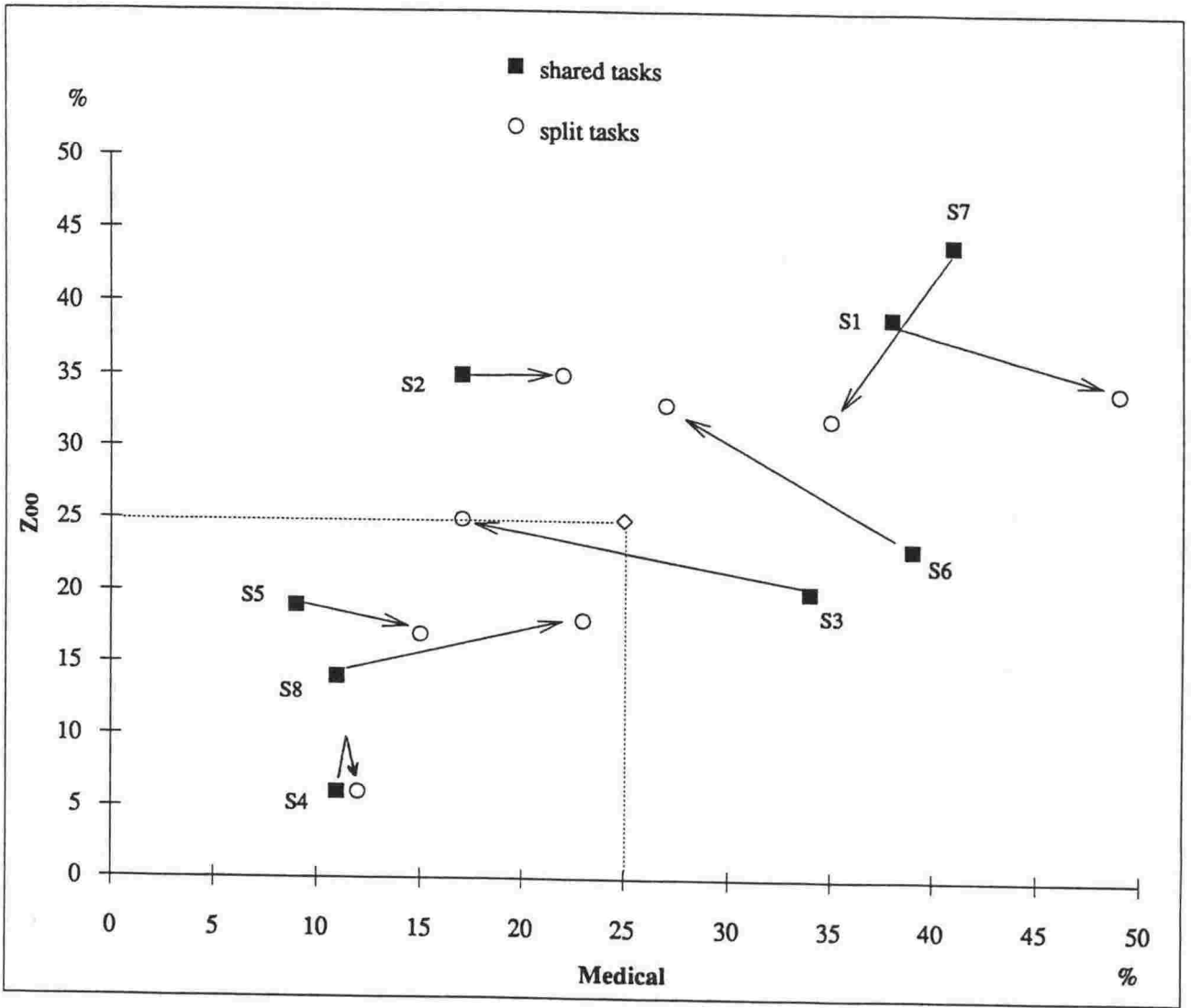


Figure 2. Movement in the Proportion of Negotiation under Shared and Split Information Task Conditions for Eight Individual Interlocutors from Two Groups

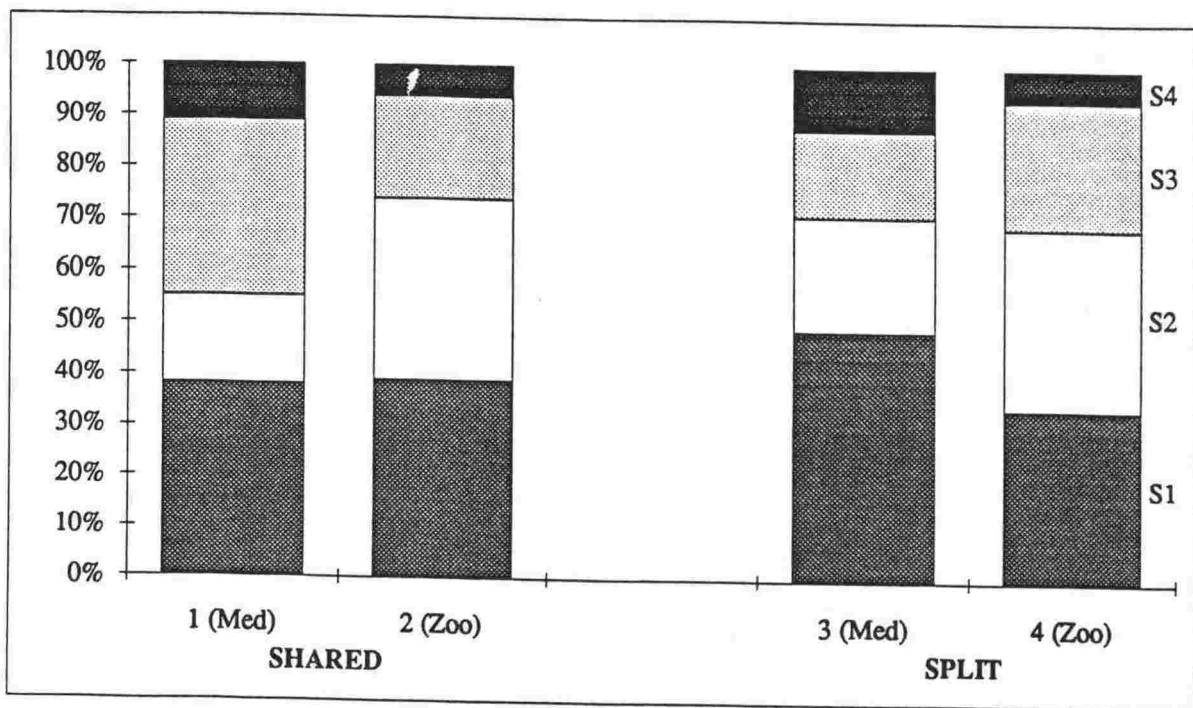


Figure 3(a). Proportions of Negotiation across Four Tasks for Individual Interlocutors from Group 1.

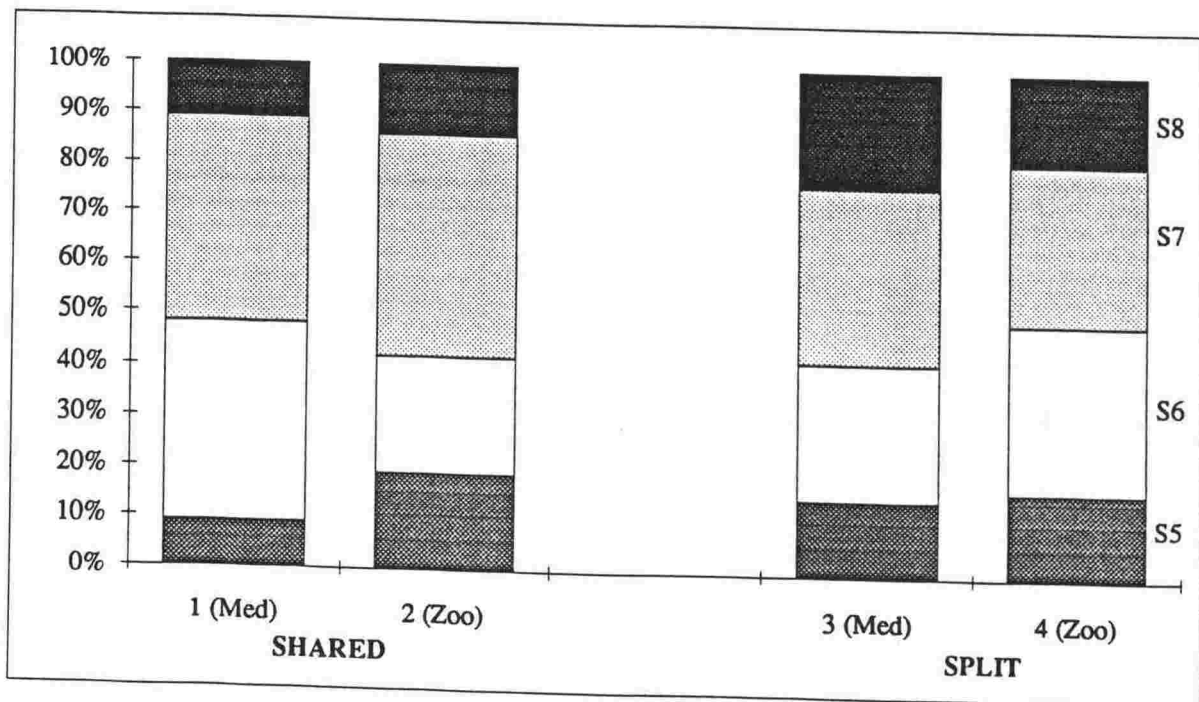


Figure 3(b). Proportions of Negotiation across Four Tasks for Individual Interlocutors from Group 2.

4.4 The Number of Non-negotiating Repeats Produced under Different Task Type Conditions

Repeats which occur as, or in a negotiating question are analyzed as part of the corpus of negotiation questions (e.g. "marry?" by S1 in example (2) on page 83). However, many repeats do not function in this way. Many occur as a response to a negotiating question as in the repeat of "between twenty and forty if they are married" by S4 in the same example. But because of their effects on redundancy, even non-negotiating repeats may have an important contribution to make to the comprehensibility of input and thus can be considered a significant feature of both foreigner talk and interactive discourse. Hypothesis 3 predicts that non-negotiating repeats, like negotiating questions, the subject of Hypothesis 1, are likely to be used most frequently in split tasks where information needs to be accurately transferred and where, by implication, there is a greater need for clarification of meaning.

Hypothesis 3: *Excluding 'negotiating repeats' such as those that function as confirmation checks, a split information task will generate a higher frequency of self- and other-repeats per task in a given time than a shared information task.*

Table 10 displays the frequency of repeats (excluding non-negotiating repeats) in the mean task time of 28'30" on all task performances. As the hypothesis predicted, non-negotiating repeats were produced at a much higher rate in the split information tasks than in the shared information tasks with the former producing three times more than the latter (a combined frequency of 294 in the shared information tasks compared to 1057 for the split information tasks). This information is displayed in Figure 4. The results were significant at $p < .05$ ($L_{2,4} = 59$) on The Page Test For Ordered Alternatives (Siegel and Castellan, 1988)¹.

¹ Because individual subject frequencies were not calculated, a multivariate analysis was not possible.

TABLE 10

Number of Non-negotiating Repeats in a Standard Task Time of 28'30"

Task type:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1	59	118	175	220	572
Group 2	64	53	249	413	779
Total	123	171	424	633	1351
	294		1057		

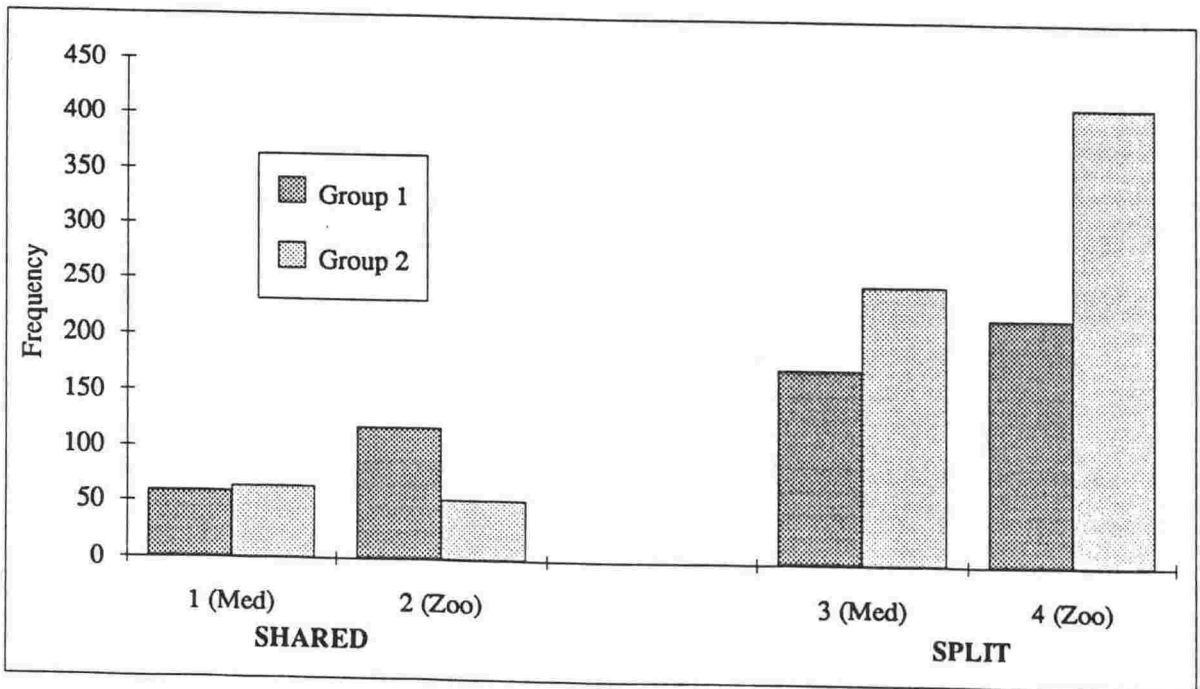


Figure 4. The Number of Non-negotiating Repeats Produced in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks

While task type had by far the strongest and most consistent effect on repeats across pairings of equivalent tasks, the picture is complicated by additional strong effects for topic and group. Overall the zoo tasks produced 32% more repeats than the medical tasks (the four zoo tasks produced a total of 804 repeats and the four medical tasks, 547) and Group 2 produced 27% more repeats than Group 1.

Interest in repeats in the present context derived from the initial coding of negotiation moves in the pilot study where it quickly became apparent that not only were repeats widespread in task-based discourse, but that distinguishing them in terms of negotiating and non-negotiating functions was difficult. Similar difficulties were reported by Doughty and Pica (1986:317). Doughty and Pica distinguish three kinds of repetition: repairing, preventative and reacting repetitions. They found that whether repetitions occurring during communication breakdowns were included or excluded from a count of interactional modifications, the results were consistent, thus eliminating "any apprehension about the definition and role of repetition in interactional modifications" (318). Furthermore, a study by Pica, Young and Doughty (1987) found that, at least as far as NS/NNS interaction was concerned, interaction facilitated comprehension largely through the increase in repetition that it generated. Data from the present study showed repeats functioning in various ways: as holding devices, as prompts by a listener for a speaker to continue, as expressions of surprise, as rehearsals of unfamiliar or difficult content words and as self- and other-repair.

Thus, while repeats categorized as non-negotiating are invariably marginalized in contrast to the attention paid to negotiating questions, non-negotiating repeats (that is repeats without a high rise terminal contour (HRTC)) may nevertheless be equally effective in obtaining more comprehensible input even when questioning intonation is absent. For example, an utterance repeated by interlocutors provides information for a speaker on the interlocutors' perception and understanding of the initial utterance. Where the repeat contains some error, it may initiate a repair sequence from the original speaker. Should a repeat by an interlocutor be accurate then it acts as a prompt for the original speaker to continue. Even if a repeat is not intended for scrutiny by the group it provides valuable opportunities for private rehearsal or a kind of 'thinking aloud'

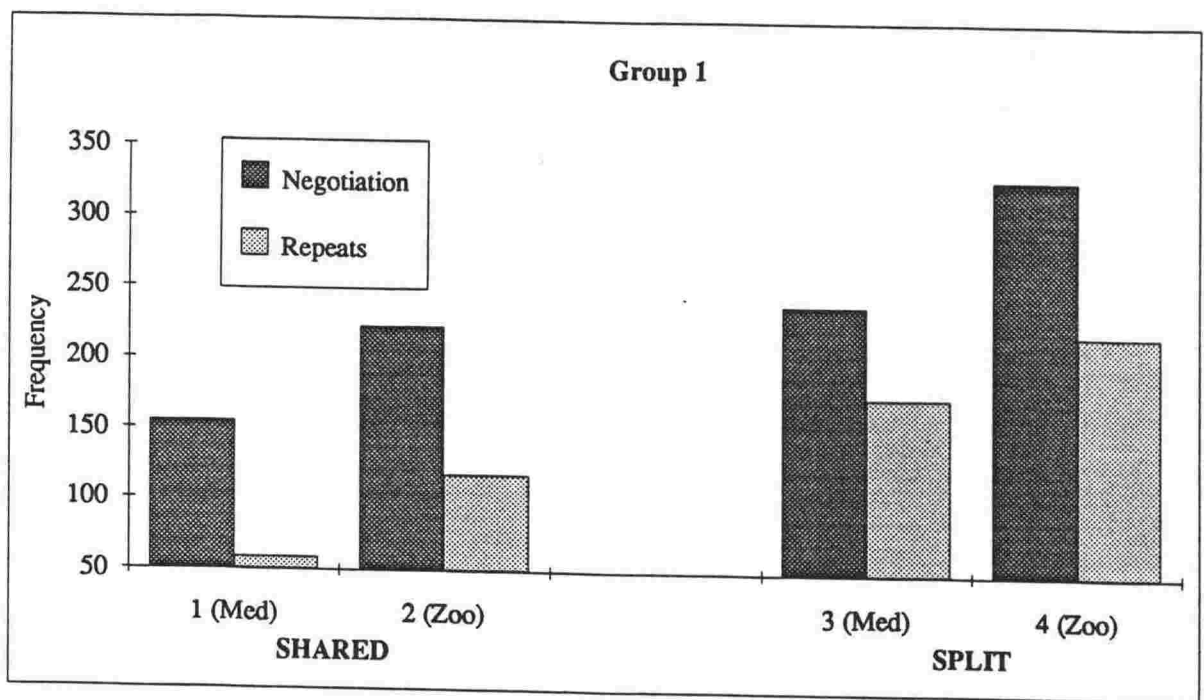


Figure 5(a). A Comparison of the Number of Repeats and Number of Negotiating Questions across Four Tasks for Group 1

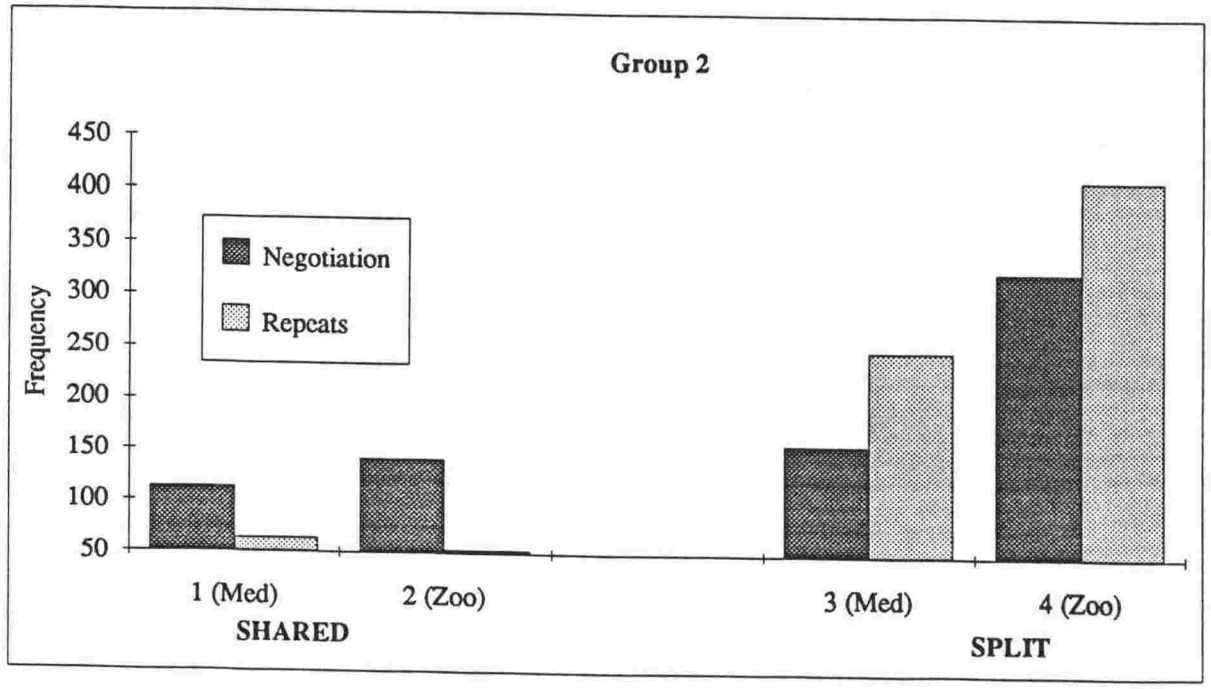


Figure 5(b). A Comparison of the Number of Repeats and Number of Negotiating Questions across Four Tasks for Group 2

The similarities between repeats and negotiating questions are also seen in a comparison of Groups 1 and 2 in Table 11. Members of Group 2, while using negotiating questions less than Group 1 in the task performances, were nevertheless using repeats more frequently. When negotiating questions and repeats are combined to represent a single category of interactive behaviour, the greater number of negotiating question produced by Group 1 is counterbalanced by the greater number of repeats produced by Group 2.

TABLE 11

The Total Number of Negotiating Questions and Non-negotiating Repeats in Four Task Performances

	Negotiating questions	Repeats	Total
Group 1	945	572	1517
Group 2	738	779	1517

But excessive use of repeats, like too many negotiating questions may not always be a positive feature of interactive performance (see section 4.2.2). Too much repetition may be non-productive resulting in, and being the result of frustration and a lack of progress on task as extract (3) shows.

(3)

S5 this brown bears
 S8 [brown bears
 S7 [brown
 S6 brown bears?
 S8 brown-
 S5 brown[bears
 S7 [b r?
 S8 bears [b r yeah yeah
 S5 [bears you know?
 S6 what is this?
 S5 b e i
 S6 b e i

- S7 [b e i?
 S6 mmm
 S5 r s
 S7 hang on hang [on.. b?
 S6 [b
 S5 e a
 S7 r, huh?
 S6 [a a a yeah
 S8 [a a a b e a r s
 S5 b e a r s
 S8 r s
 S5 [bears
 S7 [r s
 S5 [bears
 S7 [[r s
 S6 [bears bears, [I see, bears, I see,
 S5 [bears you know?
 S6 [sorry yep and
 S8 [yeah
 S5 pardon?
 S8 bears
 S7 a bears
 S8 [bears
 S6 [bears
 S5 [bears
 S8 [[bears
 S6 [bears, big
 S7 [a bears?
 S6 [mmm
 S5 [I mean a big animal
 S6 [yeah yeah yeah
 S7 [yes yes, I ah which are the other name? ahh you have two words there
 S5 yes brown [brown bears
 S8 [brown a bears
 S6 [brown ahh yes ahh brown yeah mmm and
 S7 [brown brown yes brown brown bears I think
 S5 [brow- brown bears
 S8 [mmm brown brown bears
 S6 mm
 S7 brown bears
 S5 yes [mmm and uh
 S8 [that's all no
 S5 opposite this brown bears there is a half of rectangle ...

ZSP2 3,3

What is gained through this extended piece of negotiation involving constant repetition of the item 'brown bears'? Subject S5 (who pronounced brown bears as /bləʊn beəz/) gets feedback on a pronunciation problem, and using the model provided by interlocutors is able to adjust her pronunciation towards the target language form. However, for the other three members of the group very little appears to be gained and too much unsuccessful effort has been expended on a lengthy side sequence (Varonis

and Gass, 1985) at a cost to forward progress on the task.

A similar point has been made about negotiation. While its presence in interactive talk seems to be a good thing, there is a point at which the breakdown in communication causing it might be resolved more efficiently by other means. Unfortunately, in the split tasks the options of either overlooking a problem or circumventing it through writing, reading or pointing are not available since the central purpose of the task is to transfer information accurately without access to shared task content.

Despite these qualifications, the results show that repeats are an integral part of negotiation and can function in a number of important ways in task-based interaction between language learners. They may provide opportunities to practise new or unfamiliar sounds and words, to display comprehension (or a lack of comprehension) and they may enhance input by providing redundancy through which learners have additional opportunities to process unfamiliar language.

4.5 Other Task Variables

In previous sections the effect of a single task type distinction (split versus shared-information) on the negotiating behaviour of language learners was examined. The results showed that the way in which information was distributed in a task had a significant bearing on the amount and distribution of negotiating questions as well as on the amount of repetition. But a task is clearly a complex interaction of several components of which information distribution is only one. While useful generalizations can be made by attempting to isolate and control a single dimension such as this, other aspects of a task will inevitably impinge on task-generated behaviour. These include topic, the form of the textual input, the linguistic and cognitive load of the input and of task procedures, the solution type, the clarity and complexity of the instructions, and the effect of socio-cultural and personal interactions on topic.

4.5.1 The Significance of Topic

In the design of the tasks in the present study, the effect of topic was varied across task types by the use of the same two topics, a zoo-based topic and a medically-based topic for both split and shared information tasks. This was an important design feature since it allows for an assessment of the effect of information distribution across and within topics (see Table 3, Chapter III), thus increasing the generalizability of the findings for information distribution, as well as providing information about the effect of topic on interactive behaviour.

As Tables 6 to 8 showed, topic had a significant effect on negotiation. For both the split and the shared information tasks, the task utilizing the zoo topic produced more negotiation than the task utilizing the medical topic. However, a topic is not a single entity, but is multidimensional. Therefore if generalizations related to topic are to be made, it may be necessary to look beyond the narrowness of specific topics and to see them in terms of other distinctions, as between ethical and non-ethical, diagrammatic and non-diagrammatic, serious versus non-serious, familiar and non-familiar, imaginative and factual, feasible and non-feasible issues, and so on. In this vein Klippel (1984:2) for example, refers to activities which are focused on different topic types including personal, intimate, fictional and factual topic types. Using such distinctions, a given topic may become significant not of itself, but because it represents particular features. Such features in turn may provide the basis for describing the relationship between interactive language behaviour and different topics.

In the discussion that follows, a number of the distinctions introduced above will be examined to show ways in which they may have influenced the interactive behaviour of the learners in the study.

4.5.2 The Form of the Textual Input : Diagrammatic/Non-diagrammatic

Visual support was not an experimentally controlled variable in the present study and so its effects on performance are difficult to substantiate. But given its close association

with the topic variable which was controlled and was significant, the role it may have had in the findings needs to be acknowledged.

Broadly speaking the material that comprised the textual input for the tasks in the present study was of two kinds: diagrammatic or spatial (the zoo tasks) and non-diagrammatic (the medical tasks). Linking these different forms of textual input with the findings for topic, the diagrammatic (zoo) tasks produced more negotiation than their non-diagrammatic (medical) counterparts within each task type pairing.

In a study by Nurss and Hough (1985), children showed improved performance on tasks in which visual support was supplied than in tasks in which it was not available. While the authors did not investigate interactional aspects of discourse or language learning, the result suggests that the limited target language resources of interlocutors might also be assisted by visual dimensions to a task. These dimensions provide tangible non-linguistic reference points and in doing so presumably reduce the cognitive strain of task performance and thereby assist communication. There is an immediacy to information presented in a diagrammatic form since it is not in need of the same degree of decoding as information conveyed in the words and structures of a second language. A picture or diagram is after all capable of displaying information in a comprehensible form in situations where a common language is not available.

Results from a study by Crookes and Rulon (1988) support these suggestions. In this study, learners appeared less likely to provide feedback on error when performing a problem solving task with visual support than in a task without visual support. To explain this result, the authors suggest that even if an utterance is ill-formed or not fully understood in a task with visual support, it is possible for interlocutors to give it meaning by reference to the picture under discussion. This reduces the need to further negotiate comprehension of such problematic input.

In the present study however, more negotiation occurred in tasks with a diagrammatic or spatial dimension than in those without such a dimension. Defining the scope of negotiation offers one explanation for the apparent contradiction between the results

from these two studies. Crookes and Rulon look specifically at feedback on error which, in the present study, is only one aspect of negotiation. Where negotiation also includes aspects of performance such as reaching consensus and clarifying procedures, then more negotiation represents greater involvement of interlocutors in the task performance.

Another explanation involves the nature of the visual support. In the study by Crookes and Rulon the task sheets were pictorial, but in the tasks in the present study the task sheets were diagrammatic, and thus more abstract. While shared pictures of specific objects may considerably reduce the communicative burden of interaction as Crookes and Rulon suggest, diagrams, within which lexical items are embedded without pictorial support may be much less effective at aiding task performance.

Finally there is a close link between the use of diagrammatic tasks in the present study and the nature of the required activity. Both diagrammatic tasks involved spatial manipulation of the task content in contrast to more abstract prioritizing of information in the non-diagrammatic tasks. An alternative explanation is therefore that the different levels of negotiation associated with diagrammatic and non-diagrammatic content may be the product of different activities as much as different types of content, though there is clearly a close association between the two.

4.5.3 The Solution Type: Open and Closed Task Types

Long (1989) has suggested that the open/closed distinction is particularly important and possibly superior to other task type distinctions. Open tasks are open in the sense that interlocutors are given the freedom to reach their own solution rather than work towards the pre-defined solution typical of closed tasks. The degree of openness of tasks was not an experimentally controlled variable within the present study and so the discussion that follows is largely a retrospective account requiring more rigorous testing. Nonetheless, it is possible to place each task used in the study on a cline representing various degrees of openness and closedness as in Figure 6. Task 1, the shared information medical task was the only truly open task in that the goal was not at all

predetermined but was purely an outcome of the preferences of the group members. In other words the interlocutors could have chosen any solution they preferred without violating the procedural requirements of the task.

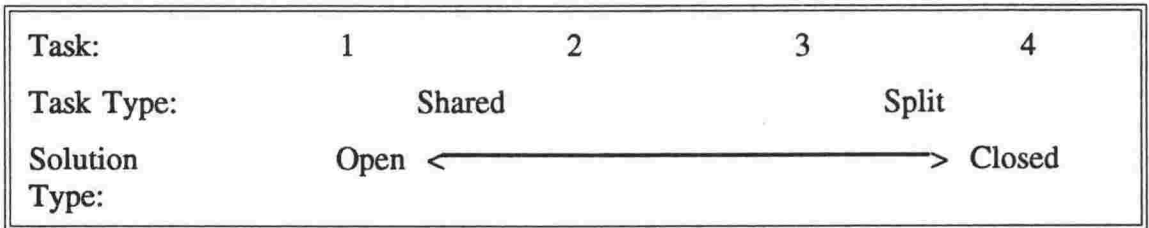


Figure 6. *The Relative Positions of Tasks Used in the Present Study on a Cline Representing Degrees of Openness and Closedness.*

The split information zoo task, Task 4, at the other end of the cline, was a closed task with a single inflexible solution achieved through the exchange of locative references in a zoo - an activity with immediate, predetermined, tangible outcomes.

Task 2, the shared information zoo task, and Task 3, the split information medical task, displayed lesser degrees of openness and closedness respectively and so lay at intervals between the two extremes of the tasks discussed above. Task 2 was essentially an open task but with restrictions on the range of solutions possible. Task 3, while essentially a closed task, required interlocutors to interpret data according to a set of criteria and then to rank the data to the extent that it fulfilled the various criteria. There was in this ranking activity, room for interpretative disagreement and so the task had a superficial likeness to the ranking done in open tasks. Hence its location on the cline to the left of Task 4.

A comparison of the order of the tasks on the cline with a rank ordering of the same tasks for both groups according to the amount of negotiation each task generated (Table 8), shows a consistent relationship. The least negotiation occurred where the task was open with a step-wise increase in the amount of negotiation occurring with each move to the right along the cline. At the far right, the most negotiation occurred where the

task was closed. The consistency of this result across the four tasks and the two groups is initially surprising. One possible explanation is that the 'openness/closedness' distinction represents varying degrees of structural support available within a given task which either facilitates or inhibits active participation. Thus, the open tasks in the present study were relatively unstructured and so allowed interlocutors plenty of freedom in the way they performed the tasks and in the extent to which they were prepared to negotiate solutions to a mutually agreeable point of resolution.

The closed tasks, given the narrowness of their goals, had a more rigid, carefully defined structure denying learners the opportunity to successfully compromise or agree on incomplete solutions. The enhanced performance of the interlocutors doing the closed tasks suggests that the structured nature of the goal of these tasks facilitates interaction. Given the cognitive demands of task performance in a second language it is hardly surprising that minimizing the procedural demands of a task through clear structuring of the goals and procedures of a task may lead to greater participation. A conclusion such as this is consistent with the discussion on the use of diagrammatic material where it was suggested that the tangible reference points provided in diagrams, support the limited linguistic resources of interlocutors, thereby facilitating their ability to contribute to the ensuing interaction. Interestingly, Task 4, the most closed of the tasks (which also used diagrammatic input), was rated the most enjoyable task by the subjects in the feedback session held after the performances.

In contrast to the closed diagrammatic tasks, it was perhaps a combination of the openness, optionality of interaction and the lack of procedural guidelines in Task 1, the shared information medical task, that caused it to generate so little talk. Clearly the open-endedness of the task left some of the interlocutors at a loss as to how to initiate or contribute to discussion, especially in the early stages of task performance. Thus, the final feedback session in the present study revealed that one learner had not been clear on the way to proceed with this task, but had kept quiet at the time rather than display ignorance during the performance. The lack of participation by this learner in the task, and the overall drop in negotiation for the group performance are accounted for by this information which was not obvious in the transcript of the performance itself. The kind

of discussion of intangibles in this type of task has to be done 'in the air' as it were, without clearly defined sequences of work. However, the justification for using such a relatively unstructured task was that both the human and the ethically controversial nature of the task would easily make up for the lack of procedural support and a pre-defined solution by drawing on the interest of interlocutors, and their desire to express an opinion on such controversial matters. That this did not happen suggests that without adequate structural support, the limited linguistic resources of NNS interlocutors can constrain their willingness or ability to contribute to optional discussion. This is supported by the fact that giving opinions on a topic and, in addition, having to provide reasons for decisions, is arguably both cognitively and linguistically more difficult than describing or sharing preset segments of information when other variables are held constant.

For pedagogic purposes, both open and closed types of tasks have their place in the classroom. An open unstructured task provides a platform for creative discussion in which learners respond to the communicative intent of each other's utterances rather than to the accuracy of surface forms. While no less communicative in purpose, a more deliberately structured task containing pre-set solutions and limited ways to reach those solutions gives learners the opportunity to practice exchanging very precise messages as accurately as possible.

4.5.4 Participant variables

Interactive behaviour is sensitive to a range of additional factors including the cultural appropriateness of certain topics or modes of discourse and learner variables such as age, gender and ethnic groupings and the proximity of a topic to the background experience and knowledge of the interlocutors to name a few. The content of a task may, for example, violate cultural or ethical norms as when deference may restrain the contribution of younger interlocutors in the presence of older members of the same culture, or when the presence of both women and men makes certain types of discussion or topics unacceptable for discussion. Thus Task 1, the shared medical task in which learners decide who gets the new heart and who is left to die, required a strong element

of ethical judgement, and, for some interlocutors, possibly a rather distasteful task outcome, both of which touch on personal dimensions of discussion not present in the other tasks. In more general terms Oster (1989) points out that in Asian cultures critical thinking and expression of dissention is not always encouraged in the education system. This may be relevant in the present study. Critical thinking and dissention are essential outcomes of the shared information tasks but play only a minimal role in the split information tasks.

4.6 Summary

The chapter presented a discussion of task features that appeared to influence the way learners interacted during their performance of four tasks.

The discussion began with a comparison of negotiation in tasks with either a shared or split information design. The results showed that the split information tasks produced significantly more negotiation than the shared information tasks. This result was also true for non-negotiating repeats, and confirms the findings of Doughty & Pica (1986). Analysis of the effect of topic showed that the zoo topic produced significantly more negotiation than the medical topic.

A further important result was that while negotiating questions were distributed more evenly in the split tasks, the tendency for certain interlocutors to negotiate more than others was not greatly affected by whether the tasks were split or shared.

An analysis of the incidence of repetition showed that like negotiating questions, repeats were used much more frequently in the split tasks than the shared tasks. This is not surprising since repetition is an integral part of the negotiation process. But as with negotiation, the large amount of repetition in the split tasks may not have been particularly productive since it displayed a lack of progress on the task and an overly long focus on relatively minor pieces of information.

In the final section of the chapter, the complex interaction of many variables that make

up a task and the performance of a particular group of learners was addressed. It became clear that caution must be applied to the interpretation of results from task type comparisons. While two tasks might be being compared across a single dimension, there were often other less obvious differences between them that could also account for the results. In considering the influence of topic for example, it was seen that what was named 'topic' was in fact a multidimensional notion, encompassing the form of the textual input, the solution type, procedural specifications, and the nature of the knowledge requirements. Of these, diagrammatic input and closed solution types were associated with more negotiation. A lack of procedural guidance, a feature related to the open-endedness of a task such as the shared information medical task, may have reduced the frequency of negotiation.

Chapter V
**THE TYPES OF NEGOTIATING QUESTIONS USED BY LANGUAGE
LEARNERS**

5.1 Introduction

It was suggested in the previous chapter that quantitative counts of negotiating questions need to be complemented by a greater depth of qualitative analysis concerning the effectiveness of particular types of negotiation at eliciting the kinds of input and encouraging the kinds of output that SLA theory associates with language development. In response to this need (as expressed in research questions 2 and 3), this chapter and Chapter VI investigate in detail the ways in which the learners in the study negotiated meaning. The present chapter begins with a discussion of the issues involved in an inductive classification of negotiating moves and an outline of the procedures used in this study to analyze negotiation. Data from the study is then analyzed using a form-function system for classifying negotiating moves. A set of categories is described and operationalized, and the coding protocols used to segment and code negotiating moves are discussed. Each category is considered in relation to the theoretical claims made for the role of negotiation in SLA.

Research Question 2

- a. *What types of moves do learners use to negotiate meaning during communication tasks?*
- b. *In what proportions do these occur?*
- c. *To what extent might particular types of negotiating moves increase comprehension and contribute to learning?*

5.2 Background Issues in Interactional Analysis

A common procedure used for analyzing negotiation in a number of empirical studies of L2 acquisition involves taking a set of operationally defined categories of negotiation and applying them to data. This procedure is characteristic of many social/psychological studies of conversation in which speech events are typically classified into discrete categories so as to supply sufficient data for statistical analysis. But it has been pointed out that using an approach such as this is problematic:

The categories used by psychologists in order to satisfy the requirements of particular statistical tests are often heterogeneous, lumping together a variety of different behaviours under the same label, which may lead to an oversimplification of communication... In the same way, certain events may perform different functions in different contexts (Roger and Bull, 1989:6).

In the present study, preliminary analysis of data from the pilot study illustrated these problems. Difficulties were encountered in attempting to satisfactorily segment and code the data using the three standard categories of confirmation checks, clarification requests and comprehension checks. The coding required arbitrary decisions as to inclusion and exclusion of forms that apparently had negotiating roles but which lay outside the boundaries of these categories. Thus, the present analysis sought to avoid prior assumptions about the exclusiveness of these three negotiation categories. Rather than making the data fit categories imposed upon it, the procedures chosen allowed the data to determine the appropriate categories through an inductive, iterative approach to classification and analysis. This approach takes account of both the range of utterances that appeared to function in negotiation, as well as the difficulty in attributing functional value to given utterances. The descriptive and qualitative goals underlying such an approach lie squarely within the framework of conversational analysis (see Goldstein and Conrad (1990:447) for a discussion of the merits of this kind of approach).

There are, of course, also some problems with an inductive approach such as this. Distinguishing and classifying the negotiating functions of utterances lifted from a

corpus of transcribed discourse is a difficult task requiring highly inferential decisions. Interlocutors negotiate meaning using a wide variety of forms many of which have overlapping or non-salient functions. These only become transparent when prosodic features such as stress and intonation, and contextual factors such as surrounding discourse and the source of the information being negotiated are taken into account.

Even with this contextual evidence available, attempts to attribute meaning and function to opaque and non-salient utterances can be controversial. As Taylor and Cameron (1987) argue, such analytical procedures are based on the two assumptions that a researcher's intuitions about the way a given utterance functions are equivalent to those shared by interlocutors, and that intersubjective or common understanding of the rules and units of conversation exists between interlocutors (an assumption which lies at the heart of much conversational analysis). As they explain it:

Exactly the same problem of intersubjectivity applies to both the classification of unit types and the identification of tokens within those types. If it is questionable whether people agree on what constitutes one unit, it is equally questionable whether they agree on the meaning or function of a piece of talk (ibid:13).

Taylor and Cameron claim that this is a fundamental problem recurring in all major models that attempt the analysis of conversation:

it would appear that inductively-based identification procedures are caught on the horns of a dilemma: either they identify reliably, but may not be sure what they identify; or they fail to identify at all and only reflect the metalinguistic conventions regulating the descriptive labels being used (ibid:39).

Further problems concern the idiosyncratic nature of certain interactional sequences as well as the danger of generalizing from small samples or rare occurrences.

In developing a framework for categorizing negotiating moves in the present study these

difficulties are recognized. The framework attempts to balance the need for categories which are sensitive to the data and which accurately mirror the intentions underlying interactional moves on the one hand, with the need for salient and generalizable categories which meet the requirements for inter-coder reliability on the other.

5.3 Data Coding Procedures

To proceed with the analysis, the first step involved identifying all utterances that seemed to either signal non-understanding or offer opportunities to modify understanding. This was done with the help of the Varonis and Gass (1985) model which functioned as a kind of template for utterances which fitted the 'indicator' slot in the routine and which therefore were assumed to have a negotiating function (see section 2.5 in Chapter II). These were then classified according to their forms and apparent functions, and either placed in one of the three categories normally used by analysts (confirmation checks, clarification requests and comprehension checks), or put to one side and subsequently reclassified into a further three categories.

A simple decision path evolved out of the initial data analysis and was used as a guideline to ensure consistency in the categorization process. This pathway and the categories that ensued are presented in Figure 7. The pathway begins at the point at which the person using it to analyze data has located a question or a signal which indicates a lack of comprehension, a need for more information on prior input, or a need for confirmation of an expression of understanding, and is then ready to code the question or signal. The decision path was designed to cope with both interrogative and non-interrogative ways of indicating non-comprehension. It uses the term 'trigger' to describe the utterance which has not been understood or the source of trouble, and 'indicator' to describe the signal of non-understanding. These terms are from Varonis & Gass (1985:75-76) and are described on pages 20 and 21 of the present study.

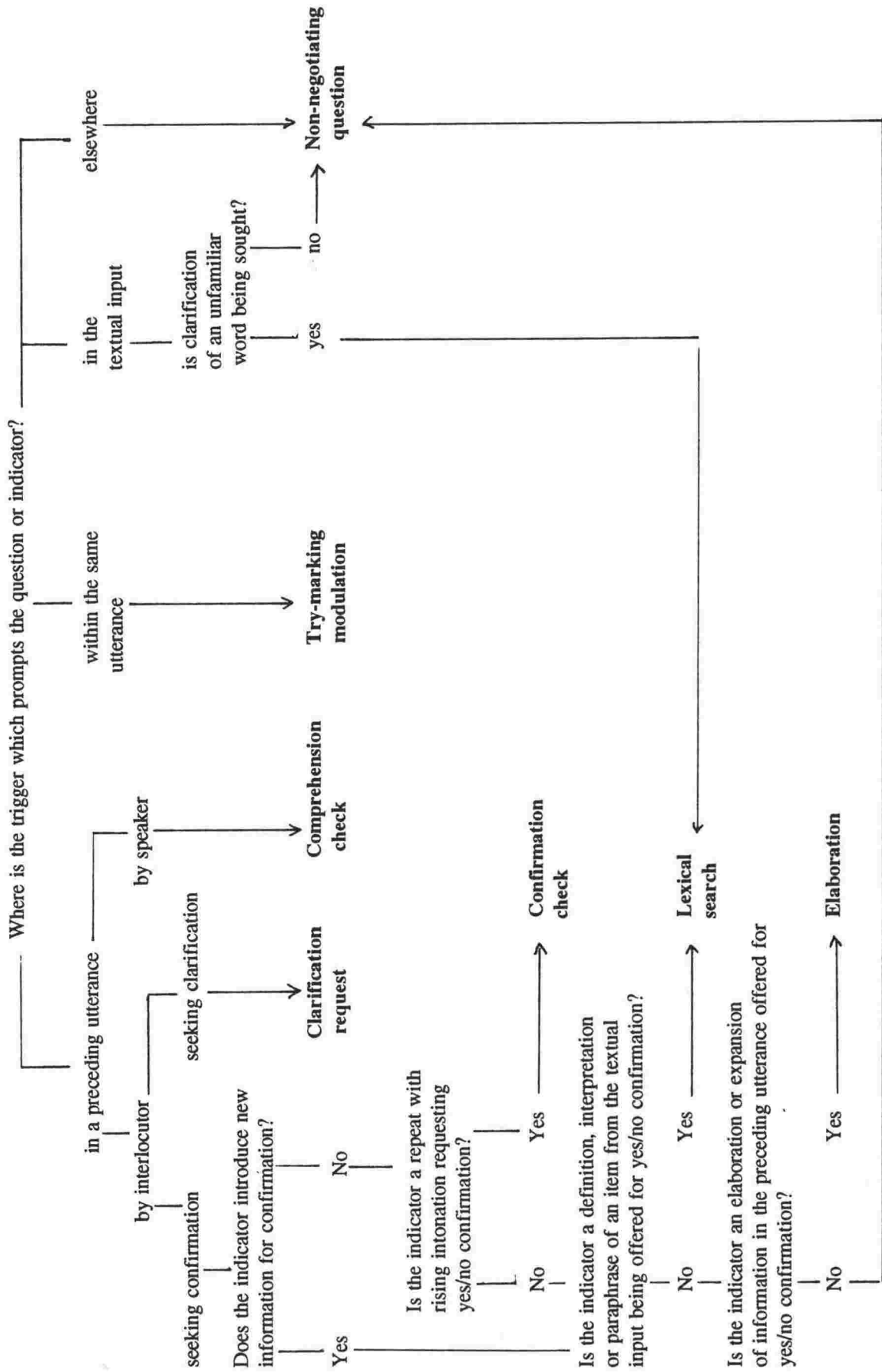


Figure 7. Decision Path for Categorization of Moves which Initiate a Negotiation Sequence

5.4 Negotiation Categories

After going through the transcriptions, six main kinds of negotiating questions were identified. They were:

1. Confirmation checks
2. Clarification requests
3. Elaborations
4. Lexical searches
5. Comprehension checks
6. Try-marking modulations

Each is defined and exemplified below using data from the present study. The transcription conventions used in examples from the data are described in Appendix B.

i. Confirmation checks

Confirmation checks are "moves by which one speaker seeks confirmation of the other's preceding utterance through repetition with rising intonation, of what was perceived to be all or part of the preceding utterance" (Pica, Young & Doughty, 1987:740). Thus the purpose of these checks is to confirm that what was heard was what ought to have been heard.

(4)

S1 do you think Sandy have how many?
 S4 eight
 S1 *eight?*
 S4 yeah

(MSP1 17:36)

(5)

S3 the room to sell tickets=
 S2 = *tickets?*
 S3 [sell [tickets
 S1 [tickets? [ahhh
 S3 [yeah tickets
 S1 I see:

(ZSP1 2:29)

ii. Clarification requests

Clarification requests are "moves by which one speaker seeks assistance in understanding the other speaker's preceding utterance through the following utterance types:

1. wh-
2. polar
3. disjunctive
4. un-inverted with rising intonation
5. tag
6. statements such as 'I don't understand', or imperatives such as 'Please repeat'(Pica, Young & Doughty, 1987:740).

Long defines clarification requests as "Any expression...designed to elicit clarification of the interlocutors preceding utterance" (1980:82).

Thus, "they require that the [previous speaker] either furnish new information or re-code information previously given" (ibid:83).

(6)

S7 hyenas is what? is a bird right?
 S5 *ahh pardon?*
 S7 this one, number five, is a bird right?
 S8 no
 S5 number five, no, its a fox
 S7 its a fox
 S5 some- something like a fox (ZSH2 10:58)

(7)

S3 electricians is Pamela
 S2 *huh? how do you spell?*
 S3 Pamela, P a m e l a (MSP1 2:13)

iii. Elaborations

Elaborations involve a guess, interpretation, completion or paraphrase by a listener of information held and at least partially expressed by the previous speaker. They are something of a blend of features of confirmation checks and clarification requests, although they move beyond both by including a representation of the negotiator's knowledge. Elaborations are typically presented with the expectation that they will receive yes/no confirmation from the first speaker. Long (1980) has a similar category of 'expansions' in his data. These however are characterised by the addition of "grammatical functors not supplied by the interlocutor in obligatory contexts created by

that preceding utterance" (84), a feature not required of the elaboration category used here. Thus Long's narrower categorization locates expansions within this broader category of elaborations, and for this reason they are subsumed within the one category. More recent studies by Pica, Holliday, Lewis and Morgenthaler (1989:87), and Pica, Holliday, Lewis, Berducci, and Newman (1991:372-373) also make reference to types of negotiating moves which involve elaboration or other types of modification of the original trigger. In particular, Pica et al (1991) further sub-divide this type of negotiating unit according to whether the trigger is modified semantically, morphologically or syntactically (373).

In the following examples the elaborations are in the form of a paraphrase or reinterpretation (8 & 9), in the form of a guess (10), and in the form of an elaborated repetition with the elaboration adding greater precision to the repeated item (11).

(8)

- S7 yeah so we put number and number ten to number four, can we? because there's two ahhh hang on I'm still confusing [we put number ten to number five
S5 but there are-
S6 *change?*
S7 yes
S5 but there are two and this is just one, there is not enough space for them (ZSH2 8:18)

(9)

- S5 what, what about that?
S7 camel-
S8 -cause one lion has died
S5 [mmm died
S7 [*oh so you mean four monkey to here?*
S5 mmm one
S7 can you put four monkey down to number five and lion just leave it alone?
S5 yes (ZSH2 14:45)

(10)

- S3 inside the square is ah, what do you call this?
S1 *yes, a line?*
S3 yeah a lines, [yeah many lines inside the square
S1 [yes yes (ZSP1 11:39)

(11)

- S1 OK then the square.. on the bottom?
S3 *the long square=?*

S1 =the [long square?
 S4 [the long sq-
 S3 -Yes I got (ZSP1 1:57)

iv. Lexical searches

A lexical search is a request for, or a suggested definition of a word or phrase from the textual input for the task. This category deals exclusively with word meaning-based negotiation which often occurs without antecedents in preceding discourse. (See also the 'word search' discussed as a repair sequence in Schwartz, 1980.)

(12)

S1 *the Hindu - wha's means Hindu?*
 S4 his name
 S3 Hindu is=
 S4 =his name
 S3 no
 S2 no [religion
 S3 [its a religion
 S4 Ohh Hindu [religion - yeah
 S3 [yes - religion (MSH1:7/17)

(13)

S1 *alar- what does alarmed mean?*
 S2 [xxxx naughty
 S1 [oh dangerous (ZSH1 2:23)

(14)

S1 do you mean do you mean .. *what's the medicine sui-suitability?* (MSH1 1:10)

v. Comprehension checks

Comprehension checks are "moves by which one speaker attempts to determine whether the other speaker has understood the preceding message" (Pica, Young & Doughty, 1987:740). The form usually associated with a such a move is either a tag question or a rising intonation repeat by the speaker. In certain cases an explicit question such as "Do you understand" or "Have you got that?" is used.

(15)

S1 Malay and Korean, that's very different, *OK?* (MSP1 15:11)

(16)

S1 yes, qualifies trade person, trade, y'know, trade? (MSP1 11:3)

(17)

S2 you'd better explain in the-

S1 Ok, the circle

S2 key symbol-

S1 -do you see the circle?

S3 yes

S1 the round - yeah - that's mean a table

(ZSP1 8:34)

vi. Try-marking modulations (TMM)

The try-marking modulation (Schegloff, Jefferson and Sacks, 1977:379) is defined by a high-rise terminal contour on a declarative sentence. In its negotiating roles it is used by the speaker to seek confirmation that interlocutors have comprehended some new information (18), and, in some cases, to also mark the speaker's uncertainty about the accuracy of their utterance (19).

(18)

S1 *and then the toilet is, beside in the right, beside the playground ✓?*

S2 yeah

(ZSP1 21:57)

(19)

S1 first one is the, the patient must ahh have an occu.pa.. occupation ✓?

S2 mmm

(MSP1 1:10)

Syntactic equivalents would be something like: "Can you understand what I'm saying?", or "Do you agree with what I'm saying?"

5.5 Issues in the Coding of Negotiation Moves

5.5.1 Distinguishing the Negotiating Function in Discourse

The reliability of negotiation data depends in the first case, on the accuracy with which utterances initiating negotiation can be distinguished from those that do not. As was discussed in section 5.2, this is by no means a straightforward distinction since the function of a given utterance occurring in discourse may be hidden in the non-explicit intentions of the speaker. It may also be multi-dimensional in that more than one function may be implicit in a given utterance (Hymes, 1968; Roger and Bull, 1989:6).

These problems can be illustrated from the data by comparing a clear case of a negotiating question with a non-negotiating question, and then with a rather more ambiguous example which on first glance could be either. First, the clarification request "pardon ?" in the following sequence is clearly a response to a preceding utterance, and as such is a clear example of a modifying question.

(20)

S1 the crocodile must away from the.. /gra:fi:/, [/gra:fi:/
 S4 [mmm pardon? (ZSH1 2:45)

On the other hand the question "Who got the electrician" in the following sequence bears no relationship to the preceding discourse and introduces a new topic.

(21)

S8 [c h e
 S7 [c h e s e h
 S8 s s
 S6 mmmm
 S8 [chess
 S7 [s s e?
 S8 yeah
 S7 Ok, [who got the electrician?
 S6 [next (MSP2 6:21)

But many questions are not so easy to classify. For example:

(22)

S2 Sandy?.. soccer
 S4 first one soccer [yeah second one?
 S3 [soccer badminton
 S2 bad - min - ton
 S3 [badminton yes
 S1 [ah: badminton
 S4 Gerald ✓ ?
 S2 [Gerald ✓ ?
 S3 [[Gerald ✓ ?
 S1 [Gerald as ah, the first is ahh rock climbing (MSP1 6:52)

The uses of the word "Gerald ✓ ?" by S4, S2 and S3 look like standard confirmation checks in which the interlocutors are checking that it is Gerald who plays badminton. In fact the context in which they occur shows that they are not modifying questions at all. The learners are in the process of identifying the sports played by various people

presented in the text for the task. Having done this for two people in earlier discussion, S1 is now asking "Who can supply information about Gerald ?", and S2 and S3 echo S1's request for new information. There is then no immediate reference point in a preceding utterance to which these questions can attach themselves in a modifying sense. Non-negotiating questions such as this are usually requests for information (Christian, 1980:130). Generally speaking they introduce or seek to introduce a new topic rather than reworking the content of a preceding utterance. This distinction is between anaphoric reference (referring back to something) on the one hand, and cataphoric or exophoric reference (referring forward or out) on the other (Halliday and Hasan, 1976). While the "pardon?" question in (20) was clearly anaphoric, and the "who got the electrician?" example in (21) was exophoric, examples like "Gerald?" in (22) are not overtly marked either way, and require careful analysis for accurate classification.

5.5.2 Negotiating and Non-negotiating Repeats

A distinction between negotiating and non-negotiating repeats was made in section 4.4 of the previous chapter. In a negotiating role, repeats are often used by interlocutors to display their perception of some aspect of a preceding utterance as in examples (4) and (5) earlier in the present chapter. In these cases, the display is designed to elicit either confirmation of a correct repeat, or further input from the speaker in the case of an incorrect repeat. In a non-negotiating role, repeats can function as 'conversational continuants' (Aston, 1986) indicating that comprehension is complete and the speaker can continue. Alternatively, non-negotiating repeats can express a kind of private rehearsal of the language as in the following example where interlocutor 'Sf' quietly rehearses the word hedges to herself while other interlocutors continue to negotiate the word with the speaker 'Sp'.

(23)

Sp	and a picture of a hedge - h e d g e - hedge
Ss	ahh
Sf	h e d?
Sp	g e s
Sm	sorry, [check that again, hedge
Sf	[hedges hedges
Sp	h e d [g e s hedges
Sf	[g e s yeah hedges

(PILOT 2:10)

But the distinction between negotiating and non-negotiating repeats is not always clear. Negotiating repeats intended to elicit confirmation might fail to do so on the one hand, while non-negotiating repeats intended as private rehearsal or as continuents might well be picked up by an interlocutor as useful input, or might initiate modification on the basis of some error they contain as in (24) below. Although not obvious in the transcription of this negotiation sequence, S4 was quietly repeating each piece of information in what appeared to be a strategy for retaining the items in memory while she recorded them on her task sheet. In doing so, she exposed her misunderstanding to the speaker who was then able to correct it for her. Negotiation occurred more by accident than design, but was successful nevertheless.

(24)

S2 and Gerald is four hundred and fifty five

S4 *one hundred and fifty five*

S2 no no, one hundred fifteen - fifty one, one, five, one

S3 *one five one, yeah*

(MS1 6,9)

5.5.3 Form/Function Overlaps and Distinctions between Categories

The category definitions in section 5.4 present idealized pictures of each category. But in practice a great many utterances analyzed in the study were non-standard and functionally non-salient. For this reason careful analysis was required both to identify modifying utterances in the discourse and then to categorize them accurately and consistently. The most common overlaps that appeared in the data were between confirmation checks and elaborations on the one hand, and between confirmation checks and clarification requests on the other.

In regard to the overlap between confirmation checks and elaborations, an elaboration often has all the features of a confirmation check but with the addition of extra information representing the interlocutor's perception of what is being referred to. This is clear in the following simple example (25) where "the long square?" looks like a characteristic confirmation check except that it includes new information - "long".

(25)

S1 OK then the square on the bottom?

S3 *the long square-?*

S1 [the long square?
 S4 [the long sq-
 S3 yes I got (ZSP1 1:57)

The new information is not in the form of a topic change but is added to establish mutual understanding or agreement on the topic of the preceding utterance. It is this additional information in the utterance that distinguishes it as an elaboration rather than a confirmation check.

With regard to the overlap between confirmation checks and clarification requests, confusion is possible where a speaker's utterance is repeated by an interlocutor with rising intonation suggesting a confirmation check, but with the crucial difference that the repeat is only partial and stops at a crucial juncture in order to prompt the speaker to repeat or rephrase the remainder of the utterance. This tactic focuses attention on the specific information which has not been comprehended, conveying the message that only to that point in the utterance was comprehension achieved. This is clear in the following example.

(26)

S3 the name is ahh, water buffalo
 S4 *water-*
 S2 *-water /?*
 S3 water buffalo
 S2 *b a::*
 (...)

 S3 double f a l o
 S2 *double /?*
 S3 double f a l o buffalo
 S1 buffalo /?
 S2 [ahhh] water buffalo /?
 S3 yes water buffalo (ZSP1 1:36)

So while there is a superficial likeness to the confirmation check in these cases, the response (either a repeat, a paraphrase, or an explanation) is closer to what would be expected from a clarification request. Often the need for clarification is made more obvious by the interlocutor repeating only an adjective or article from the speaker's preceding utterance and not the key information-carrying word which immediately follows (e.g. "the..?").

Items classified as 'lexical searches' do not, strictly speaking, modify a preceding utterance and this is an essential element in other negotiation categories. They are however included in the present analysis for two reasons. First, they distinguish questions concerning word meaning from other types of negotiation which is useful for the purpose of assessing the role of negotiation in vocabulary learning. Second, lexical searches rely on negotiation to achieve comprehension. In this way they represent a linguistic 'push-down' in the same manner as other modifying utterances. They fit into Hatch's model (1978) of discourse structures as horizontal moves in the vertical progress of interaction. The focus is not on forward progress on task, but on making prior input comprehensible in order to facilitate forward progress. It is therefore important to distinguish the lexical search from other types of negotiating moves and to analyze its use. The following examples show that whether or not the item under discussion was taken straight from the textual input (as in 27 and 28) or used in a previous utterance (as in 29) is less important than that they have in common a concern with word (or phrase) meaning rather than fulfilment of task objectives.

(27)

- S8 *what's that?*
 S5 Pardon? Camel ✓? you don't know camel ✓? camel
 S8 yeah no no
 S5 camel is like this (draws a picture) {3}
 S6 camel is desert live ✓?
 S8 ohh::
 S6 live in desert- ✓?
 S8 -Arab
 S5 he has two.. [you know, you have to sit here
 S6 ah, yeah, [yeah, yeah, yeah
 S8 ah yeah, yeah yep
 S5 yes
 S8 ohhh yeah
 S6 Ah Arab yeah, [desert, yeah
 S8 ohh mmm mmm (ZSH2: 2/7)

(28)

- S1 ahh excuse me, where is the, in here have the vocabulary that means ah qualification? what's mean qualification? certificate?
 S4 certificate yeah certificate (MSP1 7:17)

(29)

- S3 ...all enclosures should be filled
 S2 enclosures should be filled enclosure, do you know?
 S1 what means enclosure?
 S1 do you know?
 S3 [close ah- should be filled
 S2 [no I don't know enclos- enclosed
 S1 [filled what means fill? oh oh all enclosed, I think that all enclosed that means enclosed
 S2 [fill
 S3 [filled, filled
 S2 ohh
 S1 [every every area, yes should be filled
 S2 [should be filled
 S3 should be put put something inside (ZSH1 5:40)

The try-marking modulation (TMM) presents some unique coding problems. It is a highly inferential category in that the high rise terminal contour (HRTC) by which it is characterized is, among certain speakers and in certain contexts, a common feature of declarative sentences for which a negotiating function is not intended. This habitual and often functionally redundant use of the HRTC makes it unreliable evidence of the presence of a negotiating or questioning function. The TMM has the further handicap of being a purely structural category defined largely by a phonological feature rather than having a syntactic and functional description such as that used for other categories. In addition, the HRTC is an integral defining characteristic used in two other categories, the confirmation check and comprehension check. In fact, the TMM is often functionally similar to the comprehension check except that in the former the HRTC is placed on the *initial* utterance while in the latter it appears on a *repeat* of all or part of the utterance.

Despite these problems, there are important reasons for considering TMMs as a separate category rather than attempting to blend them into functionally similar categories such as comprehension checks. First, certain uses of the TMM, such as expressing tentativeness when saying something, do not fit easily into any of the other category descriptions. Secondly, because of the problematic nature of this category it makes sense to keep it apart from others so that it can be assessed in its own right. Third, the TMM targets the very utterance upon which it is placed for negotiation in contrast to all other categories. This is perhaps a relatively minor distinction to make. However,

a fundamental aspect of negotiation in the other categories is reference back to a preceding utterance, either for the purpose of clarifying it, confirming one's comprehension of it, or checking the comprehension of interlocutors. Since this back-referencing or contingency relationship is not applicable to try-marking modulations, it seems appropriate to place them in a distinct category.

As the discussion shows, distinctions between the six categories of negotiation are based on functional as well as form-based criteria, though form and function are clearly not in one-to-one correspondence. But the categories are also interpretations of the intent of speakers as expressed in their language, and it is the inferential nature of these interpretations which requires careful analysis of preceding and subsequent discourse in order for the categories to represent negotiation accurately. These issues are addressed more fully in section 5.8.1.

5.6 Inter-rater Reliability

A reliability study was undertaken to assess the descriptive adequacy and applicability of the range of categories used in the present study. It sought answers to the following four questions:

- 1 How many items were unequivocally assigned to the categories by two independent raters?
- 2 How many items did not receive equivalent ratings from the two independent raters?
- 3 What level of consensus was achieved through discussion?
- 4 How many errors did Rater E make?

Inter-rater reliability testing was done over four sessions in which Rater E - the 'expert rater' and Rater A - the 'novice rater' undertook independent analyses of data using the system. Data used for the reliability tests consisted of excerpts from transcripts representing each task type, topic and group. These were selected using stratified

randomization, thereby ensuring coverage of the different types and styles of interaction generated by different tasks, topics and groups. Within a given transcript excerpts were selected by random selection of page numbers. Following each session, the categorization decisions made by Rater A were compared with those made by Rater E. Where categorization differed, the two raters discussed the problem and went through the decision path together. On the basis of this discussion the raters sought a mutually agreeable decision regarding the most suitable categorization of an item.

It was found that in 85% of the items, the expert and novice rater gave the same result and where there was disagreement it was resolved in 100% of the cases. This suggests a reasonably stable set of categories. Rater E rated 98% of the items accurately. This figure is well within an acceptable range of accuracy.

5.7 The Proportions of Different Types of Negotiation

Table 12, and Figures 8 and 9 present a breakdown of the proportions of negotiating questions produced under specified task conditions in six categories. A breakdown of separate group figures can be found in Tables C-12 (a) and (b) in Appendix C. Overall the three widely used measures of negotiation - confirmation checks, comprehension checks and clarification requests, accounted for between 56% - 76% of all negotiating questions produced by any one task. The other categories accounted for varying proportions of negotiation. Thus the try marking contour (TMM) accounted for between 13% and 30% of all questions across the various tasks, lexical searches between 2% and 17%, and elaborations between 6% and 21%. Figure 8 presents the proportions of each category of negotiation across all the four tasks.

As shown in Figure 9, there was a preference, as one would expect, for hearers to negotiate more than speakers. This preference appeared more pronounced in the split tasks in keeping with the need for interlocutors to comprehend detailed information in these tasks. The shared tasks, by comparison, tended to generate more speaker-initiated negotiation than the split tasks. This tendency may be explained by a kind of tentativeness characterising the negotiation of opinions in the shared tasks, a

tentativeness expressed by speakers either through use of the try-marking modulation (TMM), or through checking the responses of interlocutors with comprehension checks and question tags (Figure 8). It might also be a phenomenon whereby the speaker takes greater responsibility for offering opportunities to negotiate when the propositions being expressed represent personal viewpoints in contrast to interaction concerning factual propositions in which the onus is on the listener to indicate comprehension problems.

TABLE 12

Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Task Time of 28'30"

Groups 1 & 2 combined

Task type: Topic: Task code:	Shared		Split		Total
	Medical 1	Zoo 2	Medical 3	Zoo 4	
<i>Hearer negotiation</i>					
Confirmation checks	40 (15)	70 (19)	113 (28)	152 (23)	375 (22)
Clarification requests	48 (18)	66 (18)	114 (29)	168 (26)	396 (24)
Elaborations	17 (6)	22 (6)	25 (6)	137 (21)	201 (12)
Lexical searches	22 (8)	61 (17)	11 (3)	13 (2)	107 (6)
Total hearer:	127 (47)	219 (60)	263 (66)	470 (72)	1079 (64)
<i>Speaker negotiation</i>					
Comprehension checks	61 (23)	95 (26)	74 (19)	97 (15)	327 (19)
Try marking modulations	80 (30)	49 (14)	60 (15)	88 (13)	277 (17)
Total speaker:	141 (53)	144 (40)	134 (34)	185 (28)	604 (36)
TOTAL	268 (100)	363 (100)	397 (100)	655 (100)	1683 (100)

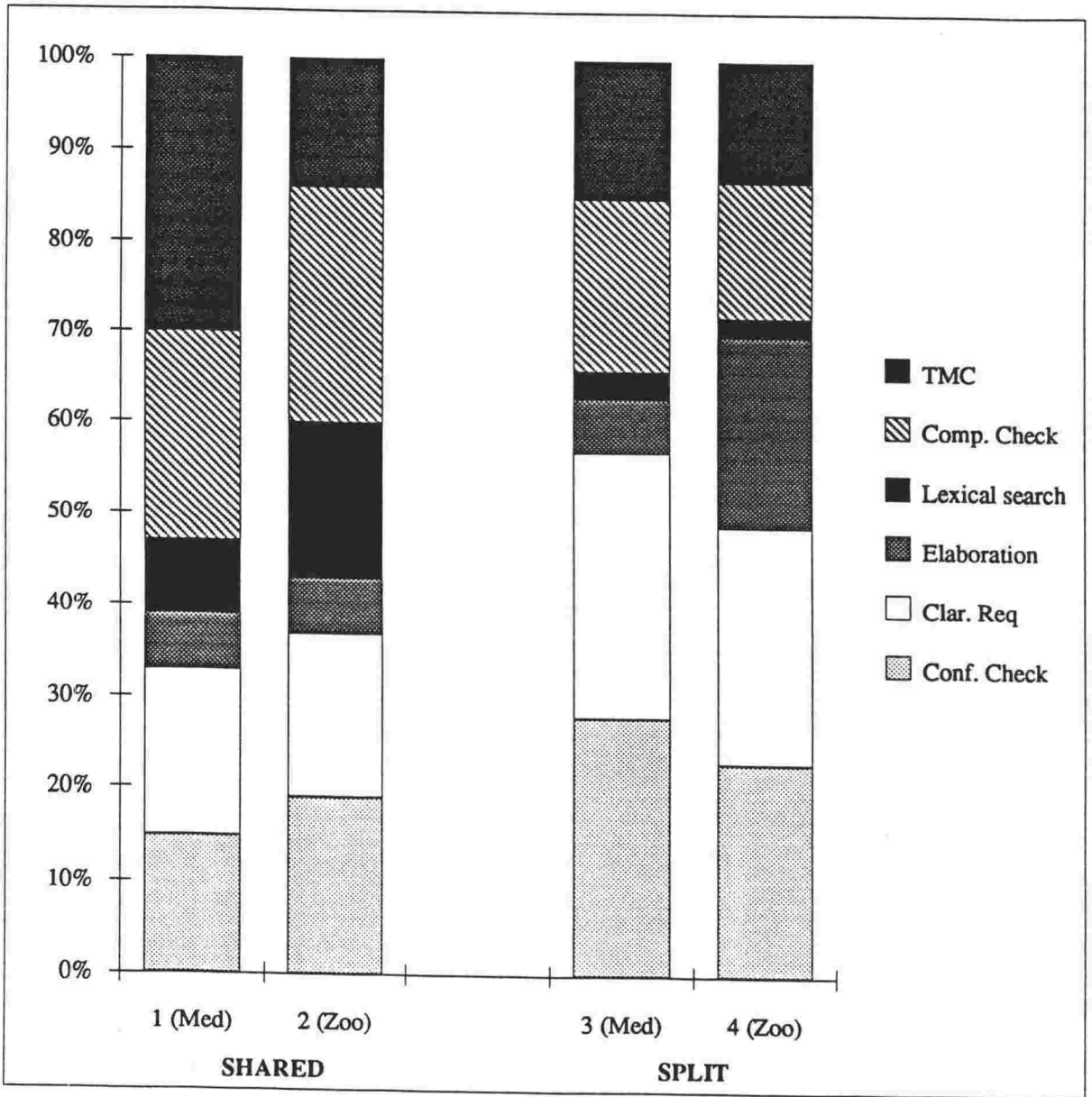


Figure 8. The Distribution of Six Categories of Negotiation for Two Groups of Language Learners (Combined) Performing Each of Four Tasks

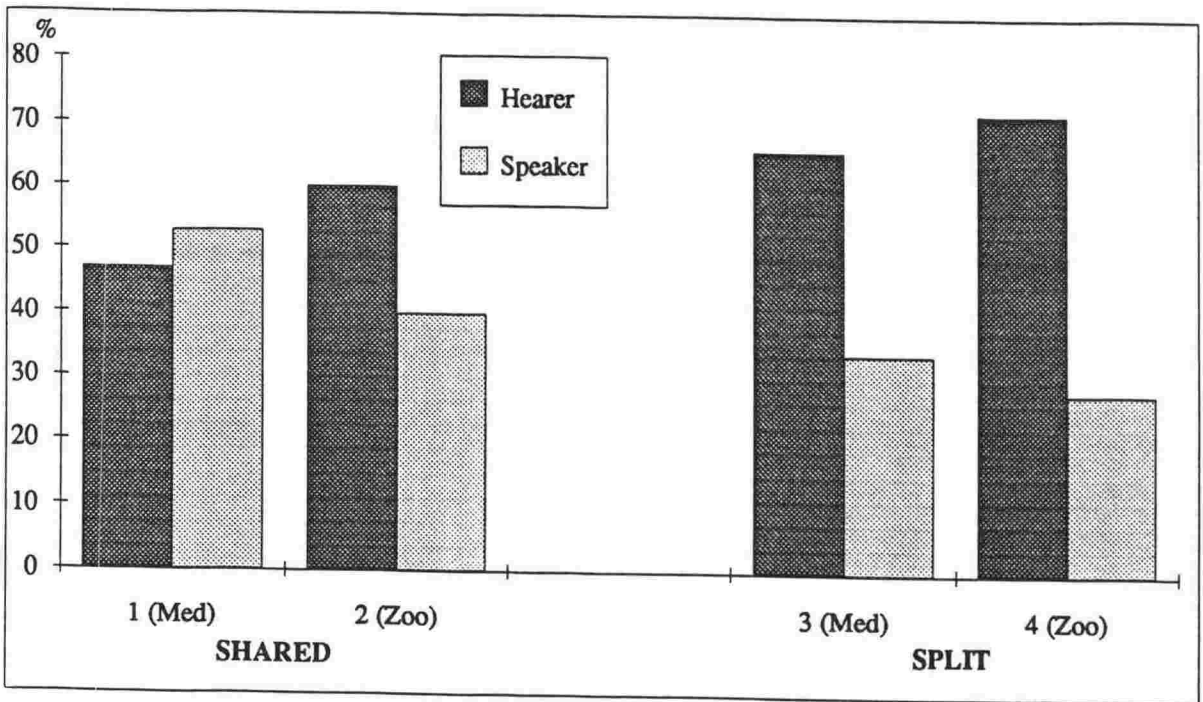


Figure 9. *The Distribution of Negotiation among Hearers and Speakers for Groups 1 and 2 combined.*

5.8 Discussion

The six categories of negotiating moves in Table 12 accounted for approximately 98% of the data. The remaining 2% were impossible to categorize for reasons such as lack of audibility. Thus in terms of its coverage, the analysis by the present system was reasonably complete.

As Table 12 shows, the three standard categories of confirmation checks, comprehension checks and clarification requests used in previous research (e.g. Doughty and Pica, 1986) accounted for between half and three quarters of the data. This result confirms the importance of looking beyond the standard assumptions about the forms and functions of negotiating questions. But why were so many negotiating questions not accounted for by the three standard categories? Two answers are possible.

First, the present analysis applied reasonably narrow and strict criteria for inclusion into these three categories, thus excluding forms that deviated from the operational definitions. It is unclear just how strict or lenient past researchers have been in the way they apply the category definitions. It is possible that where they occurred in previous studies, elaborations and lexical searches in particular may have been subsumed within the standard categories, the result being broader coverage of the data by these categories.

However, it is also likely that the approach taken to analysis in many studies (beginning with the categories, seeking those utterances which instantiate these categories, and excluding or not coding less salient and non-standard forms found in the data) would have left out much of the data which was coded in the present study. Long (1983a) argues that such an approach is useful in that it provides a reasonable level of reliability. Long and Sato in a similar vein, point out that making finer category distinctions often leads to unwieldy systems with "no parallel increase in understanding..." (1983:273). There is in these claims an assumption that the three-tiered categorization, if not exhaustive or even particularly comprehensive is at least reasonably representative and is thus adequate as a reliable dependent variable providing useful comparisons across tasks, or participants. Similarly, this assumes that an exhaustive analysis of marginal

forms or forms not covered by these categories would not add significantly to the results.

But it is the contention of this study that there is much to be gained from using a comprehensive system for studying negotiating behaviour. Restricted to the three main categories, marginal or non-standard utterances would need to be overlooked or merged with one of the standard categories to which they correspond (e.g. elaborations with confirmation checks; lexical searches with clarification requests; and try-marking modulations with comprehension checks) which raises the problem of achieving satisfactory reliability. A second option of simply excluding such forms from analysis oversimplifies the picture as the earlier discussion in section 5.2 suggests. While this second option may serve some purposes adequately, it fails to broaden our understanding of the negotiating process. Consequently, the finer-grained categorization increases understanding of the negotiation process by providing more accurate descriptions of the various types of negotiation. Using these descriptions, it is possible to link claims made for negotiation in SLA to specific types of negotiation as is done in section 5.8.2.

5.8.1 The Functions of Negotiating Questions

The analysis to this point is based on an assumed correspondence between certain negotiating functions (e.g. seeking clarification) and a set of pragmatic classes of utterances defined in part by the negotiating function (e.g. the clarification request) and also by other syntactic or structural criteria (e.g. a *wh*-question). However, a given negotiating function is no more restricted to a certain type of utterance than that type of utterance is bound to express a single function. Thus, utterances which according to certain structural criteria (such as rising intonation on an interlocutor's repeat) are negotiating in function, may in fact be used by interlocutors for a variety of purposes, some of which have no apparent bearing on the comprehensibility of either input or output. This distinction has been touched on in a number of studies including Christian (1980), Chun, Chenoweth and Luppescu (1982), Varonis and Gass (1985), and Aston

(1986). In this section, the different functions of negotiating questions are examined. Table 13 summarizes these functions. Clarification requests, elaborations and lexical searches only had single negotiating functions and are therefore not discussed in further detail.

TABLE 13

A Summary of the Functions of Negotiating Questions in the Data

Types of negotiating questions	Negotiating functions	Other functions
Confirmation checks	seeking confirmation seeking clarification	expressing an evaluative response echoic; acting as a conversational continuant
Clarification requests	seeking clarification	
Elaborations	seeking confirmation	
Lexical searches	requesting an explanation or definition of a word suggesting the meaning of a word	
Comprehension checks	checking comprehension expressing tentativeness	assessing consensus
Try-marking modulations	checking comprehension expressing tentativeness and requesting help	used habitually

Confirmation checks. Since the confirmation check is defined in relatively simple terms (a whole or partial repeat of a preceding utterance always with rising intonation), one would expect its use to be free from ambiguity. However the confirmation check is used by the subjects in the present study for a variety of purposes. First it is used, as its name suggests, to confirm that what was heard was what was said as in (30).

(30)

S4	...and zoo map	
S2	<i>zoo map</i> ʔ?	
S4	[zoo map	
S2	ohh:	(ZSP1 13:13)

Second, it is used to seek clarification. This need for clarification rather than confirmation is distinguished by the strength of the querying pitch in the utterance and by its relationship to the surrounding discourse. Thus in the following example (31), the word dump is marked by the presence of strong stress and a sharp fall/rise intonation pattern. Variations in pitch and stress such as this appear to represent greater or lesser degrees of confidence in respect to knowledge of the item under negotiation. So in this case these prosodic features carry the message "Dump? I heard the word but what does it mean?" Affirmation that this is in fact the message being conveyed is found in a second repeat, "what's zoo dump?" in which the interlocutor makes the question more explicit by specifically asking for clarification.

(31)

S3	yes on the top of zoo keeper there is ahh, a zoo dump	
S4	zoo [dump	
S1	yeah	
S2	<i>zoo dump</i> - ʔ?	
S3	-exactly on the top	
S2	what's zoo dump?	(ZSP1 19:45)

Third, the confirmation check is used to express an evaluative or subjective response to the information or opinions in a previous utterance. Implicit in this response may be surprise, disagreement/agreement, approval/disapproval, disbelief and so on (Christian, 1980:130-135). A number of these functions may be present in a given utterance (e.g. surprise and disapproval in "What? It cost you five hundred dollars!"). Bygate labels these evaluative responses 'questioning' (1988:70). He distinguishes three other

functions including: back-focusing or repetition; agreeing; and confirming and checking understanding.

Fourth and finally, the confirmation check has an echoic function. This, as with the preceding role, has more to do with social cohesion and discourse construction than with negotiation. It occurs when a hearer echoes the speaker's intonation on a repeat of the preceding utterance and is often found where a series of items is being transferred orally and each repeat acts as a prompt for the speaker to continue. Evidence of this function is found in the following example in which the repeats made by S4 mimic the intonation of different interlocutors. S4 echoes the high-rise terminal contour used by S1 & S3 as they provide the group with information. However when S2 presents a similar piece of information without rising intonation ("-and Gerald is four hundred and fifty five"), S4 also repeats without the rising intonation.

(32)

- S1 Simon is the one hundred and twenty seven ✓?
 S4 *twenty seven* ✓?
 S3 [Sandy is ninety nine ✓?
 S2 [*Sandy:*
 S4 *ninety nine* ✓?
 S1 yeah-
 S2 -and Gerald is four hundred and fifty five
 S4 *one hundred and fifty five*
 S2 no, no ..

(MSP1 5:58)

In contexts such as this the intonation may be functionally empty or at least carry a very light negotiation load. This echoic function is in part synonymous with habitual use of the high-rise terminal contour on declarative statements addressed later in this section. To some extent the echoic function is also synonymous with Bygate's 'agreeing' function (1988:70), although in the split information tasks on which half of the present data analysis is based, expressing agreement is not common or required by the tasks since the primary focus is on exchanging information as accurately as possible rather than responding to it subjectively.

Comprehension checks. Comprehension checks appeared to have three distinct uses in the data from the present study, only two of which are negotiating. First, as the name suggests, they are used to check a hearer's comprehension (33 & 34).

(33)

- S1 so maybe we can leave the one empty, then we choose - oh yeah, near, near here is the lions -
we put so we buy wolf, if near the, the area is monkey maybe we can buy deer..
S2 no I think-
S1 -d'ya d'ya know what I [mean ?
S2 [yes I [understand
S3 [no (ZSH1 11:7)

(34)

- S2 this is first aid supplies .. *first aid* ✓? (ZSP1 10:3)

Second, (and closely related to the first) comprehension checks express a kind of tentativeness on the part of the speaker with respect to the accuracy of their production in a preceding utterance.

Third, comprehension checks are often used to seek consensus, or to elicit opinions, reactions, or agreement/disagreement (35 & 36).

(35)

- S3 so we start from the beginning, *OK?* (ZSH1 1:32)

(36)

- S2 first is giraffe, *right?* (ZSH1 9:24)

The main distinction between these three uses is that while the former two are overtly concerned with comprehension and therefore with language, the latter assumes comprehension and focuses on truth value.

The try-marking modulation. To discuss the way in which this category functions, it is necessary first to look more closely at the high rise terminal contour (HRTC) itself. As a feature applied to declarative sentences, by definition of which it becomes a try-marking modulation, the HRTC also has a number of functions. First, it is often placed on a declarative sentence to check comprehension as in (37).

(37)

S2 and then *ʔ*?S1 *and then a seat ʔ*?

S2 huh?

S1 you know the seat, *a seat ʔ*? the same as the same as yesterday's seat

S2 ahh like this one . ahh:

(ZSP1 8:56)

Second, the HRTC is often used to express tentativeness about the speaker's own utterance. In this way the speaker is using the contour either to request assistance with their own comprehension or to express a degree of uncertainty about their knowledge of some aspect of the utterance in question. Used in this way, the focus, normally on a hearer's comprehension, is turned around. Thus in the following examples the speaker is using the rising intonation to ask for evaluation from the hearers of the correctness of his pronunciation or meaning - in other words, "Is this right?", "What does this mean?" or, "How should I pronounce this?"

(38)

S1 because I, he need a, need *a big area ʔ*?

S2 yeah

(ZSH1 8:6)

(39)

S7 who can stay with giraffe? *camel ʔ*?

(ZSH2 8:17)

(40)

S2 *medical ʔ*? *medical suitability ʔ*?S1 *yeah, medical suit-abil-ity ʔ*?

S2 suitable means ... how can I umm:

(MSH1 1:19)

(41)

S1 *does not require university qualification ʔ*?

S2 [ohhh

S4 [mmm

S1 and wha's it mean? I don't know

S2 *so they don't, they don't need qualification ʔ*?

S4 yes that-

S2 -oh for example ahh, they maybe, some of them don't, didn't go to university

S3 didn't [study

S4 | yes

(MSP1 11:17)

This use is something akin to hypothesis testing, an important aspect of output theory, and suggests evidence of learners operating at the fringe of their present competence.

At times the preceding two functions of the contour overlap on a given utterance so that the speaker is expressing both insecure command of an item and a request either for confirmation that it has in fact been understood, or for a correction from a hearer. This overlap is implicit in the following examples.

(42)

S1 OK have you seen the *an-te-lo-pees*? . *an-telopees* /? (ZSP1 15:47)

(43)

S4 ..how many-
 S2 how many checks?
 S1 ok, alright, two is ahh *Gerald* /? *Gerald* /?
 S4 two /?
 S1 the second /?
 S2 Sandy, Gerald, Pamela and Simon
 S1 yes (MSP1 16:50)

(44)

S3 how about you Yuko?
 S2 mm, I, mm .. I don't think, I think patient A is likely to surv- survive only two more years if the heart .. *transplant* /? is successful
 S4 is not important you [mean?
 S1 [yeah what's the meaning? (MSH1 5:35)

(45)

S2 in in in the inside.. /*klɒs*/, /*klɒs*/ /?
 S4 [sorry?
 S1 [yes
 S3 cross-
 S4 -cross-
 S2 -cross
 S1 yes
 S3 cross, yes (ZSP1 9:26)

Third, it may simply be used at the end of an utterance or the end of an information unit out of habit and without a comprehension checking function intended.

(46)

S3 different shapes or symbols ... yeah like, like maybe *like Japanese* /? *different symbols with ahh English* /? *we use alphabet* /? *like in Indonesia* /? and we have ah, I mean we-
 S1 - yes I know
 S3 have symbol the same *alphabet* /? *but in Japan* /? *they use ah: what do you call this* /? *I don't know, maybe you know?*

In this role the HRTC was characteristic of the speech of two of the interlocutors (from

Indonesia and Japan respectively) in the present study. Both were females.

A key characteristic of the HRTC is the strength of its fall/rise pitch which appears to vary according to its intended purpose. At one extreme it appears to represent almost total confidence and is produced by a hearer to encourage a speaker to continue, while at the other extreme it appears to express almost complete non-understanding, in a somewhat similar way to a clarification request, telling the speaker that the preceding item is a cause of difficulty and needs to be dealt with further. As shown above, the HRTC can function in a number of ways including: as a "Is this what you mean?" question; at a much lower level of comprehension as a "What do you mean?" or "What did you say?" question; or as an exclamation of surprise as in "What an unusual thing to say!". This ambiguity is cause for caution when attempting to decide on the function of a particular item carrying the HRTC.

The functional dimensions of negotiation addressed in this section provide some useful insights into the mechanics of negotiation and, in particular, help to clarify the extent to which negotiating questions have the capacity to improve the comprehensibility of input or to provide opportunities for a learner's output to be modified through interaction. In fact the analysis shows that the presence of apparent negotiating forms is no guarantee that negotiation of incomprehensible input or output is occurring. Given the range of functions which can be attached to apparently negotiating questions, negotiation of meaning may be entirely absent even when the appropriate forms are present. Empirical studies may need to acknowledge this problem and refine the analysis protocols they use in order to deal with such complexity. Contextual support for categorization decisions is essential. However, even with this support, decisions based on the subjective interpretations of researchers are at times bound to be highly inferential, a matter which needs to be addressed through reliability data attached to negotiation studies.

5.8.2 The Potential Value of each Category of Negotiation for Language Development

It is one thing to describe the various ways in which learners negotiate meaning in tasks. It is also possible to assess the extent to which each category provides evidence in support of a particular route to SLA. As discussed in Chapter II, it is often claimed by SLA researchers that negotiation functions in two main ways to facilitate language acquisition. First, it improves the comprehensibility of input which learners receive from one another and gives them a higher quality model of the target language on which to construct their proficiency in that language (Long 1981a). Second, negotiation may signal to speakers that there is a problem in their production of the target language forms. It provides valuable feedback enabling them to modify their output and thus provides certain conditions by which interlanguage hypotheses might be constructed or adjusted (Swain, 1985; Schachter, 1986). In the following discussion, each of the six types of negotiating questions is examined in the light of these two routes to learning.

Confirmation checks

The confirmation check is perhaps the least demanding of the negotiating questions in that the response it requires is invariably a simple affirmation or a repeat as in the following example.

(47)

S3	beside the	[behind the cafe ✓?	
S1			yeah beside	[the- yeah
S4				yeah
S3	is ah the room to sell tickets-	[sell tickets	
S2		-		tickets ✓?
S1				tickets ah?-
S3	-yeah tickets			
S2	I see			

(ZSP1 2:17)

Pica, Holliday, Lewis and Morgenthaler (1989) suggest the confirmation check has value in NS/NNS interaction in that it "provides a model of what the NNS wanted to say" (84), and is thus a valuable source of target language input. However, this claim may have limited application to confirmation checks in the present study where the presentation of a modified model distinguishes an item as an elaboration rather than a

confirmation check. Furthermore, NNS/NNS data is unlikely to provide the same accurate modelling of target forms as NS/NNS data, since NNS interlocutors appear to use confirmation checks to confirm their decoding of the oral message rather more than as a way of providing feedback on the correctness of the message.

Clarification requests

A clarification request appears to have considerably more value than the confirmation check for both the speaker and listener. It requires paraphrasing or 'padding' of the previous utterance with new, related information as in the following example.

(48)

- S2 because they said he likely he is likely to survive only two more years if the heart transplant
 ✓?...is successful
 {...}
- S1 *what's the sentence mean?*
 {...}
- S2 oh so if if the heart trans transplant ✓ ?
- S1 yes
- S2 is successful
- S1 [successful] yeah
- S2 he only he only live two more years (MSH1 5:33)

In cases such as this, more complex or more transparent pieces of interaction result from the initial negotiating move. Thus, in the preceding example, the question, "what's the sentence mean?" results in juxtaposition of clausal elements from the initial sentence. This kind of structural manipulation not only provides opportunities for the speaker's competence to be stretched further, but at the same time it provides more comprehensible input to the listener.

Elaborations

Elaborations are also likely to be more complex than confirmation checks, involving a greater level of involvement in the interaction. In an elaboration the hearer is not merely repeating the previous utterance, but also paraphrasing or adding new information to it and presenting this to the initial speaker who must then decide whether it is accurate or inaccurate.

(49)

- S8 so I mean more - just now who give the information about this ah blood pressure?
 S7 [yeah
 S8 [which one do want actually? do want a low one or do want a high one?
 S7 [below-
 S5 [between ninety to a [hundred
 S7 [ninety is too low, you can't [consider
 S8 [mmm
 S7 and and ah above one hundred and thirty-
 S8 -is too high?
 S7 too high
 S8 so what the want, just in between?
 S7 yeah between the [ninety to one hundred and thirty
 S8 [mmm ok

(MSP2 12:33)

Thus both speaker and hearer are involved in coding and re-coding information - a kind of interactive construction of meaning. This appears to be a particularly interesting and valuable kind of negotiation for language learning which might be obscured if not distinguished through separate classification.

Thompson (1982:314) also notes the quality of the interaction derived from elaborations¹ suggesting that these are not just used to point out trouble, but in fact are used more often to expand on a previous utterance, thus providing clear examples of one of the suggested benefits of group work - the mutual construction of meaning. Elaborations are important because, more than any other category, they bring together the previous speaker's knowledge and the present speaker's interpretation or attempt to access that knowledge. In the process, interlocutors, as in extract (50) below, often draw on vocabulary from beyond that supplied by the task (in this case, the words "botanical gardens"), and are all actively involved in constructing meaning. There is in these elaborations evidence of the kind of interaction said to be beneficial for learning from the points of view of both input and output theory. While elaborations have typically been noted in NNS/NS interaction with the NS doing the expanding to clarify the NNS expression (Pica et al, 1989), in the present study we see NNS successfully engaged in expanding on each other's utterances.

¹ Thompson does not distinguish between elaborations and clarification requests.

(50)

S6 yeah mm above playground, so separate the small square?

S7 ah hah

S6 a rose garden

S7 rose garden /?

S6 yeah ro-

S7 -rose garden

S5 near the botanic garden /?

S6 yeah, yeah, yeah, year, low ..

(ZSP2 9:26)

(51)

S7 and ah gorillas have another square, a an another circle but ahh- joined together

S6 -ahh

a joined, [co..co.. connect?

S8 [ohh:

S7 yes connect

S6 between [between

S7 no, but it's a different sq- ahh a different circle

(ZSP2 21:24)

Lexical searches

The lexical search provides perhaps the most direct link between negotiation and learning. As a trigger for negotiation it is the means by which an unknown word is clarified so that it can be used in meaningful interaction. While other categories are defined primarily by function, the lexical search is defined by its focus on vocabulary information. Given the fact that the information it generates is likely to be used in subsequent interaction (and used generatively given the nature of language use in these types of interactive tasks [Hall, 1991]), it is a significant first step towards learning new vocabulary items. In addition, this learning is amenable to testing such as that which is described in Chapter VII.

Comprehension checks

Comprehension checks allow a speaker to monitor the comprehension of listeners and so to modify their output accordingly. This has benefits for all interlocutors. For the speaker the comprehension check provides a way of testing the accuracy of their production against the expertise and comprehension of the other interlocutors. For other interlocutors it opens up opportunities to obtain more information and to improve comprehension.

Try-marking modulations

As discussed earlier, try-marking modulations are a multi-functional phenomenon which cannot be analyzed easily. Nor can they be ignored given their prevalent use by certain speakers. The fact that they are sometimes used in a non-negotiating role in conversational discourse does not detract from the fact that they are also an efficient and indeed an 'easy' way for less syntactically proficient interlocutors to play an active and interactive role in conversation. It is important therefore that try-marking modulations be included in the analysis and examined carefully. In fact, cases in which the speaker uses a HRTC on an utterance to express diffidence about the accuracy of that utterance are, as suggested earlier, possible examples of 'hypothesis testing', an important aspect of output theory.

This discussion suggests that different functional categories of utterances engage interlocutors to a greater or lesser extent in the process of negotiation. Knowing this allows us to make more accurate claims about the relative value of various types of negotiating questions in determining the quality of input and output opportunities likely to occur, the extent to which learners may be drawn into the current interaction, and the degree to which their background knowledge is activated.

5.9 Summary

At the heart of this chapter was a concern with the sensitivity of classification systems used to distinguish different types of negotiation. Commonly used systems appear to oversimplify the range and functional significance of types of negotiation. Thus, the present analysis proceeded to subject some of the commonly held assumptions about the roles of negotiation such as those underpinning Doughty and Pica (1986) to carefully scrutiny through a thorough appraisal of the sensitivity of standard negotiation categories to a given set of data, and a search for alternative complementary categories outside the range of these categories.

To do this, a framework for categorizing and analyzing negotiating moves in terms of their structural, functional and formal properties was developed. The examples of

negotiating and non-negotiating questions provided in this analysis show that, with careful examination of the context of the discourse, it is possible to make reliable distinctions between questions which do or do not have a negotiating function. Six categories of negotiation were found in the NNS/NNS task generated data. These categories were confirmation checks, clarification requests, elaborations, lexical searches, comprehension checks, and try-marking modulations. Discussion of the coding protocols used to arrive at these categories revealed overlaps between categories where the forms typical of one category could and often did function for another category. It was suggested that such complexity required considerable contextualization of each instance within the surrounding discourse to get at the interlocutors' intentions and interpretations.

An analysis of the distribution of categories of negotiation across task types and groups revealed an overall preference for hearer-initiated negotiation over speaker-initiated negotiation, but with a trend for more speaker-initiated negotiation in shared tasks and more hearer-initiated negotiation in the split tasks.

The discussion proceeded by examining the variety of ways in which negotiating questions - confirmation checks, comprehension checks, and try-marking modulations in particular, were used by interlocutors. It highlighted the fact that a standard functional/form-based system of categories appears to overlook a number of the less explicit functions of these items. One reason is that such functions are often conveyed through prosodic features such as stress and intonation and so are difficult to distinguish without careful analysis. A number of functions such as echoing, assessing consensus and expressing an evaluative response which emerged from this analysis were seen to have little value for improving the quality of input learners receive from each other through negotiation. A discussion of the roles of the six categories of negotiation in facilitating language acquisition highlighted the ways in which certain categories (notably clarification requests and elaborations) required greater levels of cooperative negotiation of meaning, and in particular, demanded more of interlocutors as language producers than others.

As a caveat to these points, the value of any given instance of negotiation is affected by a range of complex factors not accounted for in a category description. These include the attention paid by the interlocutors, their expectations, their knowledge of an item, the purpose of the negotiation, the outcome of the negotiation, whether or not the negotiated item is used in subsequent interaction, and finally the kinds of information or dimensions of meaning being clarified. The latter is of central interest in this study and is the subject of the following chapter.

Chapter VI
THE TYPES OF INFORMATION NEGOTIATED DURING TASK-BASED
INTERACTION

6.1 Introduction

The previous chapter examined the ways learners signal the need to negotiate aspects of meaning during interaction. It used structural and functional criteria to describe six negotiation categories. Thus for example, clarification checks use the form of a wh-question and function to elicit more information on the topic of the previous utterance. This analysis clearly supported the observation by Long (1989) that "some aspects of negotiation are probably more beneficial for language development than others" (22). It did not however tell us much about the dimensions of meaning or the kinds of information that are negotiated during task performance. Do learners negotiate an item because they do not know it, do not hear it properly, want to clarify its relationship to what they already know of the task, or disagree with it? Such questions cannot be answered on the basis of a formal or even a functional classification alone and require among other things, an examination of the content and intent of negotiation, that is, what information the user wants to retrieve, and what purpose the negotiation is being used for. Research question 3 (a, b and c) takes up these issues and is the starting point for the construction of a second framework for coding negotiation.

Research question 3

- a. *What dimensions of meaning are negotiated by learners during communication tasks?*
- b. *How are these dimensions affected by task type?*
- c. *To what extent might each of these dimensions increase comprehension and contribute to learning?*

6.2 The Types of Information Negotiated during NNS/NNS Task-based Interaction.

In response to part (a) of research question 3 it is suggested that when learners negotiate they seek to improve their comprehension or understanding of five general dimensions of meaning including the need to:

- 1 Clarify the form of the speaker's utterance
- 2 Understand the lexical components and syntactic structure of an utterance
- 3 Recognise the referential sense of a whole utterance by understanding the content of that utterance in relation to surrounding discourse and the purpose of the task
- 4 Understand and agree on the truth value of an utterance
- 5 Understand procedural aspects of task performance as introduced in a preceding utterance.

The first two categories have a language focus in common, the first distinguished by attention to perceptual concerns and the second by attention to lexis or syntax. The next three categories have a message focus in common, that is a concern with the content and intent of an utterance. Each of these dimensions is operationalized below.

6.2.1 Clarifying the Form of the Message

Before interlocutors can deal with any aspect of the meaning or content of an utterance, they obviously need to have established the form of the message. Where there is background noise, multi-layered discourse or inattention, perception may be incomplete and need to be renegotiated. This can be seen in the following example. S6 is having problems with understanding 'brown bears' partly as a result of having weak listening comprehension, and partly as a result of difficulties with S5's pronunciation (S6 is Japanese and S5 is Iranian, both having been in New Zealand less than six months).

(52)

S5 this brown bears
 S8 [brown bears
 S7 [brown
 S6 /glavrn bilz/ r?
 S8 brown
 S5 brown [bears
 S7 [b r o r?
 S8 bears [b r yeah | yeah
 S5 [bears you know ? |
 S6 what is this ? (ZSP2 3:3)

The problem is clearly one of perception since after the words have been spelled out, S6 responds in a subsequent turn with "bear bears I see bears I see.. sorry, yep yep", showing she clearly knew the item but had not recognised it in oral interaction. What is important about this type of negotiation is that it often involves items that are within the learner's competence but are non-salient for contextual reasons. Although it might also involve unfamiliar items, a form classification will remain appropriate if the negotiating sequence does not move beyond a focus on the surface form of the item.

6.2.2 Clarifying Grammatical and Lexical Meaning

When an item is perceptually clear, comprehension may still be lacking as a result of unfamiliarity with the lexical or syntactic content of the utterance. When this kind of comprehension gap prompts negotiation, attention is directed at meaning at a linguistic level. This kind of negotiation can be the equivalent of the lexical search discussed in section 5.4 in that most meaning-focused negotiation produced by learners in the current study concerned unfamiliar words rather than difficult syntax. Such is the case in the following example.

(53)

S5 how about /gra:fi:/ ? /gra:fi:/
 SS giraffe who knows?
 S7 giraffe is something like a horse but have a-
 S5 -no that zebra
 S7 what do you want? ah, giraffe, ah, ah,
 SS giraffe
 S7 tall with a very [tall neck
 S8 [long neck

S7 no, long neck yeah, the animal with a very long neck, you understand that?
 S5 yes yes yes

6.2.3 Clarifying Content

The next dimension involves negotiation of understanding of the content of an utterance in relation to surrounding discourse and the purpose of the task. Classifying an utterance in this way builds on the assumption that it has been perceived and understood. Thus negotiation is occurring because the interlocutor concerned wishes to clarify the sense of the utterance as it relates to the purpose of the task. This being the case, in both the following examples, "for Simon?", and "under the square you mean?", the essential underlying question behind the negotiation is something like, "How does what you said relate to my knowledge of the task?".

(54)

S1 do you have another?
 S3 yes ahhh German / ?
 S3 for Simon / ?
 S2 yeah
 S3 she speak German / ?
 S1 yeah

(MSP1 4:11)

(55)

S1 do you see the circle?
 S2 under the square you mean?

(ZSP1 8:35)

In the second example, S2 has heard and processed the utterance, "Do you see the circle?", but needs to relate the circle being discussed to the rest of the task. Having perceived and understood what was said on a formal level, there is concern with the sense of the whole utterance.

6.2.4 Clarifying Opinions or Intentions

Interlocutors often use negotiation to express a subjective opinion in relation to a preceding utterance, or to ask the previous speaker to explain their reasoning. This

function was touched on in section 5.8.1. In such cases the speaker is concerned with their own or an interlocutor's ideas, opinions, interpretations, viewpoints, intentions values or judgements. In the following segment in which interlocutors are deciding on the rank ordering of two people, each of the negotiating questions is dealing with this kind of information.

(56)

- S3 maybe one can be two, two can be one, yes ?
 S4 yes I think / so
 S3 / you think so?
 S1 yeah?
 S4 / because
 S3 / do you think so?
 S4 yeah
 S2 why?
 S3 because you know ...

(MSH1 8:24)

Explicit forms of opinion-focused negotiation include "Why did you say that?", "Do you agree?" or "Really!?"

6.2.5 Clarifying Procedures

Negotiation of consensus as to procedural aspects of task performance (as introduced in a preceding utterance) may occur as in the following examples. In both of the following segments, interlocutors S1 and S3 use negotiating forms to clarify the procedures for performing a task.

(57)

- S1 Okay, we start from the left hand side / ?
 S2 yes
 S1 Okay?

(ZSP1 1:1)

(58)

- S3 I still confused with-
 S2 -we have ah-
 S4 -just different conditions
 S2 yeah
 S4 you must explain to us all
 S3 from this?

- S4 from your paper
 {...}
 S2 so how bout yours?
 S1 no ah just use the the second page and tell ahh what conditions
 S4 you can explain first
 S1 ok I, I, now I, I talk my, *I want explain my conditions in here ?..* [in mine ? ok ?
 S2 [mmm, speak
 (MSP1 10:57)

Explicit forms of procedural negotiation include "Who's next?", "What shall we do?" or "Shall we do this ?"

There is, as one might expect, some overlap between the categories. Thus, negotiating lexical or grammatical meaning overlaps with negotiation of the message since the syntax and lexical items represent the message.

6.3 Inter-rater Reliability

To assess the reliability of this five-way categorization system inter-rater reliability data was gathered. Segments of transcripts were selected using the process described in section 5.6. The expert rater, Rater E, took a novice rater, Rater B, through a familiarization session. Rater B was given time to read and discuss a draft of the system and then undertook an independent rating of a number of samples of data. Each sample included a tape recording and a transcript with questions tagged for coding. This was followed by discussion of the system and some minor clarifications of categories.

On a subsequent day each rater carried out independent ratings of the items in the stratified samples. This was followed by comparison and tabulation of the ratings and then by discussion and resolution of differences in ratings. The reliability of both the capacity of the system to distinguish between various kinds of negotiation and the accuracy of ratings by Rater E ratings were assessed.

74% of the items were unequivocally assigned to the same categories by two independent raters. After discussion, all the ratings of Rater B agreed with those of Rater E.

6.4 Applying the Categorization to Data

To code data into the categories described above, the intentions and perception of the speaker need interpreting. Neither of these are necessarily explicit in a given utterance or segment of discourse (Christian, 1980:136) and so coding is necessarily inferential. However, three aspects of an interactional segment assist in determining the appropriate category for an utterance. These are the form of the negotiating question, the propositional content of the utterance being questioned, and the relationship between these two items and the surrounding discourse.

The form and content of the modifying question is the obvious place to start in classifying a negotiating question. A standard *wh-* question is a particularly salient form as the *wh-* word indicates clearly the kind of information being sought. So for example, a 'why?' question usually seeks information about ideas or reasons while a 'who's next?' question usually seeks to clarify a procedure. Other modifying forms are less salient. Thus, even apparently transparent question forms such as 'Huh?', 'What did you say?', 'Is this what you mean/said?', which are typically directed at perception or decoding of the oral message, could conceivably also be expressing surprise and implicit disagreement. In this way, they would be negotiating opinions rather than language. Prosodic features, including stress and a sharp fall followed by a high rise, usually indicated such an evaluative function.

A question like "Excuse me, would you like to explain again ?" (ZSP1 11:7) is problematic as it could equally be the outcome of failed perception, comprehension or understanding of the content of the utterance. In such cases, where the question of itself does not contain enough information to make its purpose clear, it is necessary to examine more closely the second contextual aspect of the negotiation: the utterance being negotiated. By examining the information in this utterance it is usually possible to discover the purpose of the negotiating question. Thus with the comprehension check "...okay?" in "so we start from the beginning, okay?" (ZSH1 1:9), the utterance being questioned is immediately followed by the negotiating question. Because the utterance is introducing a point of procedure, the tag also receives a procedural classification. In

other words procedural information is being negotiated. This is an obvious relationship although it will not always hold when a difficult lexical item or some other potential language problem also resides in the utterance being questioned.

Ambiguity in the utterance being questioned requires recourse to the third aspect of negotiation. This is the relationship between the items under examination and the surrounding discourse. Given that the categories under discussion are highly inferential and not based on a rigid set of formal criteria, it is perhaps the most important of the three. Using general context and surrounding discourse allows us among other things, to draw on our knowledge of the way textual information is distributed in the task and the degree of comprehension displayed in preceding and subsequent interaction to determine the appropriate classification. The need for such analysis of context is seen in the following example. In this segment of interaction interlocutors are deciding which animal should be placed in a cage near a cafeteria.

(59)

- S2 we can change place ✓?
 S3 yes
 S1 ah first ah-
 S2 -giraffe ✓?
 S1 no no, there is still is cafeteria
 S4 yeah
 S1 because the camel, we camel with the restaurant
 S4 yeah
 S1 yeah ?
 S2 yeah
 S3 [cafeteria
 S2 [cafe
 S1 yeah cafeteria ok and ah-
 S2 that's alright -first is giraffe, right?
 S1 giraffe, ok, I like five, [have five ✓?
 S2 [yeah me too, I agree
 {...}
 S4 five ✓?
 S1 five
 S3 five, [giraffe
 S2 [what do [you think?
 S1 [the giraffe
 S2 [do you agree ?
 S4 [its better
 S1 I think the giraffe ✓?=
 S4 no its better for the monkey

(ZSH1 9:24)

S2's "first is giraffe, right?" looks like a standard comprehension check. But how much does this classification actually tell us about the real functioning of the question and the type of information being negotiated? Taken at face value, the comprehension check is a means by which a speaker checks the understanding of a preceding utterance by interlocutors and offers additional help if it is needed. But in this case, the knowledge that this was a comprehension check does not tell us whether what was being checked was the successful transfer of the information that the giraffe was in some way 'first', whether the speaker was checking if interlocutors knew, or had understood her pronunciation of the word 'giraffe' or finally, whether a check of comprehension was in fact taking place at all. In the latter case, the speaker may have been asking if interlocutors agreed or disagreed with her opinion that the giraffe should be first.

It is possible then, that such a question could be directed at different kinds of propositions embedded in the previous utterance. The current classification attempts to distinguish between the various possibilities by examining the broader context of the requirements of the task and the roles of the participants, the surrounding discourse, and the content of the utterance. When these factors are examined in the example above, the following information is found. The first possibility that the transfer of information was being checked is unlikely since the task was a ranking task and so the giraffe was a lexical item in the textual input accessible to the whole group. The second possibility that the meaning of the word 'giraffe' was being checked can be eliminated because the word had been successfully negotiated earlier. Recourse to the recording also showed that in this instance the word was pronounced accurately. Finally, the third possibility that agreement was being sought is supported by the fact that the task involved a ranking activity in which the group was trying to decide on an order in which they would arrange certain animals so as to solve an organizational problem in a zoo. These examples are typical of the kind of decision-making process required by this coding framework and show that while the process was necessarily inferential, problematic coding decisions were often solved through access to the broader discourse context.

6.5 The Proportions of Negotiating Questions Addressing Different Kinds of Information

In response to part (b) of research question 3, hypotheses 4 and 5 were formulated to examine the prediction that attention by interlocutors to specific types of information is characteristic of certain task types. In particular, the concern of the hypotheses is with the extent to which learners performing split and shared information tasks will negotiate either their perception of the form of the oral message, or their understanding of grammatical and lexical meaning. The hypotheses give prominence to these types of negotiation on the assumption that both types will involve interlocutors working on new linguistic features of the input they are receiving. This assumption is examined in the following section.

Hypothesis 4 *A split information task will generate more negotiation concerned with clarifying the form of the oral message than a shared information task. This will be shown by comparative frequencies and proportions of negotiation which attempt to clarify form, lexical and grammatical meaning, content, opinions and procedures.*

Hypothesis 5 *A shared information task will generate more negotiation clarifying lexical and grammatical meaning than a split information task. This will be shown by comparative frequencies and proportions of negotiation which attempt to clarify form, lexical and grammatical meaning, content, opinions and procedures.*

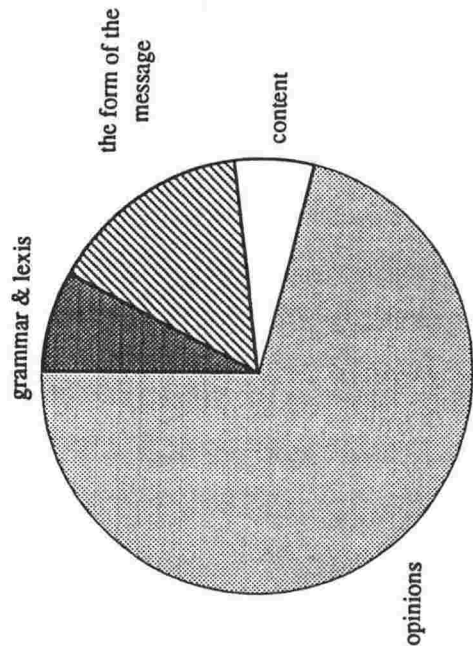
Table 14 shows the respective frequencies and proportions of negotiation in the five categories. The same information is displayed graphically in Figures 10, 11, 12 and 13. Data for the separate groups can be found in Tables C-14 (a) and (b) in Appendix C.

TABLE 14

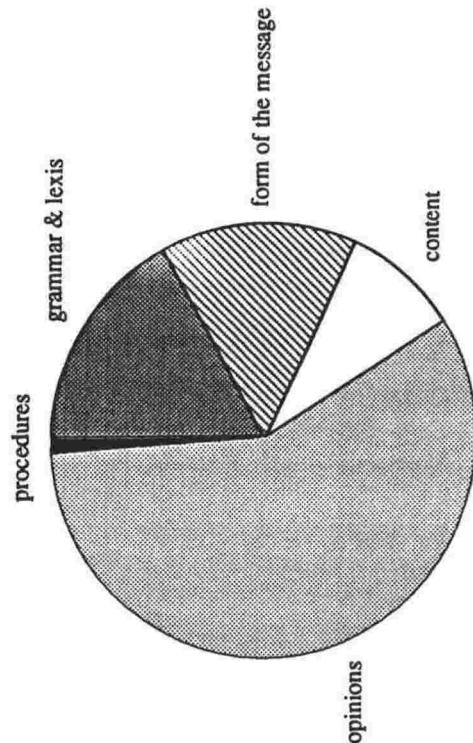
Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" (Expressed as Mean Values for Two Groups)

Task type: Topic: Task code:	Shared		Split		Total
	Medical 1	Zoo 2	Medical 3	Zoo 4	
<i>Clarification of:</i>					
Grammatical and lexical meaning	22 (8)	60 (17)	11 (3)	12 (2)	105 (6)
Forms	39 (15)	54 (15)	202 (51)	161 (24)	456 (27)
Spelling	-	-	33 (8)	61 (9)	94 (6)
Content	16 (6)	33 (9)	75 (19)	417 (64)	541 (32)
Opinions	190 (71)	212 (58)	62 (16)	-	464 (28)
Procedures	1 (0)	4 (1)	14 (3)	4 (1)	23 (1)
Total	268 (100)	363 (100)	397 (100)	655 (100)	1683 (100)

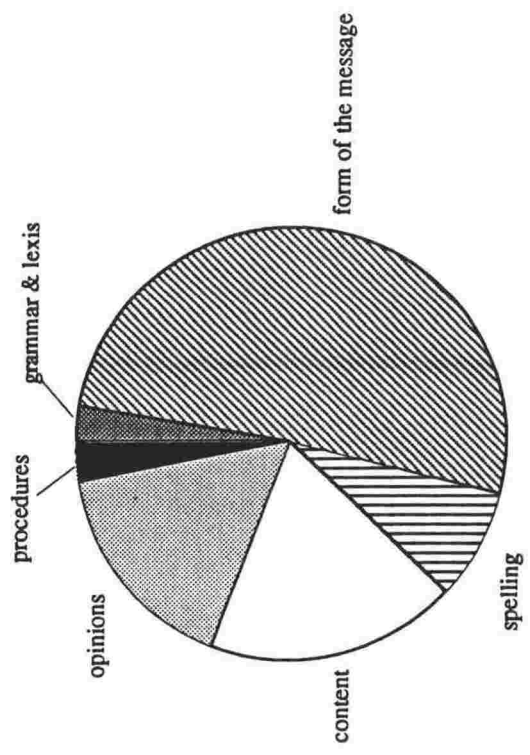
**Task 1
Shared Medical**



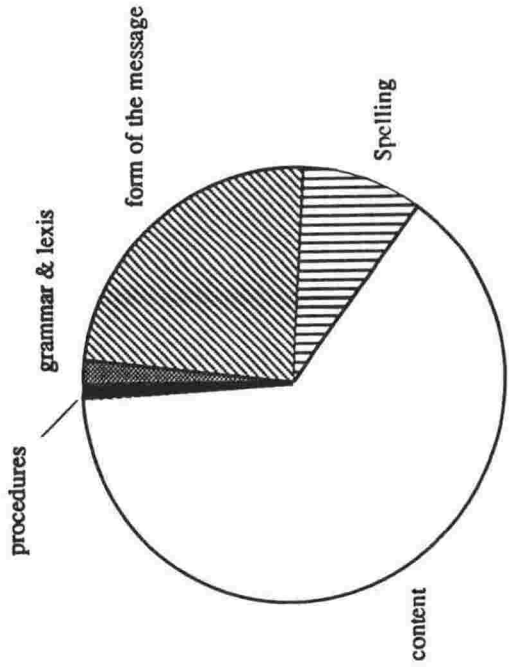
**Task 2
Shared Zoo**



**Task 3
Split Medical**



**Task 4
Split Zoo**



Figures 10, 11, 12 and 13. The Proportions of Negotiation which Address Different Kinds of Information across Four Tasks

A visual inspection of the data in Tables 10-13 reveals a large amount of negotiation concerned with neither the form of the oral message or with grammatical and lexical meaning but with opinions and the task content. Not unexpectedly, the negotiation of opinions dominated the shared task, while for the split zoo task at least, negotiation of content (in this case, of referential and locative directions) was dominant. However, a comparison of relative amounts of negotiation concerned with the form of the message and with grammatical and lexical meaning provides support for both hypotheses.

With respect to Hypothesis 4, between 33% and 59% of the negotiating questions which were produced in the split tasks concerned clarification of the oral message in contrast to 15% for the shared tasks. Furthermore, a subset of this negotiation concerning spelling checks and requests was present in similar proportions in all four performances of the split tasks but was entirely absent from the shared-task performances.

With respect to Hypothesis 5, the shared tasks produced a higher proportion of negotiation of lexical and grammatical meaning. However, overall this proportion was small across all the tasks. While an average of 12.7% of the total number of negotiating questions were word-meaning focused across all the shared-information tasks (the figure was as high as 20% in the shared zoo task for Group 2), an average of only 2.3% of negotiating questions were word meaning-focused in the split information tasks.

Taken together the results of the two hypotheses are complementary. Where the task required the transfer of detailed information as in the split information tasks, the attention of the interlocutors was to a large extent focused at the level of correct perception with attention directed to language form rather than meaning. The frequent requests for spelling in these tasks but not in the shared information tasks confirms this. As a corollary to this, on the few occasions when word meaning was not clear to one or more interlocutors in a split information task, there were two common outcomes.

First, a request for meaning clarification was made but was passed over or ignored by interlocutors who realized such a focus on meaning was non-essential for successful completion of the task. This can be seen in (60).

(60)

S7 shed
 S8 yeah
 S6 what's a spell s m- ?
 S7 -s h e d
 S8 s h e d
 S6 s h e d shed, ahhh
 S7 and the tool shed is ah t o o l?
 S5 shed
 S8 yeah
 S6 ah mmm yeah and?
 S7 yeah ok I don't worry we just write down

ZSP2 658

Second, in split information tasks, there was a strong tendency for no attempt to be made to negotiate the meaning of unknown items. Thus, the negotiation which occurred dealt largely with form. Thus in (61) below, the word 'reptiles' was only dealt with superficially despite the fact that two of the interlocutors involved in this exchange could not recognise the word 'reptiles' in either pre- or post- testing of vocabulary from the tasks.

(61)

S8 next place yeah reptile
 S5 yeah is a reptiles r e p
 S6 dicta what is this?
 S6 r e p t i l l e s yep
 S7 ah hang on -r e p t i l yes, reptiles
 S5 t i l - l? e s
 S8 reptiles reptiles
 S6 reptiles yep l e s yep reptiles yes
 S7 reptiles yes reptiles
 S5 reptiles e s yes
 S7 reptiles
 S5 reptiles and uh opposite this reptiles there is another ...

(ZSP2 2:37)

These examples highlight the tendency for interlocutors to simply transfer or place an item, often without any attempt at understanding its meaning, in tasks in which meaning is non-essential for task completion.

However, in tasks in which the outcome requires a deeper level of understanding such as when an unfamiliar item must be used to solve a problem, interlocutors will often

persevere in extended periods of discourse to get at the meaning of an item simply because they have to. Thus in the following example from the shared zoo task there is an effort to build up an accurate picture of the item in question.

(62)

- S7 [like the hippos, what's that? two hippos number six
 SS [which one?
 S8 [hippos just like the cow?
 SS [hippos, hippopotamus, big animal which live in the pool no, like elephant, big mouth
 S6 [ah big mouth yeah mm so an in the pond in the water and
 SS [yes got a big mouth in the water, in the zoo
 S6 big, big mouth
 SS hippopotamus
 S8 is it something look like
 S5 no, [I, I, alligator?
 S6 [and brown, [brown
 S8 [brown
 SS mm? no no no it is like a pig, a big one
 S5 [alligator? oh
 S6 yeah yeah yeah yeah and brown?
 S8 yeah

ZSH2 1,10

To sum up, it is clear that the meaning of unfamiliar items is often overlooked when the task does not require it of learners, something which Long (1989:22) refers to as the 'least effort outlook'. In contrast, when the task goals require learners to work with the meaning of unfamiliar items, much of their negotiation is predictably focused on the meaning rather than the form of the language.

6.6 Negotiation and the Interaction Hypothesis

In Chapter II the interaction hypothesis (Ellis, 1991) and various claims regarding the role of negotiation in language learning were discussed in some detail. Using the framework developed earlier in the chapter, this section revisits the interaction hypothesis and submits it to critical analysis in response to part (c) of research question 3. The two claims in the most recent version of the hypothesis that warrant attention are that:

modifications to input, especially those which take place in the process of negotiating a communication problem make acquisition possible providing that the learners comprehend the input and notice new features in it and compare what is noticed with their own output, [and that] interaction that requires learners to modify their initial output facilitates the process of integration (203).

These claims advance the interaction hypothesis in two ways. First, the link between comprehension and SLA which in previous versions remained vague and untestable is, according to Ellis, presented in testable terms. It requires that new information in the input be *noticed* in the first instance and then *compared* to output. Introspection and retrospection on the part of interlocutors provide the means by which the researcher can examine the processes of noticing and comparison (ibid:203). Second, output is included in the hypothesis as an independent route for language acquisition. Following this route, the adjustments made to output through interaction and negotiation facilitate the *integration* of new information leading to subsequent interlanguage adjustments.

In the discussion that follows, the claims in the hypothesis will be evaluated against data from the study representing different types of negotiation.

6.6.1 Clarifying the Form of the Message

Where negotiation is concerned with clarifying form we may distinguish three sources of trouble: the form of unfamiliar language items, mis-heard input, and ill-formed input.

6.6.1.1 The Form of Unfamiliar Input

Where an unfamiliar item or construction initiated negotiation in the data, clarification often focused on form or perception through repetition or spelling. If this failed to bring about recognition we might expect further clarification dealing with meaning (e.g. providing a paraphrase). But as has already been noted, in the split tasks many items were often only negotiated for form despite being unknown by one or more interlocutors in the pre- and post-tests (see extracts 60 and 61 above). The fact that learners were prepared to exchange items - that is to spell and locate them as the task required, even when the items themselves were not known is problematic for the link between negotiation and learning. If a learner has difficulty attaching meaning to an unfamiliar item, restructuring by interlocutors only modifies the phonemic form or the spelling of the item in question. Negotiation per se fails to tackle the source of difficulty so that items which were unfamiliar to begin with, remain unfamiliar. Comprehension sufficient for progress on task may have been reached, but this is inadequate for significantly improving familiarity with the unknown item and fails to provide the necessary conditions specified by the hypothesis for acquisition to occur.

6.6.1.2 Mis-heard Input

A second reason for form-focused negotiation was that input was misheard because of situational constraints on processing such as inattention, background noise or overloading of the processing capacity of the learners. In such cases an unfamiliar item might be coincidentally involved, but primarily such negotiation simply replayed known items to achieve comprehension. This type of negotiation goes no further than comprehension because unfamiliar linguistic input does not need to be present for the negotiating sequence to have occurred. Negotiation functioning in this way typically used confirmation checks as in the following example where S7 is having trouble processing incoming input at the same rate as other interlocutors.

(63)

S6 nineteen and blood pressure one hundred fifty one
S8 one five one

in diagnosis of the exact source of the problem, much less parsing of the difficult syntax and integrating it into interlanguage. In fact, where negotiation generated restructuring, comprehension of the modified structure often seemed to override memory of the initial structure so that the focus of attention was on the comprehensible restructured item which did not contain the original source of trouble. This appears to happen in (66) where an unfamiliar construction is likely to survive only two or three years if the transplant is successful is confronted and presented in a modified form for comparison.

(66)

- S1 *first one ah not good, likely to survive only two or more years if the heart transplant is successful, huh? if it successful still only two or more years? that means that?*
 S2 yeah
 S4 yeah
 S3 yes
 S1 if if it failed then die suddenly will die
 S3 maybe only survives only two more years, so after that ah he will die-
 S1 -yeah
 S3 yeah we can say this

MSH1 1,28

Thus, unless there is opportunity for reflection and exposure to the original problematic utterance alongside its modified version, the message encoded in the unfamiliar syntax may be made semantically salient which contributes to the communicative goal even while its linguistic form remains unanalyzed. Whether a problematic grammatical feature is 'noticed' is difficult to say without recourse to the introspection of the learner.

In the data, problems with syntax caused only a very small number of negotiating sequences. This may be a reflection of the kind of input in the tasks - an abundance of discrete words and phrases rather than lengthier sentences. But it may also reflect a more general trend to focus attention on a lexical item rather than on a whole phrase when faced with a comprehension problem. The former is a more salient, readily identifiable source of trouble which, when resolved, can substitute for not fully understanding aspects of the surrounding syntax.

Difficult syntax may also prompt learners to engage in negotiation in different ways from vocabulary and oral perception problems. While problems with an unfamiliar word may be easily solved through direct negotiation between interlocutors, unfamiliar syntax

may be more easily unravelled by the learner comparing the input which contains the problem with existing interlanguage and L1 rules. This can be seen as a kind of internal negotiation (or 'internal strategies' - see Loschky and Bley-Vroman, 1990:167-8) which reduces the need for more direct negotiation between interlocutors, a suggestion which has parallels in a study by Holliday (1992). Holliday suggests that it is the separation and chunking of phrase constituents in negotiated sequences which provides important cues as to the way the target language is constructed. Syntactic knowledge is thus acquired through exposure to the language of negotiation rather than through the negotiation of syntactic problems per se (see section 2.4.2 for further discussion of this point). Similarly, Færch and Kasper (1986) propose that in active communication, unattended input, that is input comprehended for its message rather than for its linguistic structure, can interact with the processing systems of the learners to result in learning.

6.6.2.3 Lexis

In the case of lexis, the very act of initiating negotiation also typically entails *noticing* the presence of the new item which in turn also implies the process of *comparison* through which the learner fails in their search for a match in their present SL repertoire. According to the interaction hypothesis, it is under these conditions that the item is available to be integrated into the learner's interlanguage as in the word fraud in (67).

(67)

- S6 so mm, if so, why do you, do you think E first the F?
 S7 huh?
 S8 at ah F?
 S6 mm
 S7 I think the the the personal characters [is not very good
 S6 [mmm mmm
 S7 because ah he's a criminal record [for the fraud?
 S8 [no his job-
 S7 -and [the age, no no no this is against the law yeah illegal [job yeah
 S5 [yeah (laugh) job but illegal job [ohh (laugh)
 S8
 S5 they [cheat someone like this
 S7 [and ah, and ah

MSH2 5,6

The likelihood of acquisition occurring is increased as the item is used in the

meaningful context of the task. Post-test improvements on vocabulary scores in the study (as reported in the following chapter), show the effectiveness of shared tasks in providing the necessary conditions under which new vocabulary can be acquired. This area of negotiation is the subject of the following chapter.

6.6.3 Clarifying Content, Opinions and Intentions

A large proportion of negotiation in the study was concerned not with clarifying the oral message or with problematic linguistic features, but with either contextual reference that required greater specification, or with ideas and opinions that provoked a response such as disagreement or surprise. In the following example, contextual reference - the location of S6's 'the circle' is being negotiated.

(68)

- S5 [kiwis which?
 S8 [where? where?
 S6 [mmm the circle /? circle, top circle, top top
 S7 [the circle /? yeah, the top one
 S5 [which ? top circle or?
 S5 half circle, [yeah
 S7 [yeah the big the big circle /?
 S6 yeah
 S8 ohh not this this-
 S6 [-kiwis
 S5 [means a half, half circle /?
 S6 yeah half circle, separate top, yeah? and k i-
 S7 -he means, ahh she means, ahh sorry, she means the circle
 S8 circle, circle
 S7 have separate two
 S5 no no no, there is two circle, one is half circle, one is full
 S6 ahh sorry sorry, mm yeah, big circle
 S5 big circle /?
 S6 yeah big circle, sorry, so kiwis

ZSP2 10,3

During a series of negotiating sequences S6 progressively adds more specification to her reference point ("top circle", "half circle", "ahh sorry sorry, mm yeah, big circle") making her initial utterance "the circle" more referentially comprehensible for interlocutors in the sense that it allows them to accurately place this initial locative reference ("the circle") on their versions of the task sheet. But despite this lengthy negotiating sequence, there were no new features in the input to be noticed and matched

against output. S6 simply clarified the fact that the circle to which she referred was 'the top, half, big one' rather than 'the small bottom one' (see the task-four sheet in Appendix A).

While this kind of negotiation might map successfully onto the first four steps in the model, covering difficult input, negotiation, modification and comprehension, it can go no further since there is no obvious feature in the language to be acquired.

6.6.4 Output in the Model

The previous section affirmed the consistent finding of this study that evidence of an input - interaction - acquisition link is mixed and needs to be qualified by a clear understanding of what is being negotiated and for what purpose. But this still leaves open the claim that negotiation concerned with the accuracy of a speaker's language, that is with production rather than comprehension, might provide an effective route to acquisition. In the following example (69), negotiation causes the speaker to make adjustments to her message which correspond more closely to the target language model. The speaker gives explicit acknowledgement to the differences between their initial and later output and so has fulfilled the noticing and comparing conditions of the interaction hypothesis.

(69)

S1	yes and another meaning is another meaning is the crocodile must away from the /gra:fi:/
	/gra:fi:/
S4	mm pardon?
S2	/gra:fi:/? what does-?
S1	what does mean ?
S3	which one? giraffe giraffe
S2	giraffe giraffe yeah that's alright
S1	giraffe giraffes sorry giraffe ah must away from the
	MSH2 2,47

Such cases were frequent enough in the data to make a substantial case for the benefits, at least in the short term, of learners negotiating the accuracy of production by interlocutors. Longer term 'integration' beyond accurate use of a modified item in subsequent task performance remains unverified at least in regard to the data available from these particular performances. If this final link is to be made, it may be necessary

on them in a subsequent session.

There is a further qualification at least in terms of the data being examined here. Even when a learner's output contained a non-standard feature which was subsequently modelled accurately by interlocutors during negotiation, this was no guarantee that the noticing, comparing and integration stages in the model would occur. In other words a learner might produce a non-target like utterance and have this correctly modeled by an interlocutor in subsequent interaction and yet still not notice the difference. Where the target form is noted, there may still be insufficient time permitted by performance conditions or inadequate motivation on the part of the learner for this target form to be compared and integrated in subsequent performance. There appear to be two main reasons for this. First, learners performing these tasks are driven primarily by the communicative imperative. Thus when communication breakdown occurred because of a lack of language competence, the learners often resorted to avoidance or to another strategy for communicating their intentions. In either case the problematic feature of their initial output was not dealt with. This is particularly common in negotiation produced in the split tasks where, after a couple of attempts at making a word comprehensible, the speaker simply resorted to spelling it out as in the following sequence.

(70)

S1 reptile, ah reptiles
 S4 reptiles
 S1 reptiles /?
 S1 reptil[es reptiles
 S2 i l hang on, i? l e, p t yep
 S2 yep
 S3 reptiles

ZSP1 2,42

Second, negotiation concerned with some items fails to make the problem in the initial output salient to the speaker and so output remains unchanged. Thus in the following examples S8 does not notice the difference between her use of /s/ in shed and shelter and correct use of /ʃ/ presented a number of times in negotiation by interlocutors.

(71)

S8 /sed/, /sed/, s h e d /sed/
 S6 s ?
 S5 /jed/
 S7 /jed/
 S8 [I don't know /sed/?
 S7 [s h e d
 S5 /jed/
 S8 [s, what's the meaning of /sed/? no: yeah? oh:
 S5 [/jed/ means some materials
 S7 it's a whole name its a feed- and a tool?
 S8 - and tool /sed/ /sed/
 S7 /jed/
 S8 yeah
 S6 [what's a spell, s m? s h e d
 S8 s h e d
 S7 s h e d and the tool /jed/ [is ah t o o l?
 S6 [/jed/ ahhh
 S5 /jed/
 S6 ahhh

ZSP2, 6,38

(72)

S8 [two arrow yeah a public /s/elter /s/elter /s/elter
 S6 [yep a public /s/elter? rubic?
 S7 ahh ahh pub-
 S5 [centre? s l- /s/elter? /s/elter
 S8 [/s/elter yeah /s/elter s h e l t e r
 S6 [what is /s/elter? s? s h? [yep /s/elter yep
 S7 [s h
 S5 [/s/elter yes
 S6 [public /s/elter
 S8 [public /s/elter
 S7 [a l t /s/elter
 S6 [mmm that's right

ZSP2 15:17

As a result of neither noticing or comparing, the output of S8 remains unchanged subsequent to negotiation and so there is little possibility of the new feature (the /j/ sound) being integrated into her interlanguage through the negotiation process.

These qualifications aside, data from the present study clearly supports the link between opportunities for learners to have their output modified by other learners and subsequent short term improvements in the accuracy with which they produce these modified forms.

6.6.5 Assessing the Evidence

Reviewing the evidence in this and preceding chapters it is clear that much of the negotiation occurring in the present study failed to meet the conditions (as specified in the revised version of the interaction hypothesis) by which negotiation of input might result in SLA. This can be seen in Table 15 which presents a summary of the previous discussion in the form of a component analysis. In this table, the components in the hypothesis (see page 15 and page 148) are set out along the top row so they can be matched against the various kinds of negotiation discussed in previous sections and located in the left column of the table. A tick (✓) in a given slot indicates that evidence was found to support the link this slot represents. A question mark (?) indicate mixed evidence, and a (-) indicates that no evidence was found to support the link being represented.

While negotiating sequences in which input is made comprehensible through negotiation are not difficult to find in the data, only a proportion of these (including in particular those dealing with unfamiliar vocabulary) were triggered by a new linguistic feature in the input. In many cases negotiation was concerned not with unfamiliar language but with contextual reference or with checking and comparing opinions. Where negotiation did involve a focus on language it was largely prompted by problems understanding the non-target like language production of NNS interlocutors that of itself contained neither new or unfamiliar items. Even where new linguistic items were the focus of negotiation, the presence of negotiation was no guarantee of accurate modification, of comprehension, or that the conditions were present whereby noticing and comparison might take place.

However, when the output route to SLA is examined, the evidence from the present study is more promising. First, there was a large amount of non-target-like production available for improvement through negotiation. Second, in many instances modification did occur with the result being greater accuracy in subsequent production.

Table 15

Component Analysis for Analyzing the Roles of Input and Interaction in Language Learning.

SOURCE OF TROUBLE	STAGE							
	negotiation	modification	comprehension	(new feature)	noticing	comparison	integration	
Clarifying the form of the message i. Language form ii. Mis-heard forms iii. Ill-formed input	✓	✓	✓	?	✓	✓	✓	
	✓	✓	✓	-	-	-	-	
	✓	✓	✓	-	-	-	-	
Clarifying lexical and syntactic meaning i. Lexis ii. Syntax iii. Morphology	✓	✓	✓	✓	✓	✓	✓	
	✓	✓	✓	✓	?	?	?	
	✓	✓	✓	✓	-	-	-	
Clarifying content, opinions and intentions	✓	✓	✓	-	-	-	-	
Output	✓	✓	✓	✓	?	?	?	

In making these claims, two qualifications warrant mention. First, the finding was based on negotiation between non-native speakers. Clearly, learners interacting with other learners of a similar proficiency and not with NS or with learners of markedly different proficiencies are likely to generate a different kind of interactive style than either of these latter options. As the data shows they certainly produce a lot more ill-formed language than could be expected from a NS. They may also not be as proficient at providing appropriate input or feedback on errors when they occur. It may be that NS interlocutors for example would provide the necessary participant dynamics by which new linguistic input was negotiated more thoroughly and by which output by learners was more carefully monitored and subject to negotiation where it was non-standard. This is an issue which goes beyond the scope of the present study, although it is worth recalling that, as discussed in Chapter II, less negotiation tends to occur in NS/NNS dyads than in NNS/NNS dyads (Varonis and Gass, 1985) and that furthermore, NS have been found to correct only a very small proportion of deviant output in such dyads (Porter, 1986).

Second, although the finding was based on a substantial amount of data (1015 negotiating questions from total interaction of 27,969 words), the data was derived from only a small number of tasks. The question arises then, as to whether changing the tasks might solve the input problems of the learners (and the tasks) failing to provide enough new and challenging linguistic material for exploration through interaction, and not always negotiating for meaning when this material was available. Task solutions to the input problem include: pitching the text content for a task so that it provides a reasonable linguistic challenge; combining the depth of involvement with the content required by the goals of the shared tasks, with the requirement to negotiate comprehension seen in the split tasks; and finally, building a language focus into the task goal. These suggestions are discussed more fully in the conclusions in Chapter IX.

6.7 Summary

This chapter outlined a framework for categorizing types of information being negotiated by the learners in the study. Since the type of information being negotiated is likely to have a strong bearing on what is brought to attention, what is repeated and modified in output, and by implication, what is learned, it is an important consideration in a discussion of the link between negotiation and SLA. The framework distinguished five broad categories of negotiation concerned with clarifying the form of the message, clarifying lexical and grammatical meaning, clarifying sense and content, clarifying opinions, and clarifying procedures. Accurate coding of negotiating questions into these categories relied heavily on examination of the immediate and wider discourse contexts in which the negotiation occurs. Provided these contexts are taken into account, it is possible to make accurate coding decisions. These decisions are facilitated by certain predictable relationships between functional and informational categories.

Split tasks tended to produce negotiation concerned with clarifying forms and content while a major proportion of negotiation in the shared tasks concerned the clarification of opinions. The large proportion of negotiation concerned with clarifying forms in the split information tasks was not seen as particularly useful since it often failed to address word meaning and dealt with relatively minor points of pronunciation in a time consuming way. In doing so it often halted forward progress on the task making communication less effective.

The framework was matched against the claims of the interaction hypothesis in the third part of the chapter. The discussion suggested that the speculative relationship between negotiation and acquisition which motivates many studies of NS/NNS and NNS/NNS interaction, tends to ignore both the complexity and multi-functional nature of negotiation and the influence of task type and task content on the quality of negotiation. While broadly speaking the analysis provides plenty of evidence of negotiation improving comprehensibility, much of the input requiring clarification was ill-formed in some way and so failed to contain new or challenging linguistic material to be

'acquired'. While there are perhaps social and strategic skills to be learnt from such negotiation these are not covered by the hypothesis. However, from an output perspective the evidence more readily supports the claim that improved accuracy of language production results from negotiated demands to restructure and repeat ill-formed utterances. But for the output link to be sustained it may be necessary to devise an analytical measure of integration of the modifications arising from negotiation of initial output beyond those which are visible in short term adjustments to output. This may involve the researcher noting linguistic features which interlocutors pay attention to in negotiation and assessing production of these features on subsequent occasions. The following chapter attempts to do this through examining retention of new vocabulary from the tasks by the learners as a result of task performance.

Chapter VII

NEGOTIATION IN RESPONSE TO UNFAMILIAR VOCABULARY

7.1 Introduction

The previous chapter introduced a categorization of negotiation in which negotiating questions were distinguished according to the particular types of information they sought to clarify. This chapter examines the learning outcomes associated with one of the ensuing categories of negotiation - the negotiation of unfamiliar vocabulary. The research question motivating the discussion is as follows:

Research Question 4

To what extent do vocabulary gains occur during communicative task performance, either as a result of incidental exposure to unfamiliar words or through the active negotiation of the meaning of these items?

The question rests on two suppositions: first, that each learner brings something different to a task in terms of their understanding of the target language, and second, that interlocutors will tap into each other's understanding to help overcome comprehension problems. These two suppositions are examined in light of data from the study and then Hypothesis 6 is introduced to address the research question.

7.2 A Comparison of Pre-test Recognition of Task Vocabulary by Different Learners

A study by Saragi, Nation and Meister (1978) showed that there is surprising variability between the vocabularies of individual learners at a similar proficiency level. Using a word knowledge test with Indonesian EFL learners, the authors found that only 12% of the words were known by every learner while 30% of the words were known by at least one learner (Twenty learners were tested). These learners were in an English as a foreign language (EFL) situation in which exposure to English was mostly limited to a set curriculum, classroom and textbook. Variability in word knowledge between students is likely to be even greater in an ESL context where exposure to the language in the social environment is rich and varied, and where learners may have quite different backgrounds. The present study took place in just such a context, and so it seemed a reasonable premise that the learners from the study would have a good chance of receiving help when confronted with unfamiliar words while working on a group communication task.

Thus, the first supposition on which research question 4 is based is that the learners, when working cooperatively in groups, will have access to a larger pool of vocabulary than would be available to them when they were working independently. Provided that learners were prepared to share their knowledge, this vocabulary pool would in turn provide wider coverage of unfamiliar vocabulary encountered in the accompanying texts for the tasks. To test this supposition, the content words from the task sheets were presented to the learners in a pre-test prior to task performances. The test consisted of 111 words which the learners were asked to identify by providing either a definition, translation, or illustration of each word. In an initial analysis of the results, words were classified as to whether they had been identified correctly by all the members of a group, by at least one member but not all, or by none of the members. The results are displayed in Table 16.

TABLE 16

Prior Knowledge of Task Vocabulary

	Number of words	
	Group 1	Group 2
Words recognised by all learners	38	39
Words recognized by one or more learners, but not by the whole group	61	58
Words not recognized by any learners	12	14
Total	111	111

As the results show, a considerable number of words were not known by at least one member of a group; 73 such words for Group 1, and 72 for Group 2. However, the majority of these unfamiliar words were known by at least one other member of a group; 61 for Group 1, and 58 for Group 2. Thus in each group, at least one of the learners (but often more than one) had the required knowledge to assist with most of the cases of unfamiliar vocabulary. No one learner was responsible for an unduly large proportion of these unknown words (or for the known words) as the pre-test scores for the individual learners in Table 18 show.

It is therefore reasonable to claim that the different vocabularies of the learners in the study had the potential to expand the vocabulary available to any one learner participating in the tasks. While this is to some extent an obvious assumption, it illustrates the complementary aspects of proficiency brought to the group performance of a task by individual learners.

7.3 The Accuracy of Responses to Word Clarification Requests

Since the data shows different learners bringing unique vocabulary knowledge to their participation in the tasks, it seems reasonable to assume that when called upon to use this knowledge to help each other, they will do so, and will do so successfully. Thus, the second supposition underlying research question 4 was that the learners in the study would be capable of providing effective help in response to requests for assistance with word meaning. This supposition was tested through careful analysis of the outcomes of each instance of negotiation dealing with word meaning. Table 17 summarises the results of this analysis. A more detailed account of the outcomes for each word is found in Table C-17(a) in Appendix C.

These results provide evidence of learners giving each other considerable assistance with word meaning. Of the 49 words negotiated for meaning only two resulted in incorrect information being given. Coincidentally, it was one word alarmed which accounted for both of these instances since it was negotiated with an incorrect outcome by both groups. In Group 1, one group member did in fact provide accurate information about the word, but being a quieter group member of the group, his suggestions were overshadowed by the wrong attempts at defining the word from a more assertive group member. The first learner suggested the word meant surprised (which could be an adequate synonym), and the second member defined it as meaning warning which is a near approximation of at least one meaning of alarm, though not the one required here. In Group 2 alarmed was glossed as naughty and dangerous by two group members. Again, dangerous collocates with at least one aspect of the meaning of the word, if not that required in the context. So even in the two cases in which incorrect information was supplied by the learners, this information was partly correct and displayed good use of guessing strategies, including the use of context.

A further four words required a certain amount of assistance from a supervisor, and another word was defined solely by the supervisor. But overall, the results show the learners effectively drawing on group knowledge to solve comprehension problems concerning unfamiliar vocabulary. The results were achieved with very little outside

assistance from supervisors and without reference to dictionaries.

TABLE 17

Responses to Word Clarification Requests (Groups 1 & 2 Combined across all Task Performances)

Responses	Occurrence
1. Accurate information provided by interlocutors	29
2. Information provided on word form only (e.g. spelling)	11
3. Adequate information provided with supervisor assistance	4
4. Adequate information provided solely by supervisor	1
5. Word-meaning request overlooked or avoided	2
6. Incorrect information provided	2
7. The number of words and phrases targeted by word clarification requests	49

7.4 Vocabulary Gains as an Outcome of Communicative Task Performance

In the previous sections two suppositions were examined and shown to be supported by the data. These were that learners would bring differing vocabulary knowledge to a task, and that in a group learning context they would use this knowledge effectively to assist each other. The present section examines the prediction that communication tasks are able to foster a significant amount of vocabulary learning, provided that learners who perform the tasks encounter unfamiliar vocabulary in the process of accomplishing meaningful communicative goals. Vocabulary learning was measured through the use of pre- and post-tests of words from the tasks in this study. All the words negotiated

for meaning in the data were from the textual input for the tasks. The testing required learners to provide either translations, definitions, pictures, paraphrases, or examples of words taken from the accompanying texts for the tasks. While not a particularly rigorous form of testing, this had the advantage of not exposing learners to additional information about the words prior to the tasks. Section 3.8 of Chapter III contains a description of the pre- and post-test methodology. Hypothesis 6 was formulated to address the research question.

Hypothesis 6 *Learners will make significant vocabulary gains (measured in pre- and post-testing of recognition of task-vocabulary) as a result of performing communication tasks, and of negotiating unfamiliar words with other learners.*

Table 18 presents a summary of results concerning recognition of words in the pre- and post-tests by learners in the study. These results are displayed in a bar graph in Figure 14. Learners were able to recognize and provide meaning for significantly more words on the post-test. A matched t-test gave an observed t -value of $-7.66_{(7)}$ which allowed the null hypothesis to be rejected at the $p < 0.001$ level of significance. Improved post-test recognition occurred for an average of 16 (or 14%) of the 111 words tested with the smallest improvement being 10 words (a 9% increase) and the largest, 21 (a 19% increase). This is a promising result given that very little help with difficult words was given to learners by the supervisors during the performances. It shows that vocabulary learning can occur through task performance where the focus is on meaningful communication and where unfamiliar vocabulary is met either incidentally or through explicit negotiation. This is, of course, what must happen in first and second language acquisition under natural learning conditions.

TABLE 18

Pre/Post-test Results for Recognition of Task Vocabulary (111 Words)

Subjects	Words known	
	Pre-test	Post-test
S1	55	76
S2	82	92
S3	81	94
S4	69	90
S5	74	88
S6	60	78
S7	68	84
S8	70	83
Mean	69.9 (63%)	85.6 (77%)

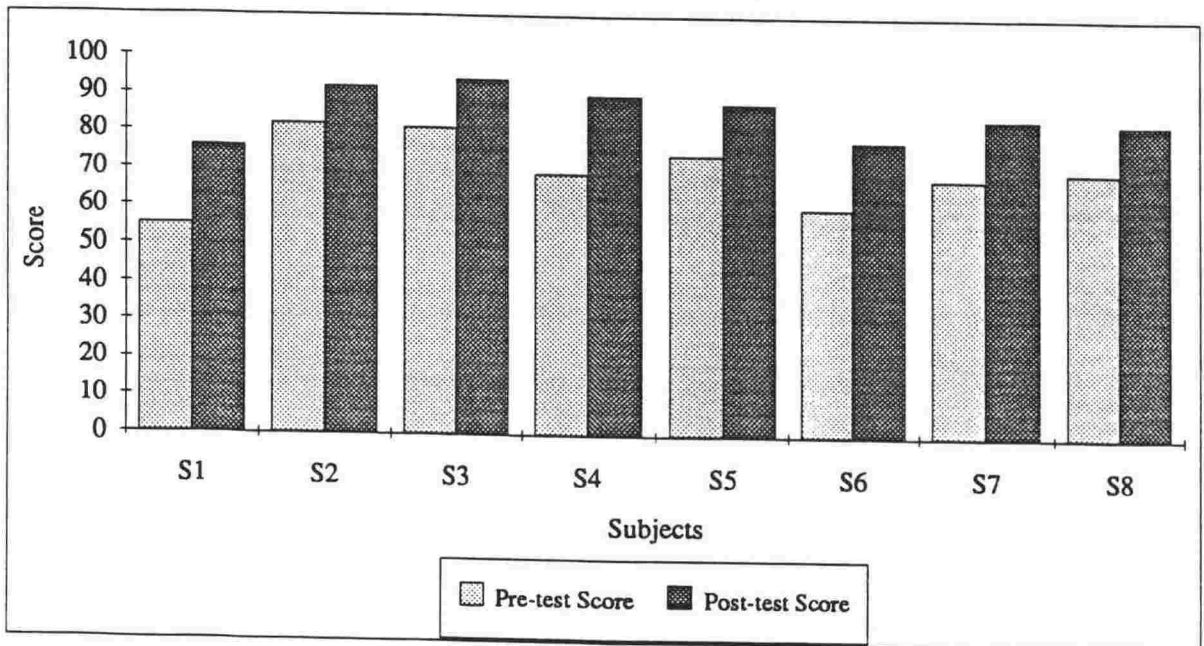


Figure 14. Pre/Post-Test Results for Recognition of Vocabulary (111 words) from Tasks Performed by Eight Learners

While these results are promising they fail to link gains to particular interactional processes. So what caused the gains? Was exposure to words in a meaningful context enough to ensure learning? Was vicarious exposure to negotiation of unfamiliar vocabulary sufficient or did explicit negotiation of the meaning of a word have the greatest impact on post-test gains? To deal with these issues, comparisons were made between post-test gains for words negotiated for meaning and words for which no meaning was sought or provided. Table 19 displays this data. Data for each Group can be found in Tables C-19(a) and (b) in Appendix C. A breakdown of the data in these tables for individual words across the eight task performances can be found in Table C-17(a) and C-19(c) in Appendix C.

The majority of words which were negotiated for meaning were recognized and accurately defined by more learners on the post-test than the pre-test (18 out of 24¹ or 75%). But it is at least as important to note that many apparently unfamiliar words were not explicitly negotiated for meaning. Although learners made 49 requests for clarification of word meaning (see Table 17), in total 152 (94 + 58) words were not known by at least one member of either group leaving many unfamiliar words for which clarification was not sought overtly. This can be explained in a number of ways. First, the pre-test may not have been a true assessment of the ability of the learners to recognize the words from the tasks in that it only assessed their ability to recognize words in a decontextualized list. Thus, at least some of these apparently unfamiliar words may not have been entirely new to the learners. When the learners had to respond to these words in a task, contextual information was available to prompt recall of previous encounters with the words, and so to provide the necessary information on word meaning.

¹ This number is derived from the total (34), less the words which were negotiated for meaning but not tested (10).

TABLE 19

Post-test Results for Words Negotiated for Meaning and Words not Negotiated:
Groups 1 and 2 combined

	Words for which meaning clarification was sought			Words for which meaning clarification was not sought	Total
	Adequate information provided	Information provided on word form only	Wrong information or no information provided		
Known by all (pre- and post test)	1	1	-	65	67 _a
Not known on pre-test: post-test improvement	18	6	1	69	94
Not known on pre-test: no improvement	5	3	-	50	58
Attrition	-	-	1	2	3
Not tested	10	1	2	-	13
Total	34 _c	11	4	186	235 _b

- a. It might be noted that the total for data row 1 [Known by all (pre- and post-test)] is 67, whereas in the earlier Table 16 the equivalent total was 77. This difference occurs because Table 16 was based on an analysis of pre-test results only whereas the present table is based on both pre- and post-test results in which: (i) words which were known by all on the pre-test but for which more precise knowledge was displayed in the post-test by one or more subjects (7 words) were included in the second row (post-test improvement); and (ii) words which were known by all on the pre-test but which registered attrition in the post test were included in the fourth row (3 words).
- b. This total is comprised of the number of words in the test (111) multiplied by two (for the two groups). It also includes 13 words or phrases which were negotiated for meaning but not included in the test for three reasons:
- i. The test included only single word vocabulary items, whereas phrases such as medical suitability and on the point of were also negotiated for meaning.
 - ii. Five words were omitted from the test in error (fair, zebra, wolves, flamingoes, bear).
 - iii. Function words were not tested and neither were certain other words which were expected to have been known (filled, written, playground, seat).
- c. This total includes 5 words defined with help from the supervisor.

Alternately, the meaningful use of a word by other learners may have provided the information necessary to fill the knowledge gap without the need for explicit clarification requests. This suggests a useful role for vicarious learning in group work whereby problems with unfamiliar input can be overcome through listening to and watching interlocutors interact. In this regard, 69 (or 57%) of the unfamiliar words for which no meaning clarification was sought or given (and which were not recognized in the pre-test by at least some learners) also showed post-test gains. While the proportional increase is not as great for these words as for the negotiated words (57% compared to 75%), this result suggests that even without overt negotiation of word meaning, exposure to unfamiliar words in tasks which provided plenty of contextual support, and which required the active participation of the learners, was sufficient to encourage learning of new vocabulary. But the fact that 50 (or 42%) of the words which were unfamiliar to at least one learner in a group and which were not clarified for meaning failed to show post-test gains also suggests that individual group members could remain inactive in interaction, thus neither knowing, learning, or using the unfamiliar vocabulary even though the group completed the task successfully.

7.5 The Effect of Task Type on the Treatment of Unfamiliar Vocabulary by Language Learners

The issue of how task types affect the way learners react to unfamiliar vocabulary was addressed in section 6.5 of Chapter VI in response to Hypothesis 4. However, it is worth reviewing the issue in the context of the present chapter. As was pointed out earlier, for shared tasks to be performed successfully, learners need to make judgements and comparisons, and form opinions on the basis of information contained in the shared textual input. The meaning of words thus becomes essential. Predictably then, more negotiation concerned with word-meaning occurred in these tasks (between 8-17% of all negotiating questions) than in split information tasks (between 2-3% of all questions) (see Table 14 in Chapter VI).

For the split information tasks used in this study, the meaning of words was less crucial. While these tasks encouraged a great deal of negotiation, little of this dealt with word

meaning. Even where word meaning clarification was sought, 10 of the 24 responses in the split tasks failed to provide explicit information on meaning. Instead, a repeat or spelling of the words in question was presented (see Table C-19c). A number of these responses were by learners who, according to post-test results, had no idea what the words actually meant. They were content to let meaning lie unresolved, because the goal of the task (accurate transfer of information such as labels) did not require it.

7.6 Implications for the Classroom

The exposure to, and learning of unfamiliar words is not likely to be the main goal when communication tasks are used in the language classroom. The presence of too many unfamiliar words in a communication task is likely to subvert the communicative purpose of the task. On the other hand, ensuring all words are within the competence of all learners, while also making the task as authentic as possible, is both difficult and unrealistic given the normal different vocabularies of learners. It also restricts task design and assumes too much about a teacher's knowledge of learners' vocabulary.

A middle road, and one no doubt taken by default in the use of tasks in most classrooms, is to roughly tune the task to the level of the learners so that some unfamiliar words are likely to occur in the textual input of the task, but accompanied by enough contextual support to help the learners deal with these words. Support can also be provided through pre-teaching and through the provision of glosses or dictionaries. Alternatively, learners can be encouraged to assist each other through the negotiation process. Results from the present study indicate that this alternative is promising. The learners in the study provided each other with good quality information on the meaning of unfamiliar words when asked by other learners to do so, and in subsequent post-tests, significant vocabulary gains were recorded as a result. These results are encouraging and support the engagement of learners in group work on communication tasks which contain unfamiliar and useful vocabulary.

The following extracts (73) & (74) demonstrate the kind of help learners provided for each other in respect to word meaning. In (73) learners use a combination of

exemplification ("crocodile", "lion scaring rabbit"), paraphrase ("two animals will join together so we must separate them", "because its often will attack") and definition ("one animal eat another animal") to build up a picture of the unknown animal.

(73)

S2 [humm, what does pre- dators mean? predate, pre-da-tors
 S3 [predict pre-da-tors
 S4 [mmm predators means- yeah one kind of animal eat another animal
 S2 [-animals /? what kind of animal?
 S4 ahh kind- no lion xxxx yes
 S2 -I mean like lizard /? mammal /? | lion ahh
 S1 | lion crocodile /?
 S3 ohh, I know the meaning, maybe like, [ah you know ah like ah the two animals can can-
 S2 crocodile /?
 S1 | you can you can see
 together, join [together yes
 S3 [together join together, so we must separate them [to attack
 S2 [ohh
 S4 yes xxx
 S3 [oh not to attack, to protect because its often will attack
 S2 ahhhh
 S1 protect yes, because you can see the eight and seven they're joined
 together because the lion and the crocodile they are very strong animal
 S3 yes
 S2 ahhh
 S1 yeah, you can't put the lion and the next with the rabbit [because the lion will scare the rabbit
 S2 mmm
 S3 yes right
 S4 [yes
 S2 [I see
 S1 [yes
 S3 [yeah, so we must separate [yeah? separate, yeah, separate
 S2 separate, yeah

(ZSH1 6:21)

Again, in (74) below, in order to build up a meaningful picture of the animal for the learner who does not recognize its English name, other learners present a number of perspectives. They describe the animal in terms of its defining behaviour and typical environment ("they show it in the performance like swimming pool", "they jump up and they catch the ball"), its class ("fish"), a more familiar animal with which it is similar ("like a shark"), and other key characteristics ("not dangerous", "funny").

(74)

S7 [do you know what is number nine? yeah
 S5 [this one? dolphins, you know dolphin? .. dolphins yeah
 S7 what animal's that?

S5 | yeah sometimes they show it in the performance
 S8 | like swimming pool
 S5 yes= | swimming pool they jump up and they catch the-
 S8 =yes
 S5 | -ball
 S7 | just something fish?
 S5 like a shark but they are not dangerous
 S8 oh yeah its | funny
 S6 | dangerous (ZSH2 1:59)

These examples show admirable creativity in attempts by the learners to explain unfamiliar words, as well as considerable involvement by the learners in the negotiation process. In terms of learning opportunities, processing of unfamiliar words in such task-generated discourse has the added advantage of the word, having been negotiated successfully, being used meaningfully in the remaining task performance, thus providing a greater chance of retention through repeated use.

7.7 Directions for Further Research

In evaluating the effect of communicative task performance on word knowledge, a direct pre-test/post-test comparison was made using a particular form of vocabulary testing. In interpreting the results, three issues arose that future work should address.

(i) *How should the word knowledge test be presented?*

In the tests, subjects were asked to respond through drawing a picture², providing a translation, or giving a definition to words presented in writing. The tests were done in silence except where a request was made by a subject to hear a word. In order to reduce the interference which may result from a written test being used to measure the effects of spoken interaction, the tests could be presented in spoken form with the words read aloud by the test administrator with subjects responding in writing and/or by thinking aloud with an audio recording made of the sessions. In the case of spoken responses, tests could be administered either separately to each individual, or in a language laboratory with separate recording facilities for each subject. To obtain further

² This option was not used by any of the subjects.

information, learners would review the words after the post-test and introspect on questions such as whether they remembered particular words in the tasks, what help they received from other learners with unfamiliar words, and what strategies they used when they encountered unfamiliar words while working on the tasks.

(ii) *How should test repetition effects be controlled?*

Two alternatives merit consideration. First, the test would contain distracters, words the learners were not going to encounter in the tasks or were not likely to encounter in concurrent class work. The validity of the pre/post test comparisons would be strengthened by different pre/post test movements for these words than for words encountered during tasks. Second, a control group with matched proficiency levels which sat the same pre- and post-tests, but did not work on the tasks would be used.

(iii) *When should the post-test be administered?*

In the present study, the test was administered on the day following the final test performance. If the post-test was also administered one or two weeks later it would provide information on longer term retention of the words encountered in the tasks, although this creates a number of problems. A second post-test at a later date would prevent the researcher from discussing with the subjects the ways they responded to words in the first post-test. In addition, the second post-test would include the effect of the subjects' involvement in further intensive English language instruction.

7.8 Summary

Negotiation holds a central role within input and interactionalist theories of SLA. In support of this role, the results in this chapter suggest a link between negotiation of unfamiliar vocabulary and subsequent gains in vocabulary recognition. The key to discovering this link was in moving beyond the negotiation counts typical of previous studies and in place of such quantitative analysis, investigating the different aspects of language, in this case unfamiliar vocabulary, which required processing as a result of

negotiation. Through such qualitative study, it was possible to subject some of the broad claims made about the value of negotiation in SLA to close scrutiny.

The investigation found that the learners successfully elicited accurate information on word meaning from each other. However, there was also a willingness on the part of individual learners to tolerate unfamiliar vocabulary, particularly in the split information tasks which could be completed with relatively little meaningful use of the words in the text for the task. In contrast, the problem solving and ranking components of the shared information tasks provided the learners with an incentive to persist with negotiation of word meaning. Significant learning gains were associated with negotiation of unfamiliar vocabulary, although learning gains were also associated with incidental exposure to unfamiliar vocabulary without overt negotiation of word meaning. Further to these particular findings, work remains to be done in developing a sound methodological base for assessing the relationship between vocabulary learning and different kinds of exposure to unfamiliar vocabulary in interaction.

Chapter VIII

THE LANGUAGE OF TASK-BASED INTERACTION

8.1 Introduction

Research has made various claims regarding the efficacy of different types of interaction for language learning. Comparisons of teacher-directed interaction and interaction between language learners show that in the former, not only do teachers tend to take a large share of the talk, but teacher-class discourse is characterized by a relatively narrow range of speech acts controlled by the teacher with predictable patterns of turn-taking which have few parallels outside of the classroom. Group work and communication tasks, on the other hand, involve forms of interaction that not only have greater face validity for learners, but also put in place conditions claimed to be important for learning (Long and Porter, 1985). While the relatively high frequency of meaningful negotiation directed at real communication gaps in group settings is a major reason for using communication tasks, other dimensions of interaction might equally provide the relevant conditions through which learners can develop as proficient language users. The present chapter has selected four of these dimensions and examined the degree to which they occur in the tasks used in the study. The concerns of this chapter are summed up in the following question:

Research question 5

In what ways might specified features of the language of communicative task performance by learners be influenced by task type and topic? These features are: the amount of talk, the length of turns and utterances, the expression of intra- and inter-propositional relationships, and the modes of discourse.

8.2 Talk on Task

An analysis of the amount of talk produced in task performances can reveal, albeit at a general level, the potential for different types of tasks to achieve what they were designed for, namely to engage learners in active language use. Similarly, an analysis of the distribution of talk among interlocutors can also reveal differences in the level of participation of individual learners within each task and comparatively, across the four tasks.

8.2.1 The Amount of Talk

In a comparison of the amount of interaction produced under split and shared task conditions, Doughty and Pica (1986) found that the total amount of interaction measured in T-units and fragments increased in split information tasks. However, Duff (1986) found no significant difference in the total number of words produced by students performing a problem solving task (a convergent task) and a debate (a divergent task). Although Duff claimed as a result, that "we have no reason to predict differences in total language production based on task type" (151), both tasks in the study by Duff were shared information tasks in terms of the distinction used by Doughty and Pica, and so comparisons are limited.

In keeping with the results obtained by Doughty and Pica, there are two possible reasons for expecting that learners will talk more in split information tasks. First, the requirement to exchange information in these tasks ensures that all interlocutors have something to talk about and a clear need to talk. This is not necessarily true of the shared information tasks which provide less guidance and rely more on the ability of the interlocutors to formulate conversation on a given topic. Second, the amount of talk in the shared information tasks may be reduced by the presence of more gaps and silences created as learners make judgements, organize their arguments and establish personal viewpoints, all of which require planning and thought both prior to and during task performance. This supposition is supported by an analysis of between-turn pauses of five seconds or more across all the task performances as presented in Table 20. The

shared information tasks contained 510 seconds of such pauses compared to only 199 seconds of pauses in the split information tasks.

TABLE 20

Total Time without Talk as Measured by Periods of Silence of 5 Seconds or More
(Displayed in Seconds)

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1	97	7	46	7	157
Group 2	183	223	129	17	552
Total	280	230	175	24	
Total	510		199		709

Hypothesis 7 was formulated to test whether there were differences in the amount of talk produced under different tasks conditions

Hypothesis 7 *Split information tasks will encourage learners to talk more than shared information tasks as shown by the frequency of words spoken in a given time.*

The hypothesis was evaluated using a SAS (1989) statistical package for analyzing the variance of data collected from the same subjects under different conditions. The various sources of variation are summarized in Table 21. Relevant means and standard deviations are shown in Table 22. Frequency data based on a standard task time can be found in Table 23 and is displayed visually in Figure 15. Frequency data for each subject can be found in Table 27(a) & (b).

The hypothesis failed to find support in the data as shown in Tables 21-23. Inspection of the tables indicates that neither the distribution of information, the topic of the task, nor the composition of the group had a main effect on the amount of talk produced in the different tasks in the study.

TABLE 21

Summary of Analysis of Variance for Talk on Task

Source of variance	SS	df	MS	F
Groups	101813	1	101813	1.32
Task type	52084	1	52084	0.73
Topic	220282	1	220282	3.75
Task type x topic	116	1	116	0.97

TABLE 22

Mean Frequencies (and Standard Deviations) of Talk on Task in a Standard Task Time of 28'30"

Task type:	Shared		Split	
	Medical	Zoo	Medical	Zoo
Topic:				
Task code:	1	2	3	4
Group 1	29 (18.1)	38 (24.3)	30 (12.7)	34 (10.7)
Group 2	24 (14.7)	26 (15.7)	29 (14.1)	37 (11.0)

TABLE 23

Talk on Task Measured in Frequency of Words per Minute in a Standard Task Time of 28'30"

Task type:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1	116	153	120	135	524
Group 2	96	102	113	146	457
Total	212	255	233	281	981
	467		514		

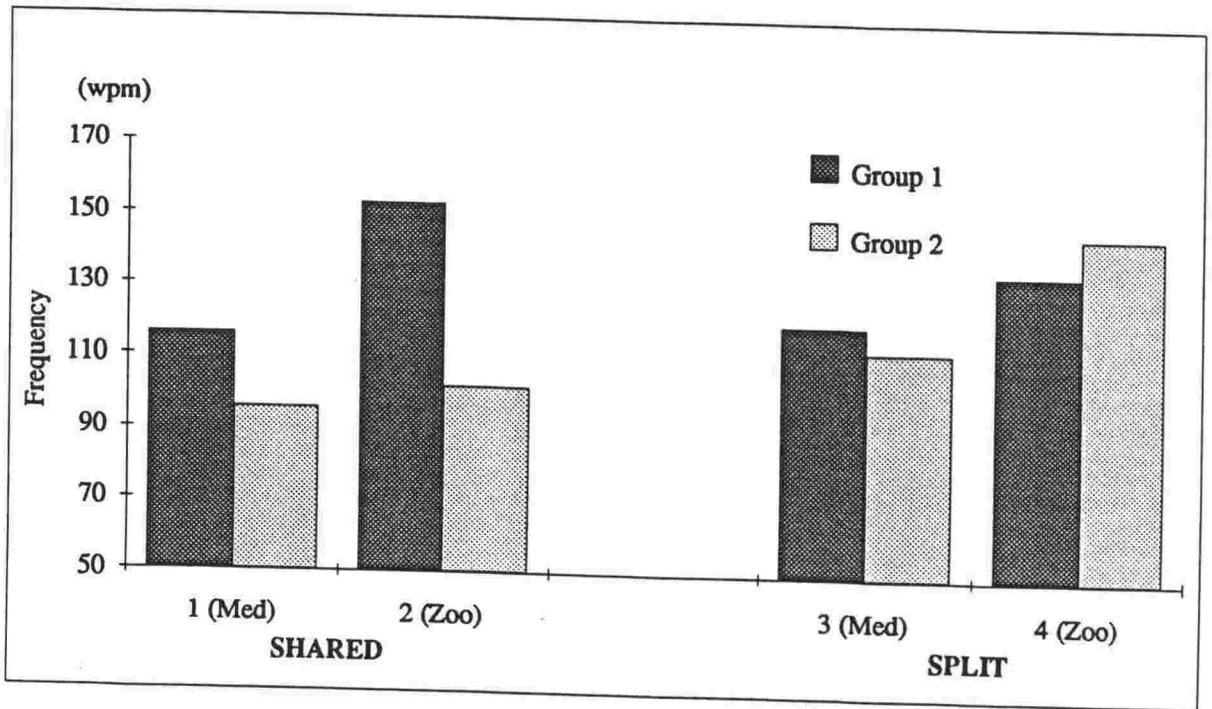


Figure 15.

The Amount of Talk Produced in a Standard Task Time of 28'30" by Two Groups of Learners Performing Four Tasks.

The fact that the hypothesis was not sustained may be accounted for by a number of factors. First, the shorter turns typical of the split information tasks (see section 8.3) may have resulted in a greater number of between-turn pauses of less than five seconds (not accounted for in Table 20), and this may counter the effect of the longer pause times in the shared information tasks. In addition, the split medical task involved a lot of reading and was structurally more complex than the other tasks thus working against the assumption that split information tasks needed less processing time.

Second, the shared information tasks allowed fluent speakers to dominate interaction and thus to produce more language, while the split information tasks constrained these same speakers, as can be seen with S1 whose large share of talk in the shared information tasks was reduced when he performed the split information tasks (see Table 24). Thus, contrary to our expectations, the amount of talk can increase in the shared information tasks through the increased contributions of fluent interlocutors in a group. This effect were not considered when the hypothesis was framed.

Third, intra-group dynamics, and the fluency and confidence of interlocutors may have had a more unpredictable effect on the amount of talk in the shared information tasks than in the split information tasks where the requirement to participate can override such factors. In summary, the results did not support the expectation that the learners in the study would fill the time on task with more talk when performing split information tasks.

8.2.2 The Relationship between Talk on Task and Negotiating Questions

It might be expected that more talk would create more opportunities and a greater need for negotiation and therefore an increase in the former would result in a increase in the latter. This was indeed the case in the study by Doughty and Pica (1986) in which an increase of 122% in the total amount of interaction corresponded to an increase (of unspecified size) in the amount of total negotiation. However, this relationship was not seen in the results from the present study which showed that while task type did not

have a significant effect on the amount of talk (see Table 21), it did have a significant effect on negotiation (see Table 6 in Chapter IV). Figures 16 (a) & (b) portray the talk and negotiation comparison visually. They show that while for Group 2, more negotiation was produced in tasks where there was also more talk (Tasks 3 and 4), for Group 1 more negotiation was produced in tasks where there was the same amount, or in fact less talk (Tasks 3 and 4). Similarly, almost twice the amount of negotiation was produced in the split information tasks, yet for Group 1, these large amounts of negotiation were occurring in the context of less talk than the same group produced in the shared information tasks. It is clear from these comparisons that contrary to the results obtained by Doughty and Pica (1986), the amount of talk on task did not determine how much learners negotiated meaning in the present study. This suggests that whether talk is interactionally rich or poor is not determined by how much learners talk, but by how much the tasks they perform require them to negotiate the sense of their talk. But there is another side to this claim. Where there is *more talk* and *less negotiation*, another kind of richness is likely to be in evidence. Here interlocutors appear to be producing longer stretches of uninterrupted discourse often as a result of the need to present complex explanations and arguments. Such talk, while not as complex interactionally, is nevertheless likely to be more complex syntactically. A case for this claim is made in sections 8.3 and 8.4.

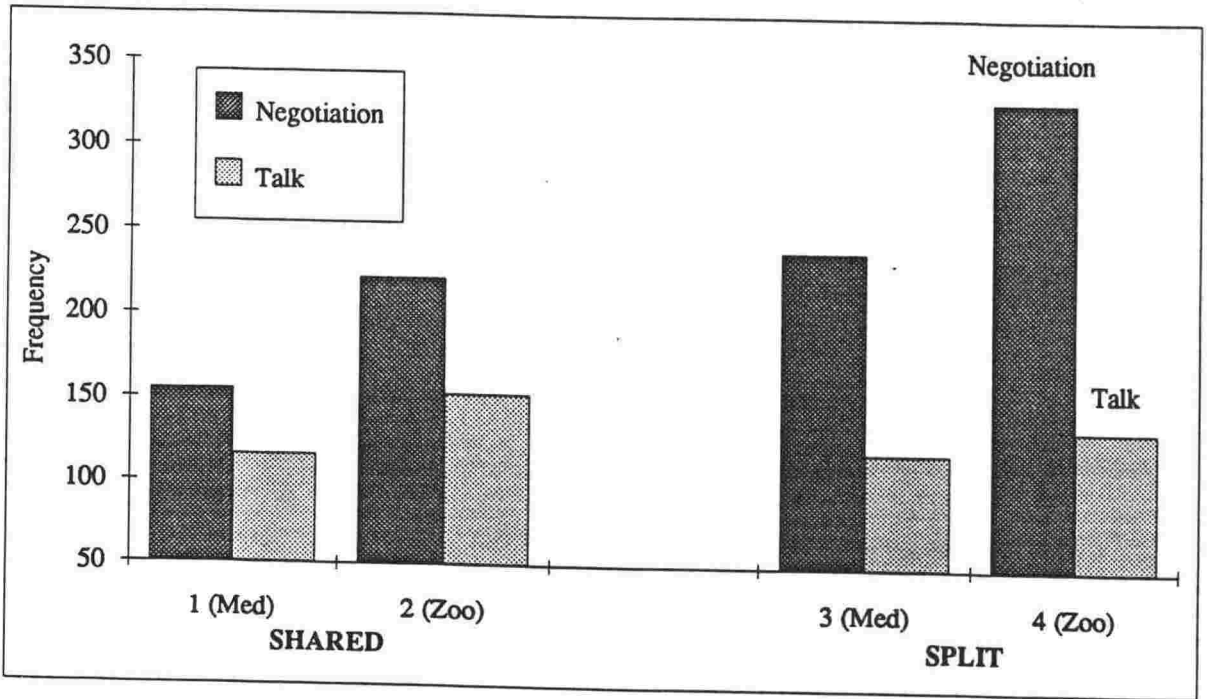


Figure 16(a). A Comparison of the Amount of Talk and Number of Negotiating Questions across Four Tasks for Group 1.

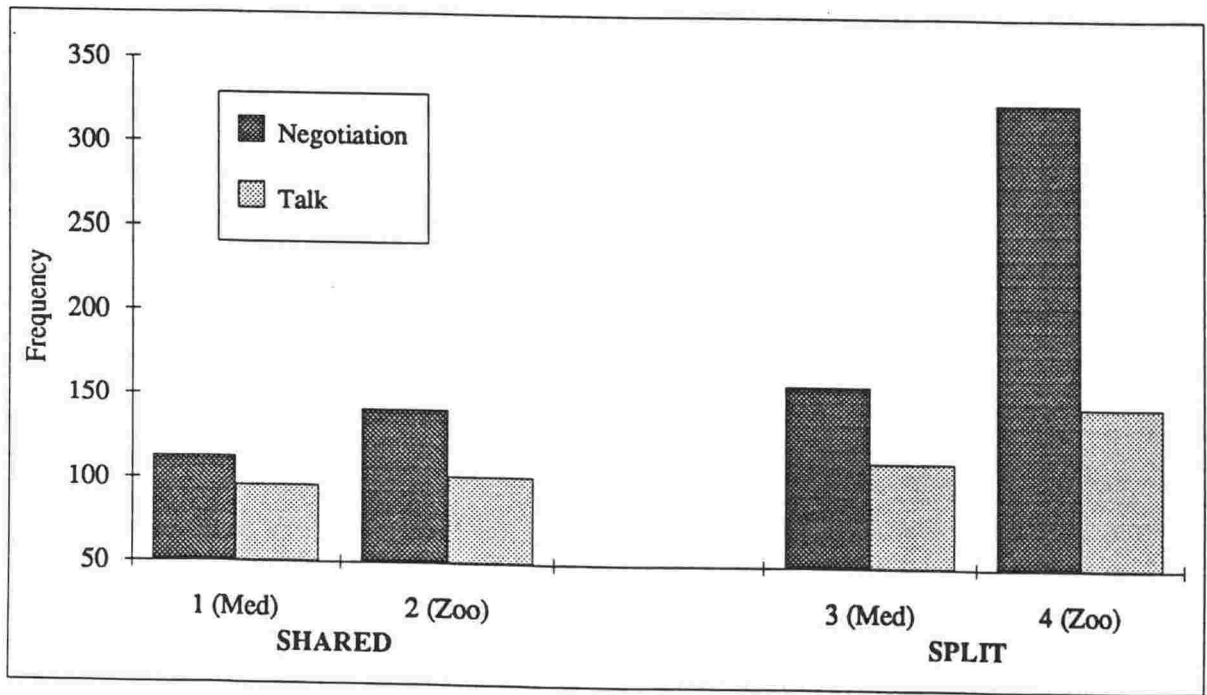


Figure 16(b). A Comparison of the Amount of Talk and Number of Negotiating Questions across Four Tasks for Group 2.

8.2.3

The Distribution of Talk on Task

A third aspect of talk on task concerns the distribution of talk among group members under different task conditions. The unequal distribution of talk in teacher-fronted class interaction is well documented (Long, Adams, McLean and Castanos, 1976; Pica and Doughty, 1984). An important benefit of communicative task work is the claim that it allows, and to some extent requires learners to play a more active role in the class. This is especially important for learners who either get (or make) few opportunities to participate in authentic discourse in English outside the classroom, or who lack confidence to speak in class. But not all tasks require the involvement of learners to the same degree. For instance, both one-way tasks, and tasks without a requirement for information exchange, fail to generate as much negotiation as two-way tasks and information exchange tasks (Long, 1980; Doughty and Pica, 1986). On the basis of such findings, it is predicted that where each interlocutor has an equal amount of unique information to share, and a prescribed need to receive information from other interlocutors (as in the split information tasks), there will be a more equal sharing of talk among interlocutors than in circumstances where none of these conditions exist (as in the shared information tasks). This prediction is stated in Hypothesis 8:

Hypothesis 8 *Talk on task will be more equally distributed between group members in split information tasks than in shared information tasks as shown by a comparison of the proportion of total words spoken by each group member across the different tasks.*

Table 24 displays the amount of talk and percentage of total talk (based on word counts) for each interlocutor and group on each task performance. The figures are converted into percentages in the bracketed columns. The movement in the share of talk for each interlocutor is displayed graphically in Figure 17. In this figure, the symbol (\diamond) represents the point of perfectly even distribution of talk if each interlocutor contributed 25% to the total amount of talk. The movement of the arrows towards or away from this point thus indicates a trend for more or less even distribution of talk across task types. The proportions of talk for each interlocutor are displayed in Figures 18 (a) & (b).

TABLE 24

Distribution of Talk on Task Reported as Obtained Frequencies of Words per Subject
(and Percentage of Total Words)

(a) Group 1

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S1	1189 (44)	2229 (47)	1431 (41)	1410 (30)	6259 (40)
S2	310 (12)	1317 (27)	763 (22)	1323 (28)	3713 (24)
S3	824 (31)	736 (15)	636 (18)	1307 (28)	3503 (22)
S4	350 (13)	524 (11)	677 (19)	612 (13)	2163 (14)
	2673 (100)	4806 (100)	3507 (100)	4652 (100)	15638 (100)
Total	7479		8159		

(b) Group 2

Task: Task type: Topic code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S5	181 (11)	1012 (28)	275 (11)	881 (17)	2349 (18)
S6	481 (30)	546 (15)	552 (22)	1341 (26)	2920 (23)
S7	704 (44)	1623 (45)	1028 (40)	1829 (35)	5184 (40)
S8	224 (14)	435 (12)	674 (27)	1180 (22)	2513 (19)
	1590 (100)	3616 (100)	2529 (100)	5231 (100)	12966 (100)
Total	5206		7760		

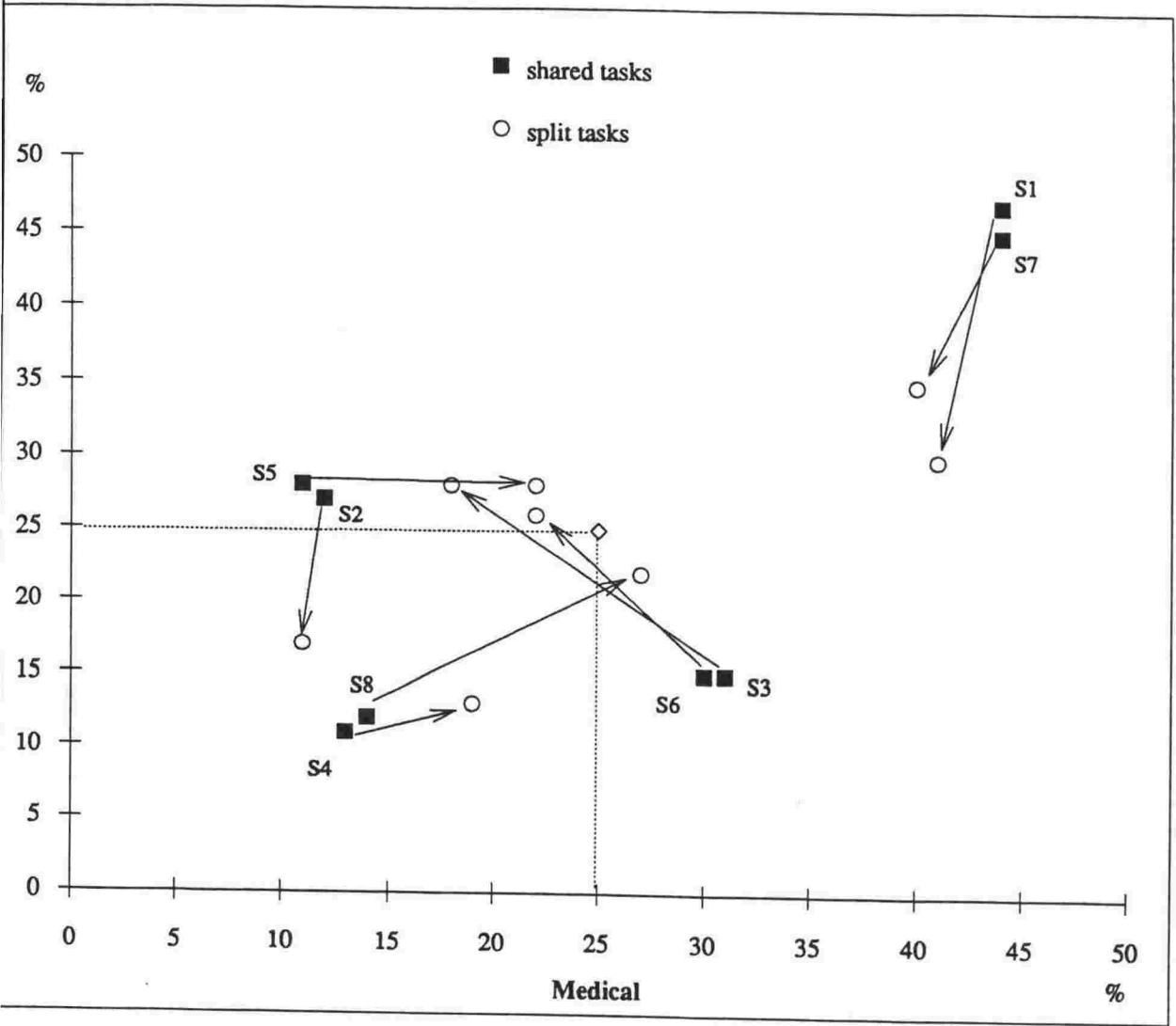


Figure 17.

Movement in the Proportion of Talk under Shared and Split Information Task conditions for Eight Individual Interlocutors

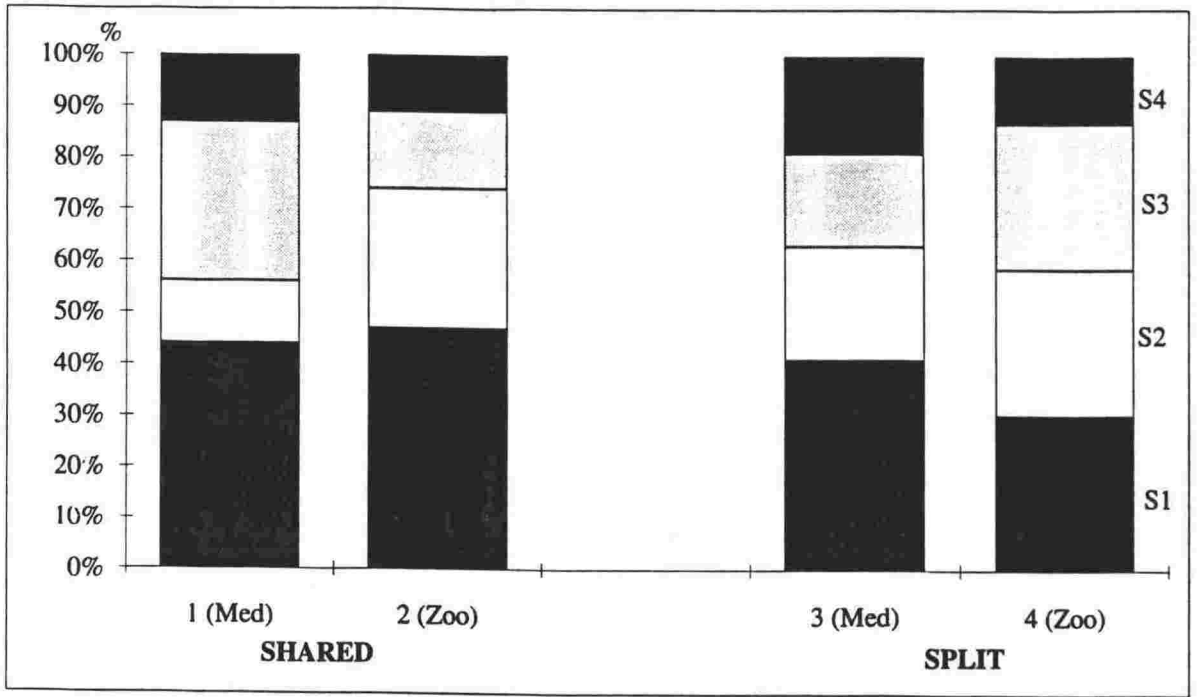


Figure 18(a). Proportions of Talk across Four Tasks for Individual Interlocutors from Group 1.

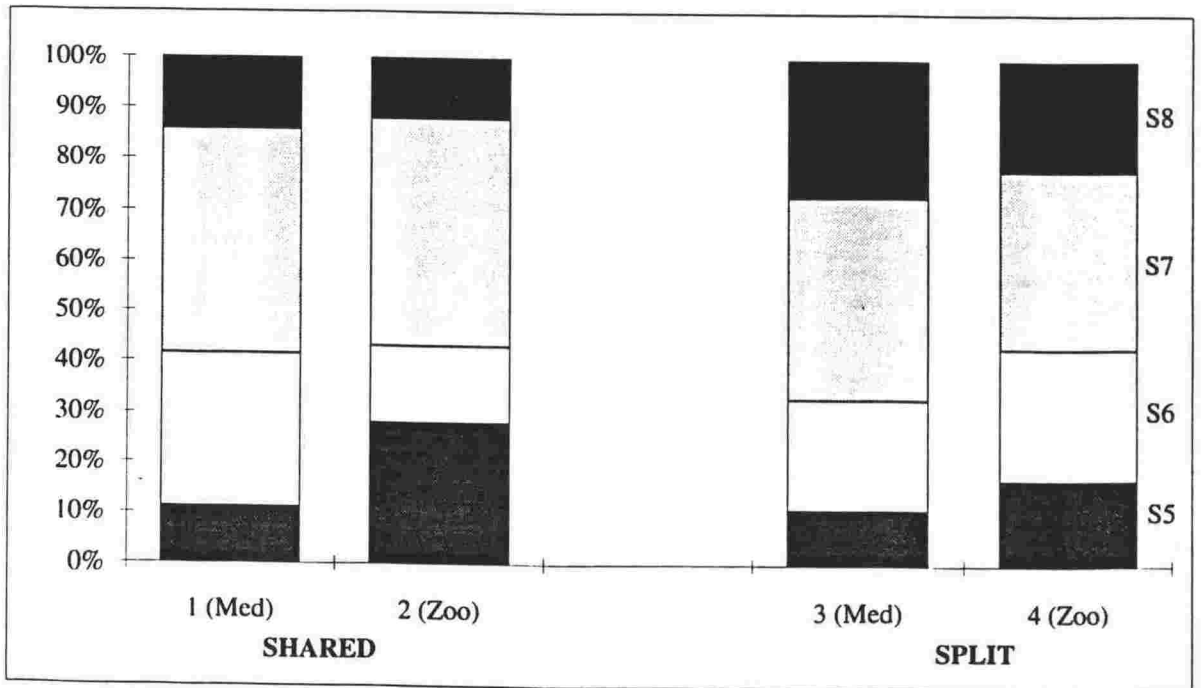


Figure 18(b). Proportions of Talk across Four Tasks for Individual Interlocutors from Group 2.

The results show that for both groups, the range between the interlocutor with the least amount of talk and the interlocutor with the greatest amount of talk was at its smallest in a split information task (Task 4). The range was at its greatest in a shared information task (Task 2). Thus, there is a clear tendency for talk to be more evenly spread among interlocutors on split information tasks than on shared information tasks. This tendency is more pronounced and more consistent than that seen in the results for the spread of negotiating questions in Chapter IV (see Tables 9(a) & (b), and Figures 3(a) & (b)).

These results favour split information tasks by showing that in these tasks, learners, who may often be reluctant to contribute in class or group work, will be required to take a greater share of talk. However, as with the previous result for negotiation, the strengths and weaknesses of the interactive behaviour characteristic of individual interlocutors, although modified by the type of task, persisted across all tasks. So for example, S1 can still take up to 41% of talk in the medical split information task even when only holding 25% of the textual input. In summary, this result shows that although the split information tasks were able to increase the participation of the less vocal interlocutors and reduce the participation of the interlocutors who tended to dominate in the shared information tasks, the way in which the participation was spread among the various interlocutors was generally resilient to changes in the type of task.

8.3

Length of Utterances and Turns

This section examines the extent to which the length of utterances and turns produced by the learners in the study was determined by the two task types used. The utterance was initially chosen as a unit of measure for the reasons outlined by Crookes (1990) who concluded that the utterance met the criteria of validity and reliability more satisfactorily than other units that he surveyed, and was "a better prospect for SL

discourse analytic purposes ... in the light of the evidence..."(160)¹. However, for the purposes of the present study, the utterance has an important limitation. Since it is designed primarily as a representation of psychological reality it is likely to be more resilient to the effects of the social and interactional dynamics created by various tasks and will not therefore be as useful as a measure of task effects on speech behaviour.

In contrast, the turn, a more widely used unit, has in fact been criticised because of its sensitivity to interlocutor dynamics since its boundaries are determined by various social and interactional processes rather than purely by the psychological processes of speech production (Crookes, 1990:156). In the present context, this is to its advantage since it makes it sensitive to the social and interactional dimensions of task types. In addition the turn has had a prominent place in discourse analysis (e.g. Goffman, 1981) and in particular in the analysis of interaction between teacher and students in classrooms (e.g. Sinclair and Brazil, 1982; van Lier, 1988) and between students (Duff, 1986).

While both utterances and turns were used for analysis in the present study, the turn receives prominence in the discussion because of its greater sensitivity to task effects. Duff's analysis of interaction under different task conditions found that turns were longer in debates (convergent tasks) than in problem solving tasks (divergent tasks). The present study seeks to investigate the possibility of similar differences between the kinds of turns occurring in split and shared information tasks. It seems likely that if a particular task constrains the length of turns learners typically produce, then this has implications for the kind of language practice they are getting from the task.

The first prediction relating to turn and utterance length is that short, fast turns and utterances would result from the kind of information exchange occurring in split tasks. Such exchange involves transferring relatively small pieces of information, constantly checking the success of the transfer, and repeating utterances or parts of utterances where necessary.

¹ Another unit, the T-unit has been used in earlier studies of a similar nature to the present study (e.g. Long, 1980). However, it has been criticised for being a measure of written language which fails to map satisfactorily onto the complexities of spoken interaction (Crookes, 1988; Barnwell, 1988; Gaies, 1980).

Conversely, the second prediction is that lengthier turns and utterances, resulting in the floor being held for longer periods of time by individual interlocutors, would result from the need to develop comparatively complex arguments, and to present, explain and justify points of view in shared information tasks. Hypothesis 9 presents these predictions.

Hypothesis 9 *The mean length of turns and utterances as measured in words per turn and per utterance will be greater in shared information tasks than in split information tasks.*

Tables 25 and 26 and Figures 19 and 20 display the results for length of turns and utterances. The Page Test for Ordered Alternatives (Siegel and Castellan, 1988) was used to test for levels of significance. Significance was reached at $P < 0.05$ for both turns and utterances ($L_{2,4} = 59$). Thus the hypothesis was sustained.

TABLE 25

Mean Number of Words per Turn

Task type: Topic: Task code:	Shared		Split		Mean
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1	9.8	7.1	4.0	2.9	6.0
Group 2	6.2	7.9	4.6	3.9	5.7
Mean	7.8		3.9		

TABLE 26

Mean Number of Words per Utterance

Task type:	Shared		Split		Mean
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
Group 1	6.2	5.0	3.5	1.9	4.2
Group 2	4.7	5.6	4.0	3.2	4.4
Mean	5.4		3.2		

When the group figures are plotted in bar graphs as in Figures 19 and 20 the trend for longer turns and utterances in shared information tasks than in split information tasks is clearly seen. This is noticeably so when we consider the difference between almost 10 words per turn for the performance of the medical shared task by Group 1, and slightly less than 3 words per turn for the same group doing the zoo split task. There is some discrepancy between the effect of the two shared information tasks on each group, with Group 1 producing longer speech units on the medical shared task than on the zoo shared task, and Group 2 producing the reverse result. For both groups however, each of the shared information tasks produced longer units than either of the split information tasks.

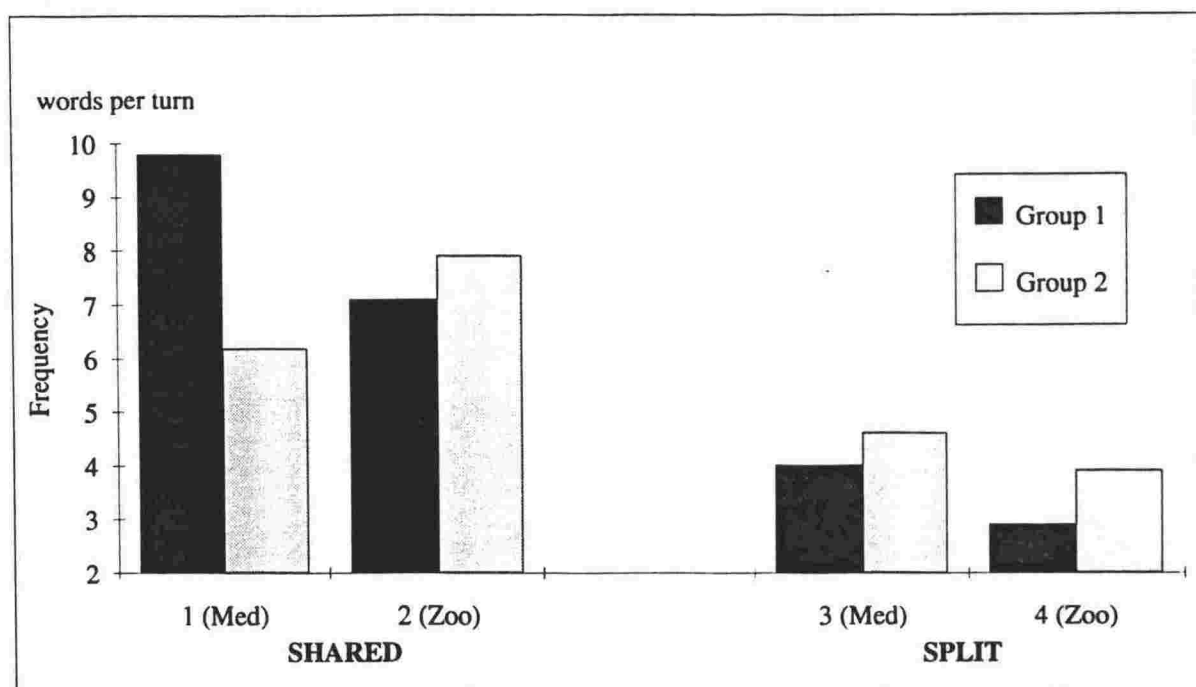


Figure 19. Mean Number of Words per Turn across Four Tasks for Two Groups of Learners

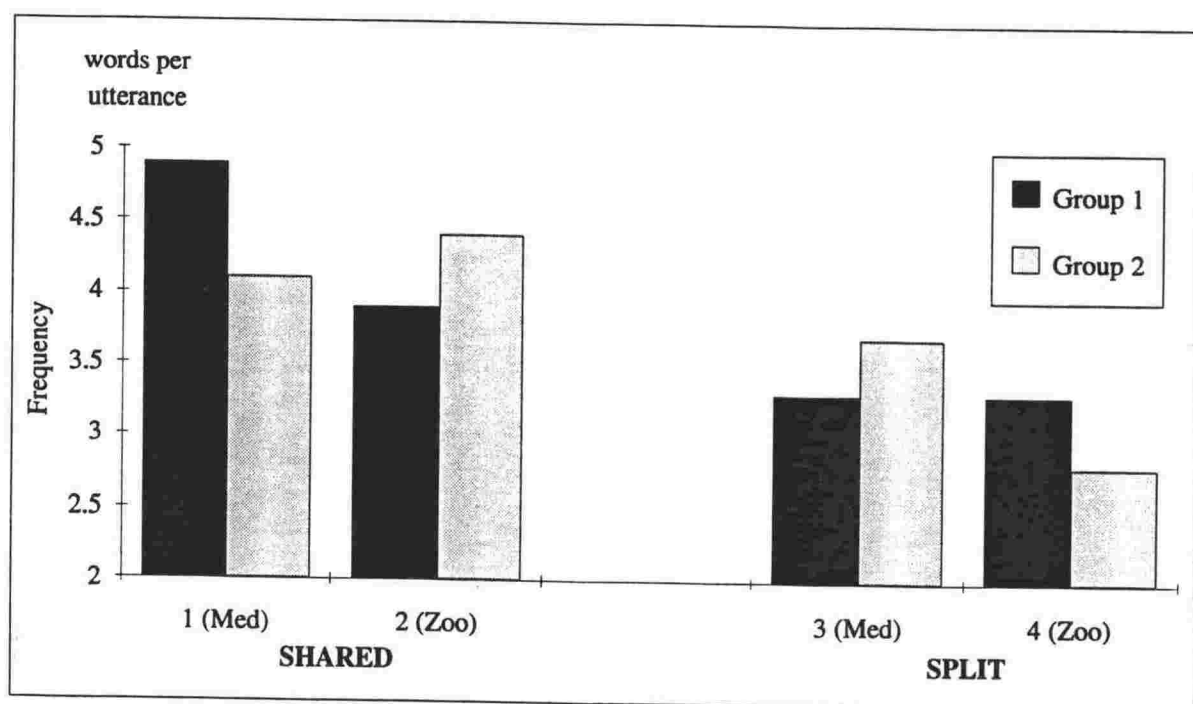


Figure 20. Mean Number of Words per Utterance across Four Tasks for Two Groups of Learners

When the results are generalized for the combined shared and split information tasks, the consistency of the trends is clear. A comparison of transcript data highlights the differences between interaction characterized by longer turns (example 75, from a shared information task), and interaction characterized by shorter turns (76, from a split information task).

(75)

- S7 now what I'm going - now I we face a problem .. I already told you alright same sort of ah same sort of- animal, you have to put it naa:
 S5 [that's no problem there is no way, because some of them has a pool and some of them doesn't, [so you can't
 S7 [that's why you have to try to find the place like where next next no pool . you know what I mean ?
 S5 yes [I know but is difficult, very difficult
 S8 [yeah
 S7 [yeah, but you have to try, that's what I mean
 S5 [how many birds we have? just two kinds of birds I think, ah pelicans
 S7 [how many what? mmm
 S5 and um-
 S7 -but this - [there's not very important number
 S8 [there's four four
 S7 nine because we have enough money, we going to we can buy if we got no pet place to put there's no we are not going to buy y'see.. instead you're going to kick all the monkeys don't you, no?
 S5 mmm
 S7 we are not going to kick out the monkeys from the zoo right? so if we don't have enough, enough place to put the, the rest of the things so we are not going to buy.. you see?
 S5 [mm yes yes
 S7 [you know what I mean? if we got enough place to put so we are going to buy these ones so we are not really worried about these ones first, y'know what I mean? (ZSH2 8:33)

(76)

- S8 and her sport is rock climbing
 S6 huh?
 S5 rock?
 S8 [rock r o c k =rock climbing
 S7 [rock climbing ah yeah= ahhh
 S6 [r o c k rock climb=?
 S8 [=climbing c l i m b b i n g, sorry one b
 S6 [c l i m b yeah mmm
 S7 [one b ?
 S8 [yes i n g after b i s i n g yes
 S7 [mm ok rock climbing

(MSP2 4:22)

Results of a comparable kind from Duff (1986) showed debates producing longer turns than problem solving tasks. This is predictable given the allocation of set speaking

times to interlocutors in debates. However, the differences in turn length between shared and split information tasks in the present study is perhaps less obvious. But what are its implications for SLA and for task-based pedagogy?

First, as might be expected, discourse characterized by longer turns is synonymous with tasks in which there is less negotiation, since negotiation typically requires shorter more rapid exchange of turns. In this respect the discourse does not contain the same number of opportunities for comprehensibility to be improved through negotiation, nor for output to be tested against feedback from interlocutors. This however may not mean that the language is any less comprehensible. The common ground on which the task is based already provides much more contextual support for what is being said, thus reducing the need for negotiation.

In addition, the kind of information under discussion is very different. The longer turns are less concerned with descriptive accuracy and more with presenting a point of view or a piece of information and then explaining, assessing or justifying it. This is evident in the preceding example (76). Such information is unlikely to demand as much of the ability of interlocutors to comprehend exact details. So for both these reasons, there need not be a decline in comprehension in discourse involving longer turns. On the other hand, there is the opportunity to develop fluency which can be limited by insistent negotiation and rapid turn exchange in the split information tasks. There is also, as the following section shows, the opportunity to develop reasoning skills in the language in the shared information tasks where longer turns are typical.

8.4 The Expression of Intra- and Inter-propositional Coherence

The differences in utterance and turn length discussed in the previous section hint at differences in the structural complexity of talk under shared and split information task conditions. While the interchange of turns was considerably faster in the split information tasks, in terms of the structuring of language within turns, there appeared to be very much more complexity within turns in the shared information tasks where

causal, conditional and other relationships between propositions are being established through subordinating and coordinating clauses.

In contrast, the split information tasks appeared to show very little marking of relationships between propositions. This difference has important implications for the language development of learners performing communication tasks. It is pursued in the present section through an analysis of a small but significant area of the morpho-syntax of task-based interaction: the marking of relationships between lexicalized concepts and between clauses, as evidence respectively of the expression of intra- and inter-propositional coherence² (Givón, 1990a:825).

The apparent differences in the marking of grammatical relationships was tested using three hypotheses. Hypothesis 10 predicts that tasks involving discussion of spatial relationships will elicit more use of prepositions than tasks without such a dimension because one of the functions of these words is to mark locative relationships. Hypothesis 11 predicts that a split information task with spatial content will elicit even more prepositions than the shared information task because the task requires the interlocutors to check for the accurate location of various items. Hypothesis 12 predicts that shared information tasks will produce more conjunctions than split information tasks and in particular, more subordinating conjunctions because of the need to reason by marking such relationships as cause and effect, condition, result and purpose. To test these hypotheses, a corpus of 27,969 words was constructed from the transcripts of the eight task performances in the study. The Oxford Concordance Programme (Hockey and Martin, 1988) was used to generate word counts, type token ratios, and collocational information using the transcripts. The programme made no distinction between the various functions or word classes of particular word forms and so for the purposes of analysis, a second step was necessary in which the use of items as prepositions or conjunctions was distinguished from their other uses. This was particularly important for words such as to for which 162 occurrences (61%) were as adverbial particles and

² Other aspects of the language produced by the learners in the study such as the omission of function words, a normal characteristic of the redundancy-reduced speech of second language learners or the choice of content words were not analyzed. It was expected that in regard to the latter, nouns and verbs produced would reflect the content of the tasks and the topics in which they occur.

infinitives, next which occurred 32 times (57%) as an ordinal, and about which was used 51 times (53%) as a phrasal item such as How about...?. Distinctions were also necessary for certain conjunctions such as and which joined nominals rather than clauses 222 times (34%) and so which was used as a pro-form in the phrase I think so 39 times (12%). Performance errors and ungrammatical uses of items were not excluded from the data. Adjustments for different functions of items such as those discussed above were not made for Tables 29 and 30 where the data from this study is compared with unadjusted data from the London-Lund corpus of spoken English and the Lancaster-Oslo-Bergen corpus of written English.

8.4.1 Results

Hypothesis 10 *Tasks involving discussion of spatial dimensions (such as placing animals on the plan of a zoo) will elicit more use of prepositions than tasks without such dimensions.*

In line with the prediction in Hypothesis 10, prepositions made up a larger proportion of the words produced in discussion of the zoo topic than in the medical topic (see Table 27 and Figure 21, and see Table C-27(a) in Appendix C for figures for the separate groups). If the results for the shared and split information tasks are combined, prepositions made up 5.8% of words in the tasks based on a zoo topic but only 3.1% of words in the tasks based on a medical topic.

A non-parametric test, The Page Test for Ordered Alternatives (Siegel and Castellan, 1988) found these differences significant at the $P < 0.05$ level ($L_{2,4} = 58$).

Hypothesis 11 *A split information task with spatial dimensions will elicit even more prepositions than the shared information task with such dimensions.*

Hypothesis 11 was also supported by the data as displayed in Table 27 and Figure 21. The split information task based on a zoo topic had a significantly higher proportion of prepositions in the text (7.36%) than the shared information task based on the zoo topic

(4.26%). On The Page Test for Ordered Alternatives, these differences were significant at the $P < 0.05$ level ($L_{2,4} = 58$).

Hypothesis 12

Shared information tasks will elicit more conjunctions than split information tasks.

This hypothesis was confirmed by the data as seen in Table 28 and Figure 22. Conjunctions made up 5.39% and 6.24% of the data in the shared information tasks and only 2.79% and 3.73% in the split information tasks. On The Page Test for Ordered Alternatives, these differences were significant at the $P < 0.05$ level ($L_{2,4} = 58$).

TABLE 27

A Comparison of the Occurrence of Prepositions in Texts Produced by Second Language Learners

Tasks				
Prepositions	Medical shared	Zoo shared	Medical split	Zoo split
about	17	13	10	6
above	-	-	5	33
across	-	-	-	1
after	3	-	1	4
around	-	7	-	3
at	3	4	9	3
before	5	-	1	-
behind	-	-	-	2
below	-	-	10	-
beside	-	3	-	19
between	4	1	17	49
by	-	3	1	-
for	21	36	20	14
from	1	19	3	8
in	41	83	33	101
inside	-	2	9	54
into	-	-	1	2
near	-	29	-	37
next	-	16	-	10
of	26	43	19	74
on	7	15	2	147
opposite	-	5	-	4
outside	-	-	12	24
over	-	4	2	-
through	-	-	1	-
to	3	57	11	10
under	-	-	15	61
underneath	-	-	-	1
up	-	-	-	2
with	3	18	2	10
within	1	-	-	1
without	-	1	1	1
Total number of preposition tokens	135	359	185	681
Total number of words in the corpus	4,263	8,422	6,036	9,248
Number of different words in the corpus	417	574	458	487
Prepositions as a percentage of the corpus	3.17	4.26	3.07	7.36

TABLE 28

A Comparison of the Occurrence of Conjunctions in Texts Produced by Second Language Learners

Conjunctions	Tasks			
	Medical shared	Zoo shared	Medical split	Zoo split
although	1	-	-	-
and	60	116	90	158
because	47	76	17	5
but	41	51	26	20
either	-	2	-	-
if	33	38	17	2
or	26	43	21	22
otherwise	-	2	1	-
so	57	126	53	51
though	1	-	-	-
Total conjunction tokens	266	454	225	258
Total number of words in the corpus	4,263	8,422	6,036	9,248
Number of different words in the corpus	417	574	458	487
Conjunctions as a percentage of corpus	6.24	5.39	3.73	2.79

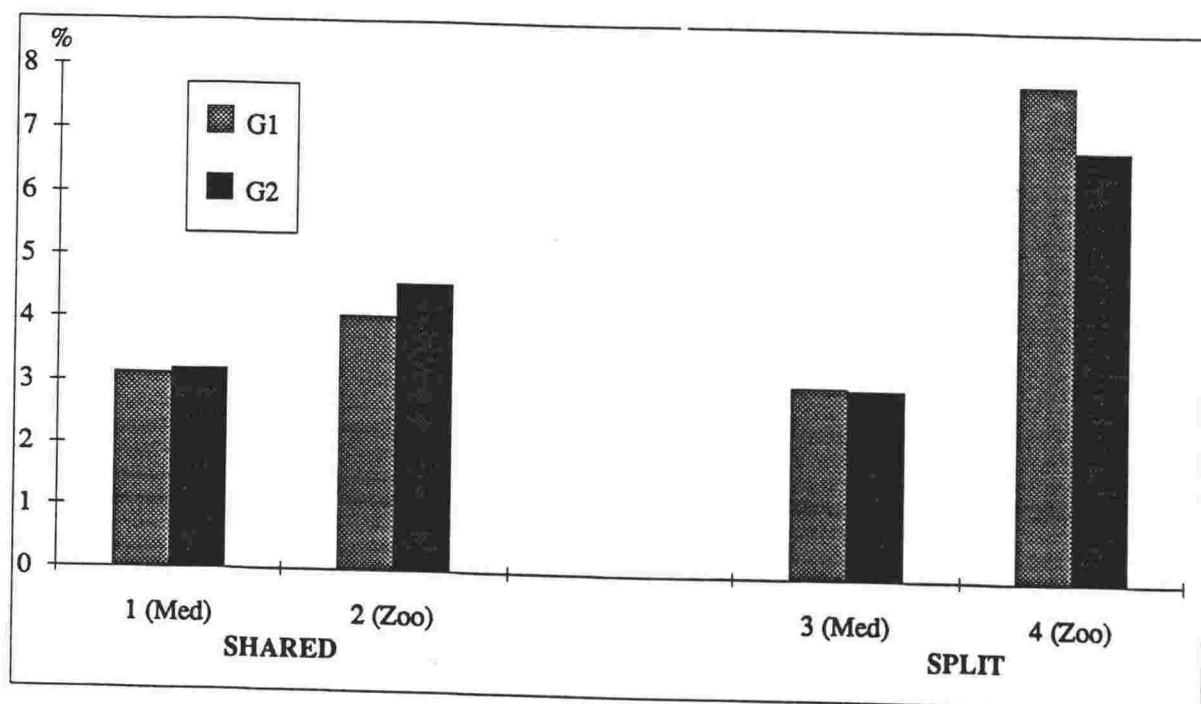


Figure 21. The Proportions of Prepositions in the Speech of Two Groups of Language Learners Performing Four Tasks

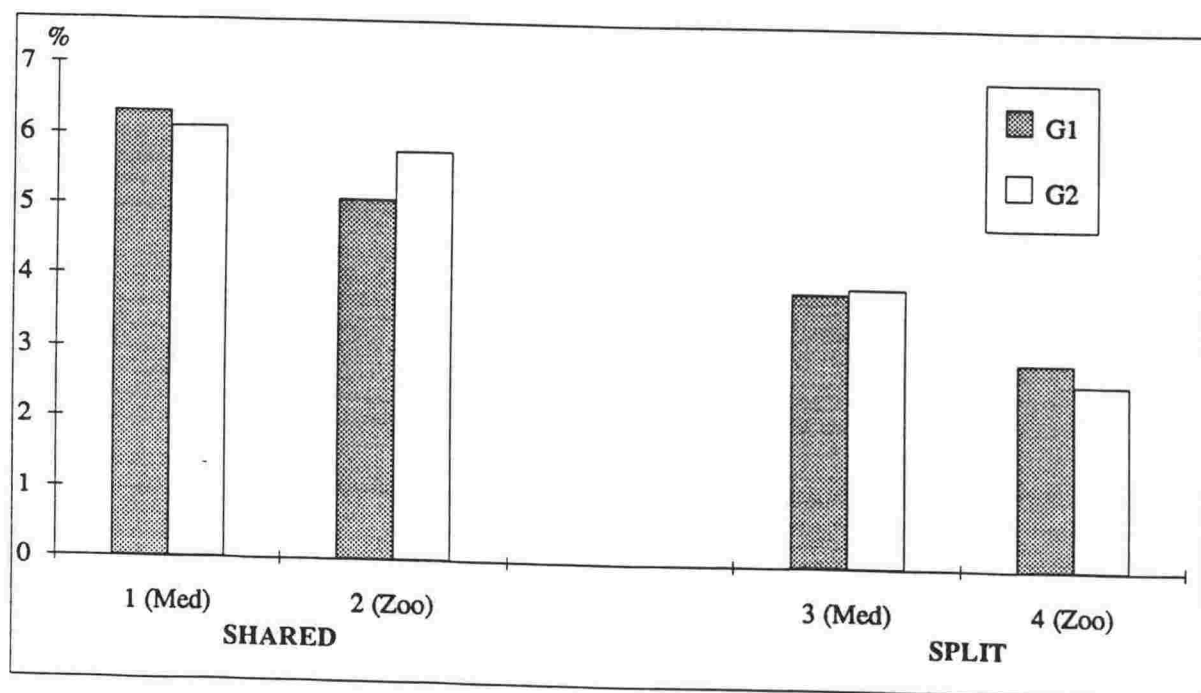


Figure 22. The Proportions of Conjunctions in the Speech of Two Groups of Language Learners Performing Four Tasks

8.4.2 Comparisons with Native Speaker Data

The proportion of prepositions produced by the second language learners as shown in Table 27 is much lower than would be expected in text produced by adult native speakers of English. Although data from native speakers of English performing the same negotiation tasks is not yet available, some idea of what might be expected is contained in Table 29 which compares prepositions as a proportion of the total words in the two kinds of task types in this study with two large corpora of English.

The London-Lund corpus (LLC) of spoken British English is the largest corpus of spoken English currently available for analysis. It consists of samples of spoken English from a wide variety of contexts including interactive discourse, and totals 435,000 words. The Lancaster-Oslo-Bergen (LOB) corpus is a representative sample of British written English consisting of 500 2,000-word samples collected from many genres. Comparing second language learners' interactive discourse on specific tasks against these two corpora is not comparing like with like. It is however worth noting that both split and shared tasks as carried out by second language learners produced less than half of the proportion of prepositions produced by native speakers whether in spoken or written contexts.

That split tasks based on a locative topic produced such a low proportion of prepositions in comparison with the native speaker data is particularly surprising given the need to use phrases such as between the ... and next to... to locate items in relation to other items in these tasks. While the prediction would have been that this type of activity would skew the proportions the other way, generating proportionally more prepositions in the learner data, in fact this was not so. On the contrary, the comparisons for prepositions (in Table 29) lend support to the well known phenomenon that second language learners tend to omit function words. However, the same phenomenon does not hold in the data for conjunctions. Table 30, which records the occurrence of certain conjunctions in the texts produced by the second language learners, set alongside the relative proportion of these conjunctions in the LLC and LOB corpora, shows striking similarities. The percentage of conjunctions in the combined split and shared

information tasks in the second language learners' corpus is 5.36% of the total number of words in the corpus, which is quite comparable to the proportions in LLC (5.99%) and LOB (4.38%). These comparisons are displayed graphically in Figure 23.

8.4.3 Discussion

The use of the 45 prepositions and conjunctions which account for between 10% and 12% of all the words produced by the second language learners in this study raises the question of why adult second language learners use prepositions much less than native speakers of English but certain conjunctions very much more. It seems likely that the answer to this question is to be found in the role of these two word classes. Although, as Matthews (1981:181) suggests, prepositions and conjunctions can have similar connective functions making them sometimes hard to distinguish, it is the case that prepositions generally operate at the phrasal level, linking individual lexemes to form prepositional phrases or marking particular semantic relationships between nouns or noun phrases. Thus the thing in the box is not the same as the thing near the box. On the other hand, rather than linking lexical entities, conjunctions operate at the level of propositional semantics, linking clauses or sentences (Givón, 1990a).

From the earliest stages of first language acquisition, it is the proposition which is the unit of expression. Even at the one-word utterance level of development, the child's speech can be characterized as being holophrastic (de Laguna, 1927) consisting fundamentally of comments or predicates but with the arguments normally associated with the proposition often being left unmarked or unexpressed. Thus the child who says up might be interpreted as intending I want to get up on to the chair or What I want is beyond my reach.

Adult users of English similarly do not always mark parts of propositions in spoken discourse (e.g. Ready? - uttered without subject or verb). Sometimes relations between propositions are unmarked, as for example when causation is expressed through juxtaposition.

TABLE 29

A Comparison of the Occurrence of Prepositions and Particles Produced by Second Language Learners and Native Speakers of English

Prepositions	NNS Corpora				NS Corpora			
	Shared*	%	Split*	%	LLC*	%	LOB**	%
about	62	0.489	35	0.229	2,043	0.470	1,900	0.190
above	0	0	38	0.249	32	0.007	297	0.030
across	0	0	1	0.007	99	0.023	265	0.027
after	4	0.032	5	0.033	432	0.099	1,162	0.116
around	7	0.055	3	0.020	166	0.038	245	0.025
at	7	0.055	12	0.079	2,649	0.609	6,048	0.605
before	8	0.063	2	0.013	423	0.097	1,059	0.106
behind	0	0	2	0.013	115	0.026	292	0.029
below	0	0	10	0.065	28	0.006	150	0.015
beside	2	0.016	19	0.124	18	0.004	90	0.009
between	5	0.039	66	0.432	208	0.048	867	0.087
by	3	0.024	1	0.007	1,261	0.290	5,836	0.584
for	57	0.450	34	0.225	3,063	0.704	9,307	0.931
from	20	0.158	11	0.072	1,498	0.344	4,693	0.469
in	124	0.978	134	0.877	7,929	1.823	21,356	2.136
inside	2	0.016	63	0.412	76	0.017	138	0.014
into	0	0	3	0.020	619	0.142	1,658	0.166
near	29	0.229	37	0.242	84	0.019	223	0.023
next	5	0.039	35	0.229	241	0.055	416	0.042
of	23	0.181	93	0.608	11,309	2.600	35,809	3.581
on	69	0.544	149	0.975	3,596	0.827	7,052	0.705
opposite	22	0.173	4	0.026	25	0.006	88	0.009
outside	0	0	36	0.236	109	0.025	235	0.024
over	4	0.032	2	0.013	506	0.116	1,334	0.133
through	0	0	1	0.007	325	0.075	776	0.078
to	184	1.451	81	0.530	12,681	2.915	26,907	2.691
under	0	0	76	0.497	183	0.042	669	0.067
underneath	0	0	1	0.007	14	0.003	11	0.001
up	5	0.039	2	0.013	1,357	0.312	1,975	0.198
with	21	0.166	12	0.079	2,404	0.553	7,196	0.720
within	1	0.008	1	0.007	130	0.030	345	0.035
without	1	0.008	2	0.013	145	0.033	665	0.067
Total number of prepositions and particles tokens	665		971		53,768		138,794	
Number of words in corpus	12,685		15,284		435,000		1,000,000	
Prepositions and particles as a percentage of corpus	5.24		6.35		12.36		13.88	

*Spoken English

**Written English

TABLE 30

A Comparison of the Occurrence of Conjunctions Produced by Second Language Learners and Native Speakers of English

	NNS Corpora				NS Corpora			
	Shared*	%	Split*	%	LLC*	%	LOB**	%
although	1	0.008	0	-	105	0.024	384	0.038
and	231	1.821	424	2.774	14,019	3.223	27,934	2.793
because	123	0.970	22	0.144	1,360	0.313	776	0.078
but	92	0.725	46	0.301	3,830	0.880	4,961	0.496
either	2	0.016	0	-	138	0.032	301	0.030
if	71	0.560	19	0.124	1,956	0.450	2,479	0.248
or	69	0.544	43	0.281	1,884	0.433	3,808	0.381
otherwise	2	0.016	1	0.006	51	0.012	91	0.009
so	217	1.716	109	0.713	2,514	0.578	2,461	0.246
though	1	0.008	0	-	213	0.049	622	0.062
Total number of conjunction tokens	809		664		26,070		43,817	
Number of words in corpus	12,685		15,284		435,000		1,000,000	
Conjunctions as a percentage of corpus	6.38		4.34		5.99		4.38	

*Spoken English **Written English

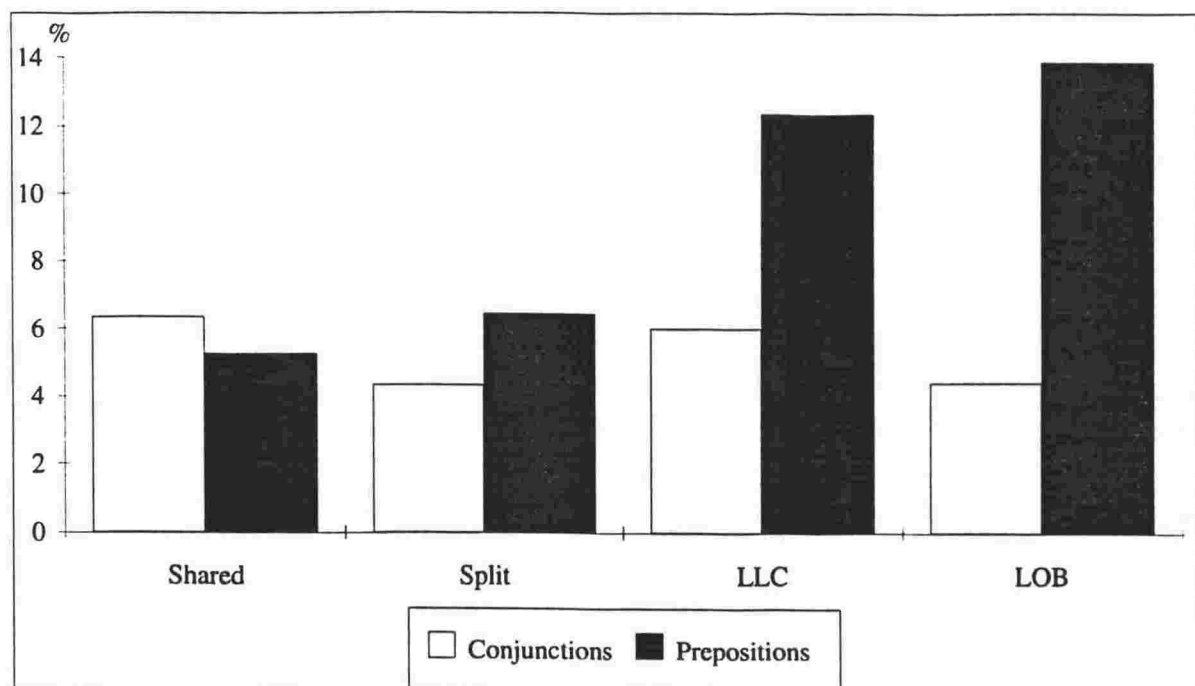


Figure 23. The Proportions of Prepositions and Conjunctions in Two Corpora of speech by Non-native Speakers of English Compared to Two Native Speaker Corpora

Pinker (1984), in a review of first language acquisition literature, shows that prepositions are acquired late, after content word categories. In adult native speaker English, prepositions typically make up between 10% and about 13% of all the words in spoken or written texts. As Givón (1990b) has argued, early first language acquisition is of the lexicon but without morpho-syntax. He argues that there is a tendency for adult second language learner acquisition to adopt and remain at this lexical non-grammatical mode. Fewer prepositions might then be expected in the second language learners' corpus. But why are there more conjunctions, especially in the shared information tasks? Conjunctions mark the relationships between propositions, the basic expression units of language. The evidence of the data suggests that second language learners show, through marking inter-propositional relationships, that this is a natural mode of expression for them as adult second language learners experienced in reasoning in their first language.

However, it is the difference between the use of conjunctions in the shared and split

information tasks which is of particular interest. As Table 30 shows, with the exception of the use of and, the shared information tasks produce proportionately more conjunctions than the split information tasks in every case, and in most cases proportionately more than in the native speaker spoken and written corpora. Shared information tasks involve interlocutors in having to argue a case on the basis of information they share rather than check on accuracy of information held by other interlocutors as is often the case with split information tasks. It is this reasoning or argumentation that requires conjunctions to mark the relationships between propositions. Thus tasks which call for reasoning in the second language bring out the marking of these relationships in a way not evident in their use of prepositions, the markers of intra-propositional relationships, even when the task (e.g. the zoo plan) calls for locative marking. In Table 30 if the coordinating conjunction and is excluded, then the huge disparity between conjunction use in shared and split information tasks is accentuated even further.

For both cognitive reasons (a need to reason, persuade, or argue) and pragmatic reasons (we communicate in propositions), adult second language learners seem to see the expression of propositions and the relationships between them as having higher priority than the marking of relationships between concepts. Shared information tasks of the kind used in this study appear to encourage the generation, expression and marking of inter-propositional relationships. Split information tasks in this study produced slightly *more talk* (although a similar number of different words) when compared with shared information tasks. But the shared information tasks resulted generally in more inter-propositional relationships being marked and a different kind of talk in which argumentation expressed particularly by means of subordination is demanded by the nature of the task.

8.5 Discourse Modes

The discussion of various aspects of interaction in this chapter ends with what can be called 'discourse modes', the equivalent of genre in the discourse of written texts.

Discourse modes are a useful finishing point because they represent the interactional data in the study at its most general level, and because they have a potentially explanatory role in the occurrence of the more micro features of interaction examined earlier.

Genre analysis shows how the structural or formal properties of a piece of text are determined by the purpose for which that text was written (Martin, 1984). Inasmuch as this relationship holds, different texts written for similar purposes will display common properties and so be considered part of the same genre. While genre analysis is typically applied to written texts, the process of generalizing from purpose to text structure may also improve our understanding of the different modes of spoken discourse typical of certain tasks. As with written genre, the discourse produced by a task is given its identifiable shape and structure not so much by features of the task itself, but by its purpose. Thus, knowing why learners are interacting, knowing the purpose of their talk, allows predictions as to the occurrence of specific linguistic features as well as in the present context, the more general discourse features of the talk such as those discussed in the present chapter.

In applying this perspective to data from the present study, two distinct modes (or genre) are seen to characterize the split and shared information task types. First, describing or reading information aloud so that interlocutors can receive, record or process the information in some way (as in the split information tasks) typically led to a descriptive mode. This was characterized by specific linguistic features such as relational transitivity choices ("her first language is Italian"), the marking of simple additive conjunction relationships ("one sport is indoor and one sport is outdoor"), unmarked topical themes, few textual themes (e.g. a lack of interclausal linking) and simple present tense choices. It was also characterized by large numbers of questions and repetitions, by the rapid interchange of relatively short turns and by increased marking of links within propositions as represented by the use of prepositions. Many of these properties are seen in the following example (77) from a split information task and typifying the descriptive mode.

(77)

- S7 the men's symbol the men's toilet symbol is a circle ?
 S8 yeah
 S7 [then under the circle is a cross under the circle yeah is a cross yeah
 S5 [under? bottom?
 S8 mm
 S6 [yep so is alright yeah
 S7 [ok yes (laugh) no (laugh) you are wrong and ah women's symbol is a circle
 and then a tring-angle
 S8 yeah, triangle
 S6 mmm
 S7 tring-angle
 S5 triangle?
 S8 [yeah I got it (laugh) women's
 S7 [yeah no its a women, women, yeah
 S6 [triangle is man ♀? no ♀? women ♀? and ah...

ZSP2 11:53

But when learners discussed an issue, or reasoned and persuaded others as they worked towards consensus on a ranking of items or a solution to a problem (as in the shared information tasks), very little description of this kind was required. Instead, the discourse was characterized by features of judgement (or explanatory) genre including frequent use of textual and interpersonal themes (I think patient E because of the medical suitability), transitivity marking mental processes (I think, I disagree), greater use of consequential conjunctive marking (so, if), use of simple present, simple past and past perfect tense choices, and longer turns and utterances. The following extract (78), from a shared information task, displays many of these properties.

(78)

- S6 so mm, if so, why do you, do you think E first the F?
 S7 huh?
 S8 at ah F?
 S6 mm
 S7 I think the the the personal characters [is not very good
 S6 [mmm mmm
 S7 because ah he's a criminal record [for the fraud?
 S8 [no his job-
 S7 -and [the age, no no no this is against the law yeah illegal [job yeah
 S5 [yeah (laugh) job but illegal job [ohh (laugh)
 S8
 S5 they [cheat someone like this
 S7 [and ah, and ah

MSH2 5,6

The distinction between two broad modes of discourse is useful here because it provides

a broader framework within which the occurrence of isolated discourse features can be located. It is also important in the way it illustrates the uniqueness of the language practice which different task types generate in addition to the opportunities they provide for negotiation of meaning.

There is at least one further implication of this discourse distinction. Because discussion or explanation such as required by Tasks 1 and 2, involves a high proportion of negotiation concerned with the opinions or ideas of interlocutor (see Table 14 in Chapter VI), this kind of talk may be more influenced by the degree to which interlocutors are prepared to disagree about and argue contrary points of view. It is also likely to be more dependent on the quality of interpersonal relationships between interlocutors than discourse concerned primarily with description of subjectively neutral information as in the split information tasks.

8.6 Summary

The present chapter attempted to balance the prominence given to negotiation in studies of interaction by selecting other salient aspects of task-based interaction for analysis, and suggesting ways in which these aspects might also contribute to the developing proficiency of language learners. The features chosen for analysis included: the amount of talk; the length of turns and utterances; the marking of relationships within and between propositions; and the operation of two distinct discourse modes.

The amount of talk produced by the learners was discussed from three perspectives: the extent to which the amount of talk was influenced by task type; the relationship between the amount of talk and the amount of negotiation; and the distribution of talk among interlocutors. In contrast to the prediction in Hypothesis 8, the rate of speech did not vary significantly across the split and shared information task types used in the study. A number of explanations were proposed. First, the more rapid exchange of turns in the split information tasks was likely to have produced less continuous discourse, with frequent short pauses between turns, thus reducing the amount of talk as measured in

words per minute. This counteracts the effect of the longer pauses necessary for thinking and planning in the shared information tasks. Second, while the split information tasks increased the contributions of interlocutors who otherwise had a minor role in interaction, the shared information tasks freed up more fluent interlocutors to speak much more, since they were not bound by the requirement to receive vital information from other interlocutors as in the split information tasks. Again, contrary to the prediction in the hypothesis, these interlocutor effects reduced the amount of talk in the split information tasks and bolstered the amount of talk in the shared information tasks. But the fact that the relative contributions of each interlocutor tended to be consistent across all task performances, was balanced by a strong task type effect in which more even sharing of talk clearly resulted from the division of textual information among interlocutors in the split information tasks. The duality of this result is interesting and would bear further investigation in future research.

Pedagogically, these results show the value of equally distributing information among interlocutors (as in the split information tasks) not only because this moderates the extremes of minimal and domineering contributions by certain interlocutors, but also because it allows the underlying bases of these extremes to be evident in such a way that the 'stronger' group members can continue to carry a greater interactional load and thereby facilitate efficient task completion.

While the amount of talk was not significantly effected by task type, other qualitative dimensions of talk were. Thus, turns and utterances were significantly longer in the shared information tasks than in the split information tasks. While the length of these units is not a measure of syntactic complexity, the fact that the shared information tasks require more planning and thinking time, and also require a level of reasoning absent in the split information tasks supports the link between the longer utterances in the shared information tasks and greater syntactic complexity. Further evidence of this complexity was seen in the more frequent marking of relationships between propositions through the use of conjunctions in the shared information tasks.

It is difficult to package these various findings in a way that provides a clear preference

for one task type over another. But this difficulty perhaps exposes the fallacy that one particular type of linguistic behaviour can maximise learning benefits. Clearly the complexity of the learning process, the range of communicative events and interactional goals, as well as all the factors that constitute a task performance point to multiple sites for the enhancement of language learning. Shared and split information tasks place a range of different demands on the learner as a user of the language and as an interlocutor, thus pointing to modification to the strong claims made on behalf of split information tasks simply because they require learners to negotiate meaning more frequently. Learners clearly need to experience achieving a variety of goals through interaction, and in response to these goals, drawing on a range of linguistic and strategic resources.

Chapter IX CONCLUSIONS

9.1 Introduction

In recent years a great deal of research has been devoted to understanding and explaining the role of various learner behaviours in SLA. In particular, interactionalist and input theories of SLA have attributed varying degrees of importance to interactionally-generated language, though debate continues on the roles of modified input and modified output in SLA, and on the adequacy of the evidence in support of these roles. One result of the debate has been the careful examination by various researchers of the kinds of classroom interaction engaged in by language learners, including, in particular, task-based interaction. On the assumption that the act of negotiation generates optimum input for SLA, this line of research sought to empirically substantiate the task conditions under which negotiation was most likely to occur. It is in this context that the present study was set. The study examined the interaction of two groups of non-native learners of English performing a series of carefully controlled communication tasks. The data from these performances provided the basis for an investigation into both the nature of task-based language learner interaction and the relationships between features of certain tasks, interactional behaviour, and learning outcomes. The study was motivated by five goals. First, it sought to re-examine earlier research by Doughty and Pica (1986) which had established a link between negotiation and particular task types; second to improve the frameworks used for analyzing negotiation; third to reassess the sufficiency of the interactional hypothesis; fourth to examine the relationship between task performance and vocabulary retention; and fifth to extend the focus on learner language beyond negotiation to include an analysis of talk on task, of turn-taking behaviour, and of the marking of inter- and intra-propositional relationships. The outcomes relating to each of these goals are summarized below.

9.2 Doughty and Pica (1986) and the Relationship between Tasks, Task Features, and Negotiating Behaviour

The re-assessment of the study by Doughty and Pica revealed weaknesses in design and in the analysis and interpretation of results, as well as in the theoretical assumptions on which the study is based (see section 2.7). In the area of design, the weaknesses lay in the non-random assignment of subjects to different treatments, and in the choice of very different topics to instantiate the different information task types. In the area of analysis and interpretation of results, the study by Doughty & Pica measured tasks purely on the basis of the amount of negotiation these tasks encouraged. However this failed to account for qualitative variations in negotiation such as the fact that negotiation might not be concerned with incomprehensible linguistic input at all or might be dealing with perceptual difficulties.

The present study attempted to overcome these problems by various means, including the use of a repeated measures design and an in-depth analysis of various types of negotiation. Despite differences between the two studies, there is substantial agreement between their results. Specifically, both studies showed learners expended much more effort modifying incomprehensible input when performing split information tasks rather than shared information tasks. In the present study this result held true across comparisons of tasks in which other factors (topic and group) were varied, an issue that was not resolved in the Doughty and Pica study.

A number of factors may have accounted for differences in the amount of negotiation between tasks, and in particular the large amount of negotiation in the split information tasks. Among these were: the constraints imposed by the limitations of short term memory in the split information tasks where both listening and recording information were required; the need to accurately transfer discrete items of information in these tasks; and the fact that in the split information tasks, writing, pointing, and other direct means of avoiding communication breakdowns were not available. Such explanations are supported by the fact that a large amount of negotiation in these tasks was directed at problems of perception, and thus involved interlocutors struggling to understand the form of each other's utterances.

While topic also had a significant effect on the amount of interaction produced in different tasks, the multidimensional nature of topics makes this effect difficult to interpret. The label 'topic' overlaps with other task dimensions such as the solution type, media, the activity type and structural and procedural complexity. Although it was difficult to disentangle the effect of each of these since they occurred in tandem, a discussion of the results indicated that closed solutions, diagrammatic input, a descriptive discourse mode involving directives or instructions, familiarity with the task type, and clear structural and procedural guidelines were all associated with the production of more negotiation.

The assumption that more negotiation is better and should therefore be encouraged through the use of split information tasks (Long and Porter, 1985; Doughty and Pica, 1986) was questioned on a number of grounds. First, large amounts of negotiation may not be appropriate in certain kinds of discourse, such as when opinions on personal or sensitive issues are being discussed (as in Task 1, the medical shared task). In addition, a large amount of negotiation may indicate a breakdown in forward progress toward the task goal with excessive attention being paid to form and accuracy. Furthermore, different tasks produce not only different amounts of negotiation but also different kinds of negotiation. Thus, negotiation in shared information tasks seemed to involve more thoughtful processing of the semantic and ideational dimensions of communication, while negotiation in split information tasks typically involved perception of incomprehensible language (which in many cases did not contain new linguistic features), and the verification of descriptions of given task content.

9.3 The Nature of Negotiation of Meaning

The study attempted to extend previous descriptions of negotiating moves by describing two categorization frameworks. The first framework operationalized six functional categories of negotiating questions found in the data. These were confirmation checks, clarification requests, elaborations, lexical searches, comprehension checks, and try-marking modulations. The second framework classified the information which negotiation sought to clarify into five categories. These were the form of the message,

lexical and grammatical meaning, content, opinions and procedures. Using both these systems it was possible to get a more detailed picture of the interactive behaviour of learners under the different task conditions. It was argued that the frameworks provided a more comprehensive basis on which to assess the role of negotiation in SLA. A discussion of categories from both frameworks suggested that some categories such as elaborations, clarification requests and the clarification of lexical and grammatical meaning were more valuable for learning purposes than others. However, the negotiating behaviour of the learners proved to be a complex phenomenon by no means restricted in its scope to improving the comprehensibility of unfamiliar input as a superficial reading of interactionalist theories of SLA might suggest. Negotiating questions often contained overlapping or ambiguous functions. In addition, these functions were often implicit and context-bound rather than formally signalled and as a result, the intentions of the speakers and the interpretations of either the listeners or the researcher did not necessarily correspond.

9.4 The Adequacy of the Interaction Hypothesis

The interaction hypothesis was evaluated against a set of negotiation sequences which represented each of the categories of negotiation in the second framework. The sequences which were examined provided evidence to show that the comprehensibility of input the learners received from each other was greatly improved through opportunities to negotiate, although most negotiation by these learners was triggered by poorly formed utterances and not by unfamiliar or intrinsically difficult input. Aside from some encouraging findings regarding the learning of new words from the tasks, it was difficult to find evidence of learners acquiring or even being in a position to acquire new and challenging linguistic features through negotiation of input from other learners.

If the evidence is viewed from the point of view of opportunities for language production (rather than comprehension) the results are more promising. The quality of feedback learners gave to other learners on their language production was generally high, being accurate and often resulting in more target language-like production. Without such opportunities to negotiate and receive feedback, it is difficult to imagine

how the learners could in fact complete the tasks successfully. The results suggest that it is the opportunities to negotiate output rather than input that hold more promise for SLA, at least as far as group work is concerned.

9.5 The Retention of Vocabulary as an Outcome of Task Performance

While the negotiation of input received limited endorsement, one aspect of this negotiation, namely that dealing with unfamiliar vocabulary, provided positive results. The study showed that learners gave good quality information to each other on word meaning where it was required of them by the task. In the shared information tasks in particular, the learners tended to make an effort to negotiate the meaning of unfamiliar words in a way which was not found in the split information tasks. This was because in the shared zoo task for example, knowing the animals referred to in the text for the task was vital for completing the task goal of arranging the animals satisfactorily in relation to each other. This requirement for thoughtful processing of vocabulary was not present in the split zoo task by comparison, where the task goal of transferring the locations of animals could be achieved quite satisfactorily using strategies that avoided having to negotiate the meaning of unfamiliar animal names in the textual input.

Post-testing of the words from the task texts revealed an average 13% improvement over pre-test scores across the eight subjects. Words which had received explicit meaning-focused negotiation showed more consistent retention by subjects than unfamiliar words for which clarification was not sought. Somewhat unexpected however, was a noticeable improvement in the recognition of non-negotiated words, suggesting the value of exposure to unfamiliar vocabulary in a context where it is being used meaningfully by others.

9.6 Other Aspects of the Language of Task-based Interaction

The discussion to this point has explored the relationship between tasks, negotiation and SLA. Recommendations for task design were based on the primary goal of improving negotiation opportunities. But this kind of approach has been criticized for denying the

social context of interaction (Kohonen, 1992). It also only touches on a small part of the linguistic context. For this reason the study investigated other aspects of interaction including the amount of talk, the length of turns and utterances, and the marking of inter- and intra-propositional relations.

The results showed that shared information tasks, despite having no inbuilt requirement for participation, produced no less talk than the split information tasks, although talk in the split information tasks was more evenly distributed among interlocutors. One of the reasons used to explain the similarities in the amount of talk was that turns were on average twice as long (in words per turn) in the shared information tasks, thus reducing the number of between-turn gaps. The qualitative implications of this were that talk in the split information tasks was characterised by many fragments and short phrases, while in the shared information tasks, talk contained many more simple and complex clauses. Reinforcing this picture of different kinds of talk was the finding that conjunctions, marking links between propositions and indicating greater syntactic complexity, were more prevalent in shared information tasks. Further work is needed on how native speakers of English perform on different task types to see whether the differences in the linguistic marking of inter-propositional and intra-propositional relationships noted in the present study is maintained. Whether it is desirable to use tasks to encourage the use of certain forms, such as if or because to mark inter-propositional relationships, is also a matter for consideration by those concerned with pedagogical theory as well as those concerned with classroom practice. With adult second language learners it may not be that specific grammatical processes such as conditional or causative subordination have to be learned or developed, but that learning opportunities need to be specifically created to encourage their use.

9.7 Implications for Task Design

The features of a good task are that it should provide relevant content, meaningful opportunities to construct discourse, a context for learners to participate in solving communication problems, and new and challenging linguistic material.

As reflected in the tasks in the study, collections of published communication materials, fail to take content seriously since the primary goal is to encourage learners to actively participate in classroom communication. But the fact that the learners in the study invested so much effort in negotiating the content of the tasks (an average of 7 negotiating questions for every minute of time on task) is a compelling reason to ensure that greater attention is given to task content. The issue has been politicized by the claim that communication tasks too often trivialize the content of learning (Pennycook, 1990). For adult ESOL learners in particular, the demeaning and often irrelevant activities they are required to perform in class bear little resemblance to needs in their daily lives. Indeed the claim has been made that such approaches to learning are part of the process of marginalizing immigrant groups and denying them the tools of knowledge by which they might gain power over their lives. At the heart of this polemic is the claim that language classrooms have divorced language and content from each other when in fact they are inseparable, and are for many learners, needed in tandem (c.f. Halliday's notion of language as a social semiotic in Halliday and Hasan, 1989)

Further qualities of a good task are that it will contain goals that engage learners fully with the content, and will ensure that all participants are fully engaged in performance. In regard to the former, the problem-solving and decision-making activities of the shared information tasks motivated learners to think deeply about the task content, as can be seen in their willingness to invest time and effort solving vocabulary-based comprehension problems which mattered to task performance. On the other hand however, it was the split information tasks which bought about the greatest participation from all participants. But there is no reason why both goals cannot be built into a single task. For example, it would be possible to adapt the tasks in the study so that they begin with information exchange and then using that information (which becomes the combined property of the group), to proceed with a problem solving or decision making activity. How this suggestion is applied to the design and selection of tasks will depend to some extent on the level of the learners. For learners with limited proficiency, the mere act of negotiating each other's perception may present a challenging task, while more advanced learners may go beyond the set demands of the task by using it as a

springboard for further discussion of issues which arise and points of language which cause problems during performance.

An additional quality of a good task is that it will expose learners to new and challenging linguistic input. One way to meet this suggestion is to build an explicit language focus into the task goal. For example, Ellis (1991b) has proposed a task for raising to prominence potentially unfamiliar linguistic features in communication. The task required learners to rank a series of sentences according to whether each sentence conformed to a grammatical rule which had been introduced through the task. The ranking activity required group consensus, and so linguistic rules were under constant discussion. Færch and Kasper also make the point that for learners to perform accurately using low level rules (e.g. bound morphemes), they need to perform tasks aimed at "the identification of formal L2 features rather than on the reconstruction of the message" (1986:270-271).

But encouraging a focus on form is likely to meet resistance from many teachers whose primary motivation for using communication tasks is to encourage learners to focus on communicating meaning, that is to 'reconstruct the message'. However, one of the strengths of tasks such as those used in the present study is that even without a specific 'linguistic' focus, they provided new linguistic input in the form of unfamiliar vocabulary which learners were able to learn through the context- and interaction-rich environments of the tasks. But there are problems if tasks contain linguistically difficult content. Learners may spend excessive time struggling with the language and make little progress on the task, thus undermining the fluency goal of much task work. Fundamental to this tension between form and message is the problem of fitting the goals of task-based interaction within an appropriate theoretical understanding of linguistic knowledge and of language development. Linguistic knowledge has been described as having two key components, competence and control (Sharwood Smith, 1986). In general the present study emphasised competence by equating learning with the acquisition of new forms and features of the target language. A task was seen as a vehicle for the kinds of language development which could be represented as increments of knowledge such as that measured by the pre- and post-tests of task

vocabulary. But while the vocabulary results were promising, overall the discussion showed very limited evidence of learners acquiring new forms and features. Whether more careful selection and placement of new linguistic input in task texts would provide clearer evidence is a matter for further research. Outside of the kind of tasks proposed by Ellis above, it would seem that incidental competence learning is the best that can be hoped for. In fact this is not altogether unexpected since it is a control model of competence and not a competence model that provides the main impetus for task use in language learning.

From a control perspective, practice with the target language provides the learner with opportunities to improve their ability to recall the appropriate linguistic resources in order to perform specific communicative acts. In so doing, learners make automatic aspects of language not yet fully under control, that is, they develop fluency. Since it is the act of generating language which is central, the task acts as a prompt for the use of language to achieve challenging goals, rather than as a pool of linguistic material to be acquired. In terms of task design therefore, a control perspective places emphasis on the activity required by the task and the uses to which learners put their language resources in the belief that these provide important conditions for learning.

9.8 Implications for Language Development

Because communication tasks provide input for language learners, the linguistic nature of this input is of considerable importance. The quality of this input, whether measured by well-formedness, grammatical complexity, richness of vocabulary or sociolinguistic appropriateness is surely relevant. However, the input learners receive from each other in group work is likely to be structurally unsophisticated and inaccurate, thus presenting them with only a partial picture of the target language. In addition, group work emphasises the need to be communicatively effective which, for learners, is often at a cost to accuracy. Being communicatively successful and without a correct model for comparison, there is every chance that aspects of the interlanguage of the learner will fossilize since, in this context, there is neither opportunity nor incentive for interlanguage change. Such criticisms are consistent with a performance model of

memory which presents learning as, alongside the accumulation of facts, the construction of mental representations on the basis of accumulated experience of what we have done. In keeping with this model, the mental representations in language learning should naturally be as close to those of native speakers as possible (Rivers, 1991).

But there is another side to this picture. First, language spoken in many interactional contexts is unlikely to conform to the norms of written language. In as much as language use by learners in environments largely uncontrolled by a teacher is marred by performance errors, it is also true that talk by native speakers in interactive settings is also characteristically marred by false starts, fragmentation (or satellite units - see Bygate, 1988), incomplete utterances, run-on sentences and ungrammatical constructions. As Gillian Brown argues:

As soon as we try to situate practice in listening comprehension in an interactive setting, where speakers are free to construct whatever form of message they like, we necessarily find that many of the messages that listeners are exposed to are not ideally constructed - the information is not effectively conveyed. This is of course a feature of everyday life both in and out of the classroom. It is often the case that speakers speaking 'on the wing' do not express themselves very accurately. Clearly part of the ability to understand language (whether mother tongue or a foreign language) lies in being able to interpret such less-than-ideal messages (1986: 298).

Secondly, a study by Bruton and Samuda (1980) found that learners were successful in their attempts to correct each other and did not appear to pick up errors from each other. In another study (Morrison and Low, 1983), learners used a range of error treatment strategies, to monitor their own speech as well as that of interlocutors. (See also Long and Porter, 1985:20-21.) In addition, there is more negotiation (Doughty and Pica, 1986) and no reduction in the grammatical accuracy of talk by learners (Porter, 1986) in group work than in whole class situations. Chun, Day, Chenoweth and Luppescu (1982) point out that grammatical errors are seldom corrected even by native speakers in NS/NNS conversations.

Thirdly, we can assume that group work takes place in the wider context of a language classroom in which it is likely to be more than balanced by teacher, text book and dictionary input, all of which provide the necessary focus on accuracy to offset the likelihood of interlanguage fossilization through group work.

But furthermore, a focus on the gaps in talk by learners presents only part of the picture. An examination of some of the extracts of talk by learners such as (73) and (74) in Chapter VII, show a lot more than linguistically imperfect speech. Learners are piecing together their knowledge and using their linguistic resources at what may be their communicative edge - at the limits of their present competence. Discourse is being mutually constructed as interlocutors build meaning over a series of turns or utterances or through self-repair, and as they incorporate new forms into their language production. In other words, while there is error because learners are breaking new ground with their talk, they are also using language in new ways which are likely to result in greater fluency and the ability to use an increasing range of grammatical constructions and vocabulary.

9.9 Implications for Teaching

The role of the teacher appears to involve at least five dimensions. These are: awareness of the range, capabilities and limitations of different types of tasks; selection and design of tasks appropriate to the needs of learners (or an advisory role in selection by learners); monitoring of task performance; managing feedback and reinforcing the learning outcomes from task performance through subsequent work; and finally, using task performances as a chance to note areas of weakness in need of extra support in individual students or areas of strength to be encouraged.

Part of the skill of selecting and designing tasks appropriate to the needs of learners lies in knowing the range of tasks available and of the kinds of meaningful language outcomes a task is likely to require of learners. Such awareness might involve being able to articulate the aspects of language use such as this study has investigated. Simply claiming that "the learners enjoy a task" or "it makes them communicate" lacks the

precision required for effective use of tasks in language teaching and may not meet learner needs. In terms of design, task awareness allows teachers to take set work and reassemble it within preferred task frameworks which are known to maximize the quality of independent and interdependent engagement with the material by the learners.

Monitoring of task performances can provide a valuable opportunity for teachers to engage in action research, testing out the claims made for task-based learning and interaction against what they see happening in their classrooms and exploring new dimensions of task use. At a more specific level teachers can, through listening to the focus of negotiation, note the types of information that are causing trouble or are interesting to the learners. These can then be the focus of debriefing, intervention, or discussion of the task after the task performance. Post-performance feedback from the students on the areas of difficulty or interest is also a useful guide to areas in need of additional teacher guidance and as such represent the operation of a process or negotiated syllabus (Breen, 1984; Clark, 1991).

Overall, the present study showed learners providing each other with effective assistance in overcoming difficulties in speaking, hearing and clarifying unfamiliar vocabulary during task performance. In this regard they were a good resource for each other working with a minimum of teacher assistance once the tasks had been introduced and the procedures clarified. While not excluding teacher intervention, such findings confirm the use of communication tasks which maximise interactional opportunities among learners and which encourage them to be interdependent, using each other as a resource. Nation and Thomas make a similar point, suggesting that if the learning goal of a task is learning from other participants, then the task should "allow the learners to interact freely with others so that negotiation is possible" (1988:15). Given such opportunities, learners can make sense of their own learning, developing self-reliance, confidence and communicative competence in the process.

9.10 Possible Further Research

The questions of how and to what extent task-based interaction contributes to language development continue to attract both theoretical interest and empirical research. In this regard, the present study offers a number of suggestions for further investigation.

9.10.1 Extending Current Frameworks for Analyzing Negotiation

The assessment of the negotiable input theory discussed in this study, revealed weaknesses in the theory on the grounds that it failed to account for other routes to comprehension besides negotiation, and did not account for learners using negotiation for reasons other than to improve the comprehensibility of input. While the present study classified negotiation on the basis of the forms and functions of negotiation and the kinds of information it was aimed at, an extension of this categorization would involve classifying each instance of negotiation according to whether the problem which generated the negotiating sequence was with (a) ill-formed input, (b) unfamiliar input, (c) familiar input made incomprehensible through external factors, or (d) familiar, comprehensible input negotiated for other reasons. Such distinctions would make the value of negotiation more explicit in terms of either input or output (production) theories of learning, or in relation to some other route to learning which such a categorization may reveal. It would also provide a broader picture of the kinds of trouble which occurs in communication task performance.

To make the learning benefits of negotiation more tangible may also require a closer examination of the outcomes of specified instances of negotiation both in terms of the repeated use or successful manipulation of a negotiated item in subsequent discourse, and in the measurement of longer term retention of a negotiated item. Furthermore, the differential effect of negotiation on different dimensions of language - on phonology, morphology, syntax and lexis must be assessed to give greater precision to the kind of claims being made for interaction in language development. Recent research in the area by Pica, Holliday, Lewis, Berducci, and Newman (1991) has begun to use coding frameworks which distinguish different kinds of negotiation on this basis. In addition,

Holliday (1992) has studied the ways in which NS/NNS negotiation facilitates the acquisition of syntax through providing large numbers of cross-sentential cues by which the structure of the language is made salient.

9.10.2 Making Comparisons with Different Types of Groups

Comparisons between groups of different composition (e.g. NS/NNS versus NNS/NNS) have been typical of many studies in the field. In the present context, the two frameworks for coding negotiating questions developed in the study could be applied to data gathered from NSs performing the same tasks. This could show differences in preferred styles of negotiation and in the types of information which typically gets negotiated by NS as compared to NNS.

A comparison with NS data gathered from equivalent contexts is also necessary to confirm the tendency noted in section 8.4.2 for NNSs to mark intra-propositional relations considerably less than NS, while using a similar level of marking of inter-propositional relations.

9.10.3 Carrying out Post-performance Evaluation and Testing

Improving on the ways in which learning can be assessed is essential if communication tasks are to receive further validation. In particular it would be useful to test recall of task content (where content was relevant to the syllabus or the needs of the students). It would also be useful to assess improvement in the area of skills and fluency or improved use of specified strategies. Certainly, to find evidence that learners have integrated adjustments made to interlanguage rules through negotiation requires some form of data collection beyond the performance itself. Ellis (1991:199-200) makes a similar point suggesting that introspection and retrospection by the learner during and after a task performance can highlight new language features which learners have noticed and attempted to use or learn.

9.10.4 Investigating the Perceptions of the Learners

To a large extent the discussion of tasks and negotiation in the present study takes the perspective of a researcher or teacher. To compliment this, a feedback session after the task performances was included to gauge the perceptions of the learners on their performances on the tasks. While this provided some information about the particular tasks which the learners enjoyed as well as some of the difficulties that they faced in overcoming shyness and in understanding instructions, a more rigorous attempt to get at this kind of information might require a questionnaire, or interview with individual students after completing a task. These techniques may well reveal new information about the way the learners experience tasks, how they perceive the learning goals, and what internal processes they are conscious of using. Such methods would also give the subjects a role in the interpretation of their language behaviour. Reports by learners on their experience of a task may also elucidate the role of such factors as structural and procedural difficulty, interpersonal and cultural dynamics, familiarity with the task or topic, interest value and so on. In the present study these were largely the subject of extrapolation from product data, but could have received further attention if the perceptions of the learners had been more carefully elicited.

While the study originated out of an attempt to assess a single claim regarding negotiation, the current findings go somewhat further. They reveal a complex interaction of participant, task, and situation which impinge on language behaviour, an interaction which is not easy to isolate, and manipulate for research purposes, but a linguistic complexity which is nevertheless consistent with the dynamism and unpredictability of human interaction.

BIBLIOGRAPHY

- Allwright, R. L. (1980) 'Turns, topics and tasks: patterns of participation in language learning and teaching.' in Larsen-Freeman (ed.).
- Allwright, R. L. (1984) 'The importance of interaction in classroom language learning.' *Applied Linguistics* 5/2: 156-171.
- Antony, T. (1986) 'Characterizing student-student interaction.' *Nucleo*. Central University of Venezuela.
- Aston, G. (1986) 'Trouble-shooting in interaction with learners: the more the merrier?' *Applied Linguistics* 7/2: 128-143.
- Barnwell, D. (1988) 'Some comments on T-unit research.' *System* 16/2: 187-192.
- Bley-Vroman (1986) 'Hypothesis testing in second language acquisition.' *Language Learning* 36/2: 353-376.
- Bloomfield, L. (1933) *Language*. New York: Holt.
- Breen, M. P. (1987) 'Learner contributions to task design.' in Candlin and Murphy (eds.).
- Breen, M. P. (1984) 'Process syllabuses for the language classroom' in C. Brumfit (ed.).
- Brown, G. (1978) 'Understanding spoken language.' *TESOL Quarterly* 12/3: 271-283.
- Brown, G. (1986) 'Investigating listening comprehension.' *Applied Linguistics* 7/3: 284-302.
- Brown, R. (1973) *A First Language*. Middlesex: Penguin Books Ltd.
- Brown, R. (1991) 'Group work, task difference and second language acquisition.' *Applied Linguistics* 12/1: 1-12.
- Brumfit, C. (1984) *Communicative Methodology in Language Teaching*. Cambridge: Cambridge University Press.
- Bruton, A. and V. Samuda. (1980) 'Learner and teacher roles in treatment of oral error in group work.' *RELC Journal* 11/2: 49-63.
- Bygate, M. (1987) *Speaking*. Oxford: Oxford University Press.

- Bygate, M. (1988) 'Units of oral expression and language learning in small group interaction.' *Applied Linguistics* 9/1: 59-82.
- Canale, M. (1983) 'From communicative competence to communicative language pedagogy.' in Richards and Schmidt (eds.).
- Canale, M. and M. Swain. (1980) 'Theoretical bases of communicative approaches to second language teaching and testing.' *Applied Linguistics* 1/1: 1-47.
- Candlin, C. N. (1987) 'Towards task-based language learning.' in Candlin and Murphy (eds.).
- Candlin, C. N. and D. F. Murphy (eds.) (1987) *Language Learning Tasks*. Englewood Cliffs NJ: Prentice-Hall.
- Chaudron, C. (1985) 'Intake: on models and methods for discovering learners' processing of input.' *Studies in Second Language Acquisition* 7/1: 1-14.
- Chaudron, C. (1988) *Second Language Classrooms*. Cambridge: Cambridge University Press.
- Christian, D. (1980) 'What do you mean by request for clarification.' in R. Shuy and A. Shnukal, *Language Use and the Uses of Language*. Georgetown: Georgetown University Press.
- Chun, A., R. Day, N. Chenoweth and S. Luppescu. (1982) 'Errors, interaction and corrections: a study of non-native/non-native conversations.' *TESOL Quarterly* 16/4: 537-547.
- Clark, D. F. (1991) 'The negotiated syllabus: what is it and how is it likely to work?' *Applied Linguistics*, 12/1: 13-28.
- Corder, S. P. (1978) 'Language learner language', in Richards, J. (ed.) (1985).
- Crookes, G. (1986) '*Task Classification: a Cross-Disciplinary Review.*' *Technical Report No.4*. Honolulu: Centre for Second Language Classroom Research. University of Hawaii at Manoa.
- Crookes, G. (1989) 'Planning and interlanguage variation.' *Studies in Second Language Acquisition* 11/4: 367-83.
- Crookes, C. (1990) 'Second language speech production research: a methodologically-oriented review.' *University of Hawaii Working papers in ESL*. Vol 9, No. 2: 31-65.
- Crookes, C. and K. Rulon. (1988) 'Topic and feedback in native-speaker/non-native speaker conversation.' *TESOL Quarterly* 22/4: 675-681.

- Das, B. K (Ed.) (1987) *Patterns of Interaction in Southeast Asia*. Singapore: RELC.
- Davies, N. F. (1982) 'Training fluency: an essential factor in language acquisition and use.' *RELC Journal* 13/1: 1-13.
- Day, R. (ed.) (1986) *Talking to Learn: Conversation in Second Language Acquisition*. Cambridge, MA: Newbury House.
- De Laguna, G. (1927) *Speech: Its Functions and Development*. New Haven: Yale University Press
- Doughty, C. (1992) 'Negotiation as an SLA process.' Paper presented at the inaugural Pacific Second Language Forum, University of Sydney.
- Doughty, C. and T. Pica. (1986) 'Information gap tasks: do they facilitate SLA?' *TESOL Quarterly* 20/2: 305-325.
- Doyle, W. (1983) 'Academic Work.' *Review of Educational Research* 53/2: 159-199.
- Duff, A. (1986) 'Another look at interlanguage talk: talking task to task.' in Day (ed.).
- Ellis, R. (1980) 'Classroom interaction and its relation to second language learning.' *RELC Journal* 11/2: 29-48.
- Ellis, R. (1984) *Classroom Second Language Development*. Oxford: Pergamon.
- Ellis, R. (1986) *Understanding Second Language Acquisition*. Oxford: Oxford University Press.
- Ellis, R. (1987) Interlanguage variability in narrative discourse: style shifting in the use of the past tense. *Studies in Second Language Acquisition*, 9(1), 1-20.
- Ellis, R. (1989) 'Sources of inter-learner variability in language use and their relationship to second language acquisition.' in Gass and Madden (eds.).
- Ellis, R. (1991) 'The interaction hypotheses: a critical evaluation.' in Sadtono (ed.) *Language Acquisition and the Second/Foreign Language Classroom*. Anthology Series 29, Singapore: SEAMEO RELC.
- Ellis, R. and G. Wells. (1980) 'Enabling factors in adult-child discourse.' *First Language* 1: 46-82.
- Ervin-Tripp, S. (1976) 'Is second language learning like the first?' *TESOL Quarterly* 8: 111-127.
- Færch, C. and G. Kasper. (1986) 'Comprehension in second language learning.' *Applied Linguistics*, 7/3: 257-274.

- Ferguson, C. (1975) 'Towards a characterization of English foreigner talk.' *Anthropological Linguistics* 17: 1-4.
- Fleishman, E. A. (1978) 'Relating individual differences to the dimensions of human tasks' *Ergonomics* 21/12: 1007-1019.
- Freeman, D. (1992) 'Collaboration: constructing shared understandings in a second language classroom.' in Nunan (ed.).
- Gaies, S. (1980) 'T-unit analysis in second language research: applications, problems and limitations.' *TESOL Quarterly* 14/1: 53-60.
- Gaies, S. (1983) 'The investigation of language classroom processes.' *TESOL Quarterly* 17/2: 205-218.
- Gardner, D. (1987) 'Communication games: do we know what we are talking about?' *ELT Journal* 41/1: 19-23.
- Garvey, C. (1977) 'The contingent query: a dependent act in conversation.' in M. Lewis and L. A. Rosenblum (eds.) *Interaction, Conversation and the development of language*. New York: Wiley and Sons.
- Gass, S. and C. Madden. (eds.) (1985) *Input in Second Language Acquisition*. Rowley MA: Newbury House.
- Gass, S. and C. Madden. (eds.) (1989) *Variation in Second Language Acquisition: Psycholinguistic Issues*. Clevedon: Multilingual matters.
- Gass, S. and E. Varonis. (1984) 'The effect of familiarity on the comprehensibility of non-native speech.' *Language Learning* 34/1: 65-89
- Gass, S. and E. Varonis. (1985) 'Task variation and non-native/non-native negotiation of meaning.' in Gass and Madden (eds.).
- Gass, S. and E. Varonis. (1986) 'Sex differences in non-native speaker-non-native speaker interactions.' in Day (ed.).
- Gilbert, J. (1990) Secondary school students talking about science: language functions, gender and interaction in small group discussions. Unpublished M.A. Thesis, Victoria University of Wellington.
- Gibson, R. (1975) 'The strip story: a catalyst for communication.' *TESOL Quarterly* 9/2: 149-154.
- Givón, T. (1990a) *Syntax: A Functional-Typological Introduction* Vol.2. Amsterdam: John Benjamins Publishing Company.

- Givón, T. (1990b) 'National Language Learning and Organized Language Teaching.' in H. Burmeister and P. L. Rounds (eds.) *Variability in Second Language Acquisition*: 61-84. Portland: University of Oregon Press.
- Goffman, E. (1981) *Forms of Talk*. Oxford: Blackwell.
- Goldstein, L. M. and S. M. Conrad. (1990) 'Student input and negotiation of meaning in ESL writing conferences.' *TESOL Quarterly* 24/3: 443-460.
- Gregg, K. (1984) 'Krashen's monitor and Occam's razor.' *Applied Linguistics* 5/2: 79-100.
- Gubbay, D. and S. Coghill. (1988) An asset to the country: the effective use of educational resources to assist the successful resettlement of immigrants and refugees. Report prepared for the Ministry of Education, Wellington: NZ Government.
- Hall, S. (1991) The effects of split information tasks on the acquisition of mathematics vocabulary. Unpublished M.A. Thesis, Victoria University of Wellington.
- Halliday, M. A. K. (1975) *Learning How to Mean: Explorations in the Development of Language*. London: Edward Arnold.
- Halliday, M. A. K. and R. Hasan. (1976) *Cohesion in English*. London: Longman.
- Halliday, M. A. K. and R. Hasan. (1989) *Language, Context and Text: Asepts of Language in a Social-semiotic Perspective* (2nd ed.). Oxford: Oxford University Press.
- Hatch, E. (1978) 'Discourse analysis and second language acquisition.' in Hatch, E. (ed.) *Second Language Acquisition*. Rowley, MA: Newbury House.
- Hockey, S. and J. Martin (1988) *Micro-OCP*. Oxford: Oxford University Press.
- Holliday, L. (1992) 'NS modified comprehensible input in NS-NNS negotiations as input data for second language acquisition of syntax.' Paper presented at the inaugural Pacific Second Language Forum, University of Sydney.
- Holmes, J. (1989) 'Stirring up the dust: the importance of sex as a variable in the ESL classroom.' Paper presented at the ATESOL 6th Summer School; Sydney, Australia.
- Howatt, A. P. R. (1984) *A History of English Language Teaching*. Oxford: Oxford University Press.
- Hymes, D. H. (1968) 'The ethnography of Speaking.' in Fishman, J.A. *Readings in the Sociology of Language*. The Hague: Mouton and Co. N.V.Publishers.

- Hymes, D. H. (1972) 'On communicative competence.' in J. B. Pride and J. Holmes (eds.), *Sociolinguistics*. Harmondsworth: Penguin.
- Jefferson, G. (1972) 'Side sequences'. in D. Sudnow (ed.) *Studies in Social Interaction*. New York: The Free Press.
- Johnson, K. (1981) Introduction to Johnson and Morrow in K. Johnson and K. Morrow. (eds.) *Communication in the Classroom*. London: Longman.
- Keenan, E. (1974) 'Conversational competence in children.' *Journal of Child Language* 1: 163-183.
- Klippel, F. (1984) *Keep Talking*. Cambridge: Cambridge University Press.
- Kohonen, V. (1992) 'Experiential language learning: second learning as cooperative learner education.' in Nunan (ed.).
- Krashen, S. D. (1980) 'The Input Hypothesis', in J.E. Alatis (ed.) *Current issues in Bilingual Education*. Washington, D.C.: Georgetown University Press.
- Krashen, S. D. (1982) *Principles and Practice in Second Language Acquisition*. Oxford: Pergamon Press.
- Krashen, S. D. (1985) *The Input Hypothesis: Issues and Implications*. New York; Longman.
- Larsen-Freeman, D. E. (1975) 'The acquisition of grammatical morphemes by adult ESL students.' *TESOL Quarterly* 9/4: 409-420.
- Larsen-Freeman, D. E. (ed.) (1980) *Discourse Analysis in Second Language Research*. Rowley, Mass.: Newbury House.
- Larsen-Freeman, D. E. and M. Long. (1991) *An Introduction to Second Language Acquisition Research*. London: Longman.
- Littlewood, W. (1981) *Communicative Language Teaching*. Cambridge: Cambridge University Press.
- Long, M. (1980) *Input, Interaction and Second Language Acquisition*. Unpublished Ph.D. Dissertation, University of California, Los Angeles.
- Long, M. (1981a) 'Input, interaction and second language acquisition.' Paper presented at the New York Academy of Sciences Conference on Native and Foreign Language Acquisition.
- Long, M. (1981b) 'Questions in foreigner discourse.' *Language Learning* 31/ 1: 135-157.

- Long, M. (1983a) 'Native speaker/ non-native speaker conversation in the second language classroom.' in M. Clark and J. Handscombe (eds.) *On TESOL '82*, Washington DC: TESOL.
- Long, M. (1983b) 'Inside the black box' in Seliger and Long (eds.) (1983).
- Long, M. (1985) 'Input and second language acquisition theory.' in Gass and Madden (eds.).
- Long, M. (1989) 'Task, group, and task-group interactions.' Paper presented at the RELC Regional Seminar, Singapore, April 1989.
- Long, M., L. Adams, M. McLean and F. Castanos. (1976) 'Doing things with words: verbal interaction in lockstep and small group classroom situations.' in J. Fanselow and R. Crymes (eds.), *On TESOL '76*. Washington DC: TESOL.
- Long, M. and G. Crookes (1991) 'Three approaches to task-based syllabus design.' *University of Hawaii Working papers in ESL*. Vol 10, No.1: 1-36.
- Long, M. and P. Porter. (1985) 'Group work, interlanguage talk, and second language acquisition.' *TESOL Quarterly* 19/2: 207-228.
- Long, M. and C. Sato (1983) 'Classroom foreigner talk discourse: forms and functions of teachers' questions.' in Seliger and Long (eds.).
- Loschky, L and R. Bley-Vroman (1990) 'Creating structure-based communication tasks for second language development.' *University of Hawaii Working papers in ESL*. Vol 9, No.1: 161-212.
- Mabry, E. A. (1985) 'The effect of gender composition and task structure on small group interaction.' *Small Group Behaviour* 16/1: 75-96.
- Martin, J. R. (1984) 'Language, register and genre.' in *ECT418 Children Writing: Reader*. Geelong: Deakin University.
- Matthews, P. H. (1981) *Syntax*. Cambridge: Cambridge University Press.
- McGregor, H. (1990) 'Improving Communication Skills in Engineering Students.' Paper presented at the Eighth Australasian Learning and Language Conference. Brisbane. Australia; Queensland University of Technology.
- Morrison, D. and G Low. (1983) 'Monitoring and second language learners.' in Richards and Schmidt (eds.).
- Munroe, F. (1987) 'Female and Male Participation in Small Group Interaction in the E.S.O.L. Classroom.' I.T.A.T.E. Research Project for Graduate Diploma in T.E.S.O.L.

- Naimen, N., M. Frohlich, H. H. Stern, and A. Todesco. (1978) *The Good Language Learner*. Toronto: Ontario Institute for Studies in Education.
- Nation, I. S. P. (1976) 'Creating and adapting language teaching techniques.' *RELC Journal* 7/2: 1-15.
- Nation, I. S. P. (1985) 'Opportunities for learning through the communicative approach.' in B. K. Das (ed.) *Communicative Language Teaching*. Singapore: RELC Anthology Series 14.
- Nation, I. S. P. (1989) 'Speaking activities: five features.' *ELT Journal* 43/1: 25-29.
- Nation, I. S. P. (1989) 'Group work and language learning.' *English Teaching Forum* 27/2: 20-24.
- Nation, I. S. P. (1990) 'A system of tasks for language learning.' in S. Anivan (ed.) *Language Teaching Methodology for the Nineties*. Singapore: RELC Anthology Series 24
- Nation, I. S. P. (1991) *Language Teaching Techniques*. Occasional Publication No. 2. Wellington: Victoria University of Wellington.
- Nation, I. S. P. (1991) 'Fluency and Learning.' *The English Teacher* 20:1-8.
- Nation, I. S. P., and G. I. Thomas. (1988) *Communication Activities*. Occasional Publications No. 13. Wellington: Victoria University of Wellington.
- Newton, J. M. and I. S. P. Nation (1991) 'Teaching Vocabulary.' Unpublished paper.
- Nunan, D. (1989) *Designing Tasks for the Communicative Classroom*. Cambridge: Cambridge University Press.
- Nunan, D. (1991) 'Communication tasks and the language curriculum.' *TESOL Quarterly* 25/2: 279-295.
- Nunan, D. (ed.) (1992) *Collaborative Language Learning and Teaching*. Cambridge: Cambridge University Press.
- Nurss, J. R. and R. A. Hough (1985) 'Young children's oral language: the effects of task.' *Journal of Educational Research* 78/5: 280-285.
- Ochs, E. (1979) 'Planned and unplanned discourse.' in *Discourse and Syntax*, T. Givón (ed.) New York: Academic Press.
- Oster, J. (1989) 'Seeing with different eyes: another view of literature in the ESL classroom' *TESOL Quarterly* 23/1: 85-103.
- Pennycook, A. (1990) 'Towards a critical applied linguistics for the 1990s.' *Issues in Applied Linguistics* 1/1: 8-29.

- Pica, T. (1987) 'Second language acquisition, social interaction and the classroom.' *Applied Linguistics* 8/1: 3-21.
- Pica, T. (1988), 'Interlanguage adjustments as outcome of NS-NNS negotiated interaction.' *Language Learning* 38/1: 45-73.
- Pica, T. (1991a) 'Classroom interaction, negotiation and comprehension: redefining the relationships.' *System* 19/4: 437-452.
- Pica, T. (1991b) 'Input as a theoretical and research Construct.' *IRAL*, Vol. XXIX/3: 185-196.
- Pica, T. and C. Doughty. (1985a) 'Input and interaction in the communicative classroom: a comparison of teacher-fronted and group activities.' in Gass and Madden (eds.).
- Pica, T. and C. Doughty. (1985b) 'The role of group work in second language acquisition.' *Studies in Second Language Acquisition* 7: 233-248.
- Pica, T., L. Holliday, N. Lewis, D. Berducci, and J. Newman. (1991) 'Language learning through interaction: what role does gender play?' *Studies in Second Language Acquisition* 13: 343-376.
- Pica, T., L. Holliday, N. Lewis and L. Morgenthaler. (1989) 'Comprehensible output as an outcome of linguistic demands on the learner.' *Studies in Second Language Acquisition* 11/1: 63-90.
- Pica, T., R. Young and C. Doughty. (1987) 'The impact of interaction on comprehension.' *TESOL Quarterly* 21/4: 737-758.
- Pinker, S. (1984) *Language Learnability and Language Development*. Cambridge, MA: MIT Press.
- Porter, P. (1986) 'How learners talk to each other: input and interaction in task centred discussions.' in Day (ed.).
- Prabhu, N. (1987) *Second Language Pedagogy*. Oxford: Oxford University Press.
- Richards, J. (ed.) (1978) *Understanding Second and Foreign Language Learning: Issues and Approaches*. Rowley, MA: Newbury House.
- Richards, J., J. Platt, and H. Weber. (1985) *Longman Dictionary of Applied Linguistics*. London: Longman.
- Richards, J. C. and T. S. Rogers. (1986) *Approaches and Methods in Language Teaching: a Description and Analysis*. New York: Cambridge University Press.
- Richards, J. C., and R. W. Schmidt. (eds.) (1983) *Language and Communication*. London: Longman.

- Rivers, W. (1991) 'Reflections of language learning and teaching: an interview with Wilga Rivers.' *English Teaching Forum* XXIX/1: 2-5.
- Roger, D. and P. Bull (eds.) (1989) *Conversation*. Clevedon: Multilingual Matters Ltd.
- Rulon, K. and J. McCreary. (1986) 'Negotiation of content; teacher-fronted and small group interaction.' in Day (ed.).
- Saleemi, A. P. (1989) 'Inputs for L2 Acquisition.' *IRAL*, XXVII/3: 173-191.
- Saragi, T., I. S. P. Nation and G. F. Meister (1978) 'Vocabulary learning and reading.' *System* 6/2: 72-78.
- SAS Institute Inc. (1989) *SAS/GRAPH Software: Reference, Version 6, Fourth Edition, Volume 2*. Cary, NC: SAS Institute Inc.
- Sato, C. (1982) 'Ethnic styles in classroom discourse.' in Hines, M. and W. Rutherford (eds.) *On TESOL '81, 11-24*. Washington D.C. TESOL.
- Sato, C. (1986) 'Conversation and interlanguage development: rethinking the connection.' in Day (ed.).
- Scarcella, C. and C. Higa. (1981) 'Input, negotiation and age differences in second language acquisition.' *Language Learning* 31/2: 400-437.
- Schachter, J. (1986) 'Three approaches to the study of input.' *Language Learning* 36/2: 211-226.
- Schegloff, E., G. Jefferson and H. Sacks. (1977) 'The preference for self-correction in the organization of repair in conversation.' *Language* 53/2: 361-382.
- Schwartz, J. (1980) 'The negotiation for meaning: repair in conversations between second language learners of English.' in Larsen-Freeman (ed.).
- Seliger, H. W., and M. Long. (eds.) (1983) *Classroom Oriented Research*. Rowley, MA: Newbury House.
- Seliger, H. W. (1983) 'Learner interaction in the classroom and its effects on language acquisition.' in Seliger and Long. (eds.).
- Sharwood Smith, M. (1986) 'The competence/control model, cross linguistic influence and the creation of new grammars.' in E. Kellerman and M. Sharwood Smith (eds.) *Crosslinguistic influence in Second Lanaguage Acquisition*. New York: Simon and Schuster.
- Sharwood Smith, M. (1985) 'From input to intake: on argumentation in second language acquisition.' in Gass & Madden (eds.).

- Siegel, S. and N. J. Castellan (1988) *Nonparametric Statistics for the Behavioural Sciences* (second edition). New York: McGraw-Hill.
- Sinclair, J. and D. Brazil (1982) *Teacher Talk*. Oxford: Oxford University Press.
- Snow, C. and C. Ferguson (eds.) (1977) *Talking to Children: Language Input and Acquisition*. Cambridge: Cambridge University Press.
- Staab, C. (1983) 'Activities to elicit speech functions: varying the factors of a speech event does influence the appropriate language.' *Canadian Modern Language Review* 39/4: 847-858.
- Swain, M. (1985) 'Communicative competence: some roles of comprehensible input and comprehensible output in its development.' in Gass and Madden (eds.).
- Suwarno, B. (1992) Post-reading activity as an aid to learning from text. Unpublished M.A. Thesis, Victoria University of Wellington.
- Tarone, E. and G. Yule. (1989) *Focus on the Language Learner*. Oxford: Oxford University Press.
- Tauroza, S. and D. Allison. (1990) 'Speech rates in British English.' *Applied Linguistics* 11/1: 90-105.
- Taylor, T. J., and D. Cameron (1987) *Analyzing Conversation: Rules and Units in the Structure of Talk*. Oxford: Pergamon Press.
- Thompson, A. (1982) Clarification request sequences and related discourse strategies in informational exchange between hearing-impaired and hearing children. Unpublished doctoral thesis, Victoria University of Wellington.
- Ur, P. (1981) *Discussions that Work*. Cambridge: Cambridge University Press.
- Van Ek, J. A. and L. G. Alexander. (1975) *Threshold Level English*. Oxford: Pergamon Press.
- van Lier T. (1988) *The Classroom and the Language Learner*. London: Longman.
- Varonis, E. and S. Gass. (1985) 'Non-native/non-native conversations: a model for negotiation of meaning.' *Applied Linguistics* 6/1: 71-90.
- Wagner-Gough, J. and E. Hatch (1976). 'The importance of input data in second language acquisition studies.' *Language Learning* 25: 297-308.
- Wells, G. (1981) *Learning Through Interaction*. Cambridge, Cambridge University Press.

- White, L. (1987) 'Against comprehensible input: the input hypothesis and the development of L2 competence.' *Applied Linguistics* 8/2: 95-110.
- Widdowson, H. G. (1972) 'The teaching of English as communication.' *The English Teaching Journal* 27/1: 15-19.
- Widdowson, H. G. (1983) *Learning Purpose and Language Use*. Oxford: Oxford University Press.
- Young, R. (1984) 'Negotiation of outcome and negotiation of meaning in ESL classroom interaction.' *TESOL Quarterly* 18/3: 525-526.
- Yule, G. and E. Tarone. (1991) 'The other side of the page: integrating the study of communicative strategies and negotiated input in SLA.' in R. Phillipson, E. Kellerman, L. Selinker, M. Sharwood-Smith and M. Swain (eds.) *Foreign/Second Language Pedagogy Research*. Clevedon: Multilingual Matters.

Appendix A

THE FOUR TASKS USED IN THE PRESENT STUDY

TASK 1

WHO GETS THE NEW HEART?

Situation

You are members of a transplant team working at St Vincents hospital. There are six patients who badly need a heart transplant operation. All are critically ill and could die within a few days if they do not receive a new heart. Unfortunately there is only one heart available for the transplant and it is unlikely that other hearts will become available in the next few days

Task

Examine the data about each patient. You must decide who should receive the next available heart. Rank the patients in order. 1 - first to receive, 6 - last to receive

Time: You have 30 minutes to complete this exercise.

The patients

Patient A.

male, 57 years old, Muslim.

a heart surgeon on the point of developing a new technique in heart transplant surgery, married with two children

medical suitability: not good, likely to survive only two more years if the heart transplant is successful

Patient B

female, 38 years old, an atheist

owner of a dress shop, widow with three children, aged 4, 8 and 13

medical suitability: good

Patient C.

male, 42 years old, Roman Catholic

Member of Parliament (MP), married with three children

medical suitability: not good: has had an operation for possible cancer and is quite overweight

Patient D

male, 18 years old, a Hindu, factory worker, single

medical suitability: good

Patient E

female, 34 years old, a Protestant

university lecturer with a PhD in chemistry

divorced and has the custody of one son aged 5, her ex-husband is alive

medical suitability: fair, an excessive drinker and smoker

Patient F

male, 48 years old, no information on beliefs, ex-mayor of a large city, criminal record for fraud

medical suitability: good

TASK 2

REDESIGNING A ZOO

Situation:

The zoo's present layout has been causing problems.
There are also some new developments. For these reasons the zoo must be rearranged.

Task:

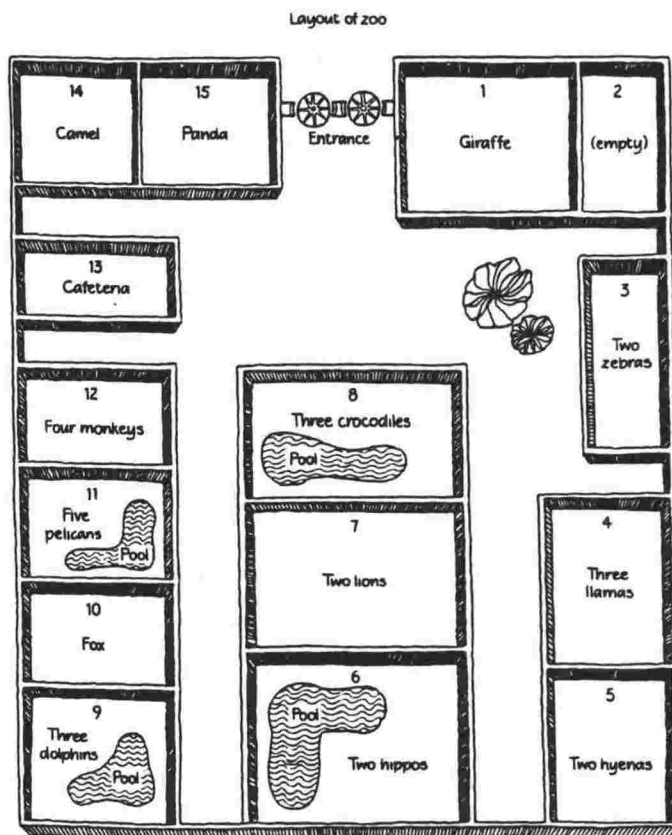
Your job is to decide what changes need to be made to the zoo using the information given below and then to rearrange the layout of the zoo. Make sure you overcome all the problems and take account of all the new developments.

Time: You have 30 minutes to finish this exercise

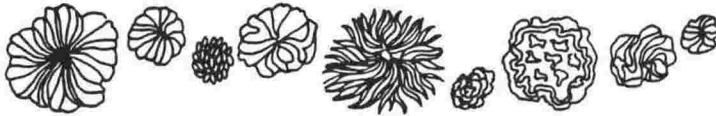
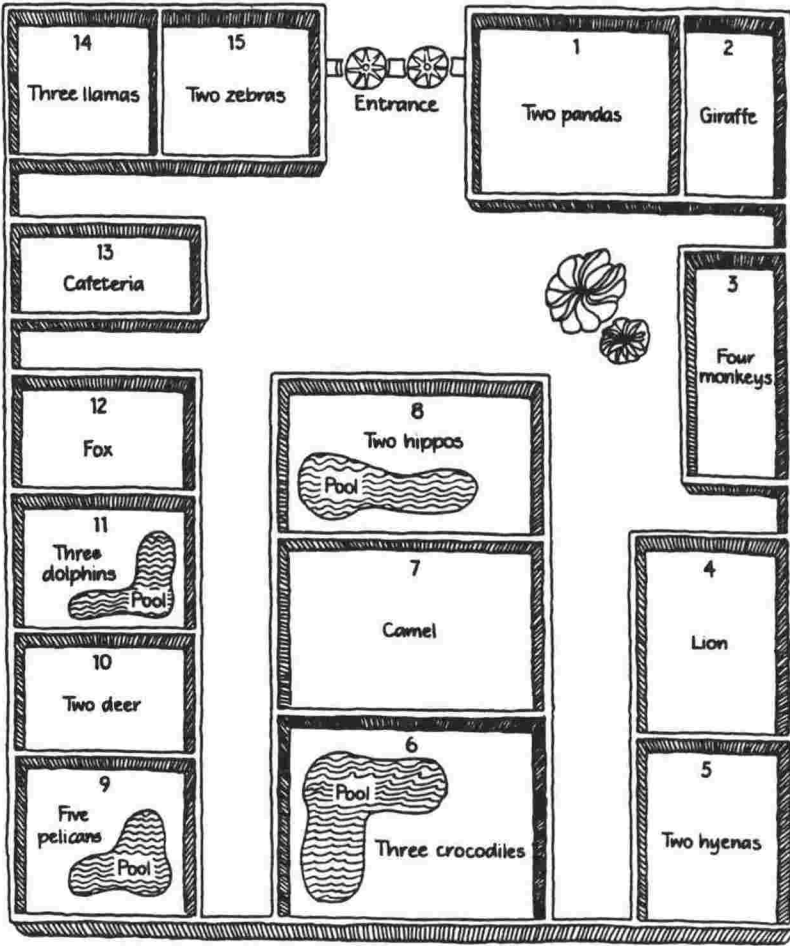
Information:

1. The Giraffe is about to give birth.
2. One of the lions has died
3. Small children are alarmed by seeing the crocodiles facing them as they come in.
4. The zoo has recently been given a new Panda.
5. The monkeys are very noisy, disturbing animals
6. The camel is rather smelly.
7. All the enclosures should be filled
8. Harmless animals should not be put next to predators (other animals which could attack or eat them in the natural state).
9. The zoo has enough money to buy two wolves or four flamingoes (birds) or a pair of small deer.

Source: Ur (1981)



Zoo (possible solution)



TASK 3

SURGERY

Time: You have 30 minutes to complete this activity.

Situation:

A new method of surgery has been discovered. This method needs four doctors to work together. Imagine you are the four doctors. Although a number of patients need this surgery, you disagree about which patient should have surgery first, second, third and fourth. To make this decision you will discuss the details of each patient together (Part 1) and then to select the most suitable patient for surgery using the criteria in Part 2.

Part 1: Complete the Patient Records.

You have a table with some details of four patients. Other members of your group have information which is missing from your table. Ask questions to find this information and fill in the table. The order of the patients is **different** in each table.

Part 2: Choose the most suitable patient.

Eight criteria will be used to decide which patient gets the surgery first, second, third and fourth. Each of you has two of these criteria. Tell your group your two criteria and listen as they tell you their criteria. For each criterion, decide which patients are suitable and put a tick (✓) beside that patient. The patient with the most ticks will have surgery first.

Learner A

Name	Lee, Gek Tay			
Occupation	lawyer	truck driver	social worker	electrician
Salary				\$29,000
Qualifications				Trade Certificate
Languages	1. 2.	1. 2.	1. 2. Korean	1. English 2.
Marriage status		unmarried		
Age			34	42
Health		high blood pressure		
Sports	1. 2.	1. 2. chess	1. rock-climbing 2.	1. 2.

Part 2

The most suitable patient should;

1. play at least one indoor team sport and one outdoor team sport
2. be under 25 years of age if they are unmarried

The patient who will receive the surgery is _____?

Learner B

Name	Pamela			
Occupation	electrician	social worker	lawyer	truck driver
Salary		\$32,000		
Qualifications		B.A. Sociology		
Languages	1. 2.	1. Malay 2.	1. 2.	1. 2. German
Marriage status			married	
Age				26
Health			very good	
Sports	1. 2.	1. 2.	1. 2. badminton	1. hockey 2.

Part 2

The most suitable patient should;

1. earn no less than \$20,000 per year
2. be fluent in two languages which have different written forms (ie, different shaped letters or symbols)

The patient who will receive the surgery is _____?

Learner C

Name	Simon			
Occupation	truck driver	lawyer	social worker	electrician
Salary	\$44,400			
Qualifications	B.A. (English) & L.L.B. (law)			
Languages	1. 2.	1. Chinese 2.	1. 2.	1. 2. Arabic
Marriage status	married			
Age	42			
Health	over weight			
Sports	1. 2.	1. 2.	1. 2. cricket	1. rugby 2.

Part 2

The most suitable patient should;

1. be between the ages of 20 and 40 if they are married.
2. be of a reasonable standard of health with no major health problems.

The patient who will receive the surgery is _____?

Learner D

Name	Gerald			
Occupation	social worker	electrician	truck driver	lawyer
Salary	\$35,790			
Qualifications	B.Sc Geology			
Languages	1. 2.	1. 2.	1. Italian 2.	1. 2. English
Marriage status	unmarried			
Age	29			
Health	This patient had skin cancer, but is better now			
Sports	1. 2.	1. 2. chess	1. rock-climbing 2.	1. rugby 2.

Part 2

1. have an occupation that does not require University qualification
2. be a qualified tradesperson

The patient who will receive the surgery is _____?

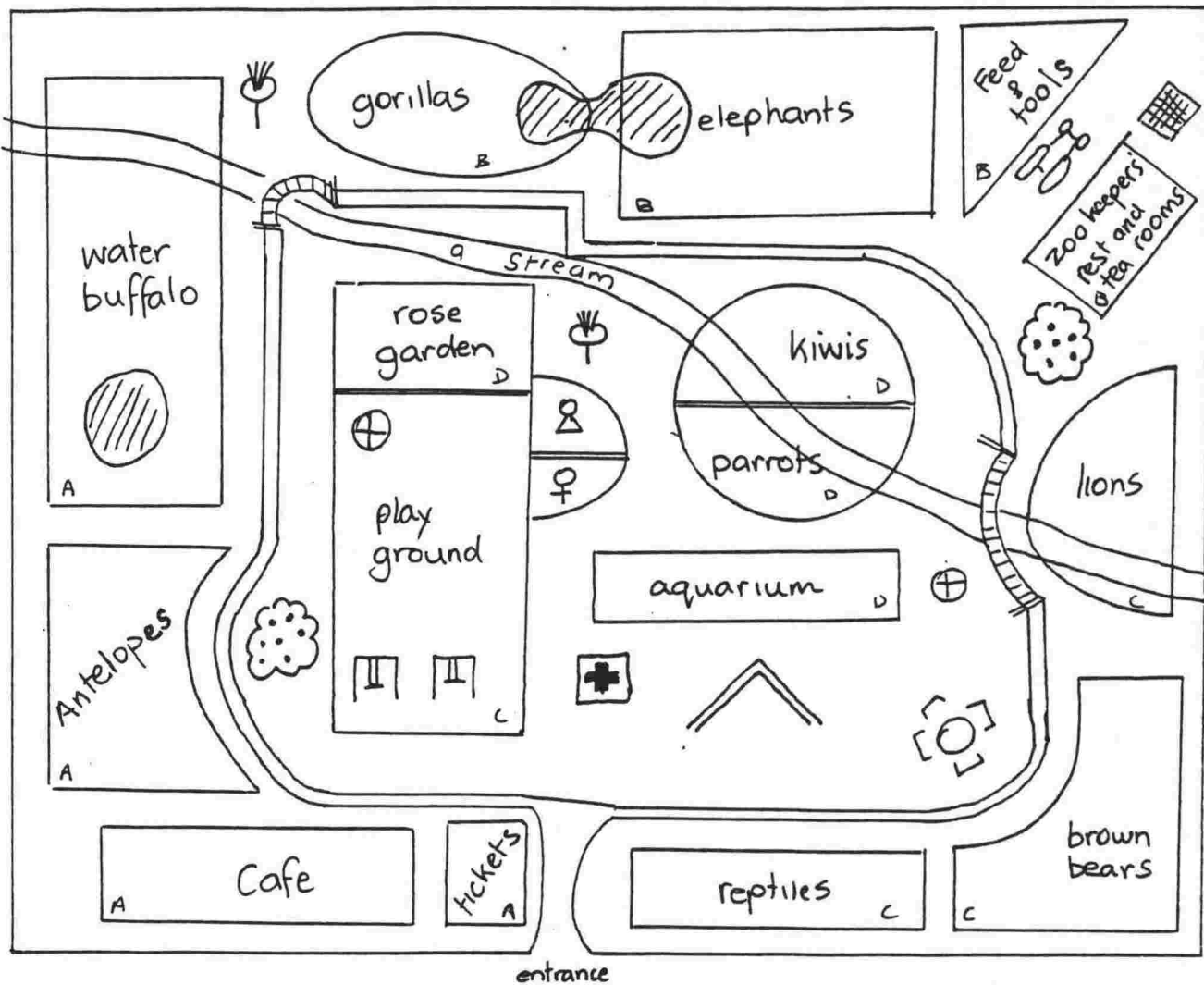
TASK 4

COMPLETING A ZOO PLAN

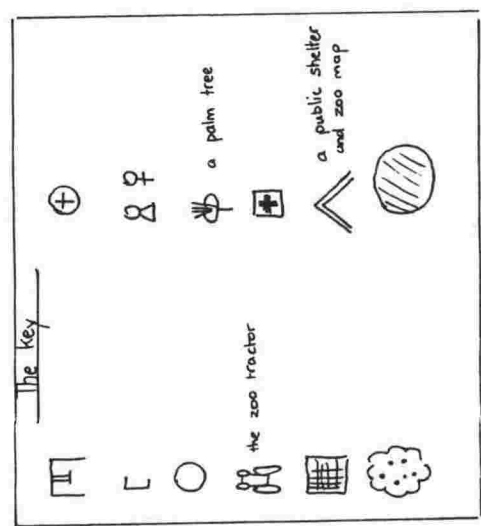
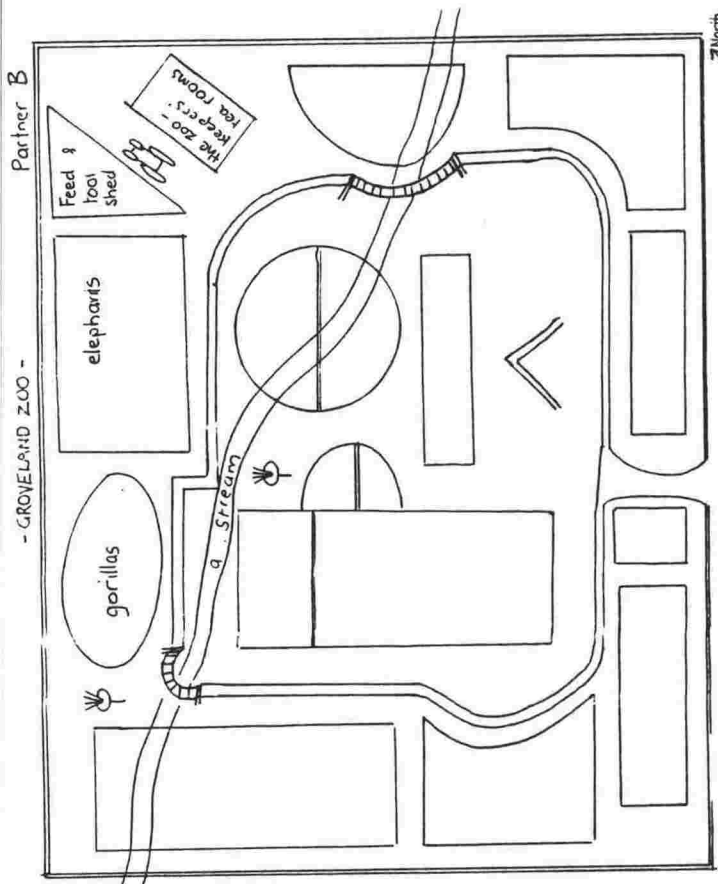
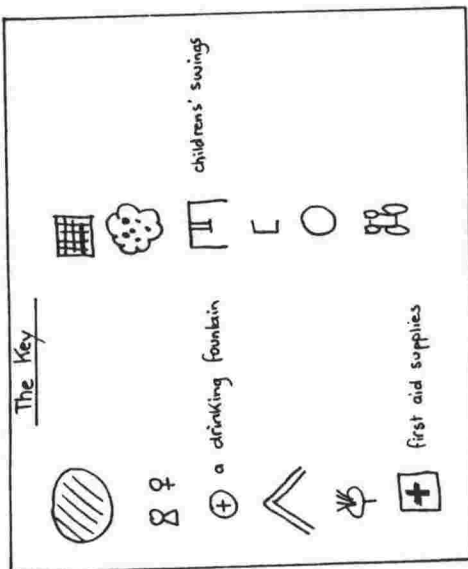
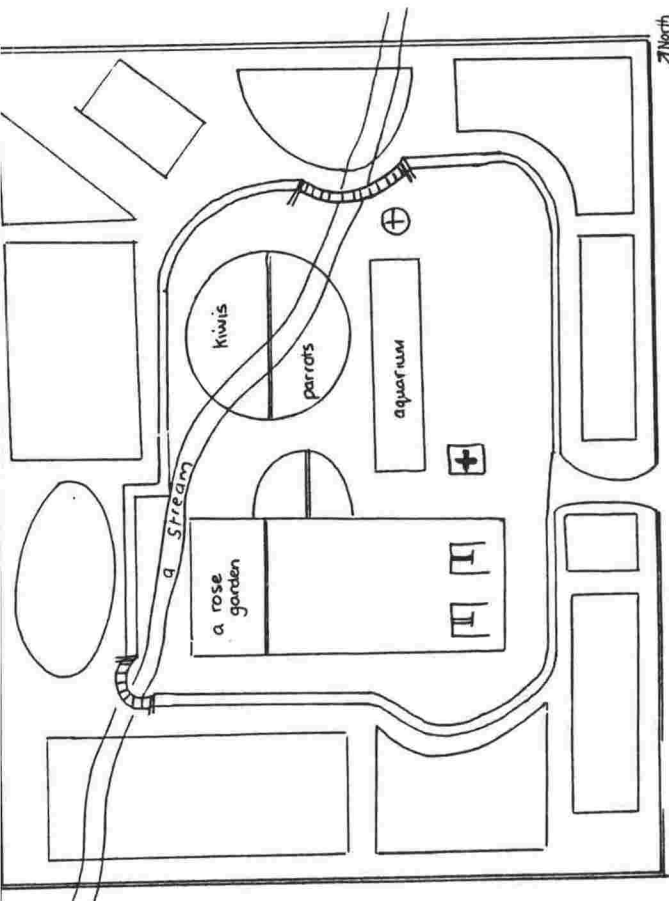
Instructions: Complete this plan of a zoo by doing the following activities;

1. Share information from the plans to find out;
 - i) which animals are in which cages
 - ii) what the other places in the zoo are called
2. Describe the symbols in your keys to find out what they represent.
(The order of the symbols is not the same in each key)
3. Describe the exact position of the symbols on the zoo plans.

Time: You have 30 minutes to complete this exercise.



The Solution



Appendix B

TRANSCRIPTION

1. Transcriptions Conventions

The conventions used here were based on Allwright (1980), Schwartz (1980) and Munro (1987).

:	sound is held
[overlapping speech
...	a pause of three seconds - each dot represents a second
{4}	a pause of more than three seconds with the bracketed number representing the number of seconds
xxxx	unintelligible utterance
{...}	intervening utterances removed for the sake of brevity
↑?	a high rise contour
/ /	phonetic transcription
()	transcriber's comment
↗	high rise terminal contour (HRTC)
S1-S8	interlocutors one to eight
SS	supervisor
-	cutoff speech resulting from either self- or other interruption
=	latching; no pause between one speaker and the next
<u>long square</u>	stress, involving either pitch or volume
<i>italics</i>	used to highlight the utterance(s) in an extract which are being discussed in the text
p a m e l a	a word with a space between each letter means the word was spelled
(ZSP2:11,2)	source and location of segment in original transcripts
Z	tasks involving a zoo-based topic
M	tasks involving a medical topic
SP	split information tasks
SH	shared information tasks
1	group one
2	group two
11:2	page and line number reference in computerized transcripts

2. The Hand-written Layout of Transcripts

S1	if you . if you want crocodile live here then we must move	
S2		
S3		
S4		
S1	the giraffe to here	no
S2		no this is no
S3		
S4	no its a little wall between crocodile and =	
S1		ah yes
S2	good because this, y'know this is cafeteria is crowded	
S3		
S4		yeah
S1	-you must ah, move	yeah OK
S2	So fa- five is giraffe	we mu- no
S3		we number five
S4	yes I don't	
S1	OK	noisy, OK
S2	don't	and then four monkeys, noisy one
S3	is mmm	OK
S4		
S1	monkey, ah, monkey pat on the -	
S2		
S3		
S4		-you can put number four also
S1	ten	no you can't put number four
S2		ten
S3		
S4	number ten ten	number four and
S1		yes and number four, you are
S2		
S3	number four for giraffe?	and five, five for giraffe?
S4	number ten	
S1	naughty, naughty giraffe	NO
S2	five good	NO
S3		monkey is-
S4		-number four

3. The Printed Layout of Transcripts in the Data-base

S1 if you if you want crocodile live here then we must move the giraffe to to
 here
 S4 no it's a little wall between crocodile and
 S1 no
 S2 no this is no good because this you know this is cafeteria is crowded
 S1 ahh yes
 S4 yeah
 S1 you must ahh move
 S2 so fi- five is giraffe we mu- no
 S4 yes i don't
 S1 yeah ok
 S3 number five is ummm
 S2 we don't
 S1 ok
 S2 and then four monkeys noisy one
 S1 noisy
 S1 ok monkey
 S1 ah monkey put on the-
 S4 you can put number four also number ten
 S1 ten
 S4 ten
 S1 no you can't put number four
 S2 ten
 S4 number four and ten
 S3 number four for giraffe ? E %
 S1 yes and number four you are naughty naughty giraffe
 S3 and five five for giraffe ? E %
 S2 five good
 S3 monkey is
 S4 number four
 S1 no
 S2 no

ZSH1 14

Appendix C
SUPPORT DATA

TABLES C-8 (a) & (b)

Frequency of Negotiating Questions in a Standard Task Time of 28'30": Groups 1 & 2 Respectively

(a) Group 1

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S1	59	85	118	111	373
S2	26	78	51	116	271
S3	53	44	42	83	222
S4	17	15	28	19	79
	155	222	239	329	945
Total	377		568		945

(b) Group 2

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
S5	10	27	23	54	114
S6	45	33	43	108	229
S7	46	62	56	106	270
S8	12	19	36	58	125
	113	141	158	326	738
Total	254		484		738

TABLES C-12(a)

Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Standard Task Time of 28'30" for Group 1.

Task type: Topic: Task code:	Shared		Split		Total
	Medical	Zoo	Medical	Zoo	
	1	2	3	4	
<i>Hearer Negotiation:</i>					
Confirmation Checks	14 (9)	43 (19)	64 (27)	68 (21)	189 (20)
Clarification Requests	24 (16)	36 (17)	59 (25)	100 (30)	219 (23)
Elaborations	10 (6)	16 (7)	8 (3)	58 (18)	92 (10)
Lexical searches	17 (11)	32 (14)	10 (4)	7 (2)	66 (7)
Total Hearer	65 (42)	127 (57)	141 (59)	233 (70)	566 (60)
<i>Speaker negotiation:</i>					
Comprehension Checks	39 (25)	61 (28)	46 (19)	51 (16)	197 (21)
Try marking modulations (TMM)	51 (33)	34 (15)	52 (22)	45 (14)	182 (19)
Total Speaker	90 (58)	95 (43)	98 (41)	96 (30)	379 (40)
TOTAL	155 (100)	222 (100)	239 (100)	329 (100)	945 (100)

TABLES C-12(b)

Frequencies (and Percentage frequencies) of Questions in Each Category of Negotiation in a Standard Task Time of 28'30" for Group 2.

Task type: Topic: Task code:	Shared		Split		Total
	Medical 1	Zoo 2	Medical 3	Zoo 4	
<i>Hearer Negotiation:</i>					
Confirmation Checks	26 (23)	27 (19)	49 (31)	84 (26)	186 (25)
Clarification Requests	24 (21)	30 (22)	55 (35)	68 (21)	177 (24)
Elaborations	7 (6)	6 (4)	17 (10)	79 (24)	109 (15)
Lexical searches	5 (5)	29 (20)	1 (1)	6 (2)	41 (6)
Total Hearer	62 (55)	92 (65)	122 (77)	237 (73)	513 (70)
<i>Speaker negotiation:</i>					
Comprehension Checks	22 (20)	34 (24)	28 (18)	46 (14)	130 (17)
Try marking modulations (TMM)	29 (25)	15 (11)	8 (5)	43 (13)	95 (13)
Total Speaker	51 (45)	49 (35)	36 (23)	89 (27)	225 (30)
TOTAL	113 (100)	141 (100)	158 (100)	326 (100)	738 (100)

TABLE C-14(a)

Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" for Group 1.

Task type: Topic: Task code:	Shared		Split		Total
	Medical 1	Zoo 2	Medical 3	Zoo 4	
<i>Clarification of:</i>					
Grammatical and lexical meaning	17 (11)	32 (14)	10 (4)	7 (2)	66 (7)
Forms	32 (21)	28 (13)	118 (49)	84 (25)	262 (28)
Spelling	-	-	16 (7)	25 (8)	41 (4)
Content	8 (5)	24 (11)	39 (16)	211 (64)	282 (30)
Opinions	97 (63)	134 (60)	48 (20)	-	279 (29)
Procedures	1 (0)	4 (2)	8 (4)	2 (1)	15 (2)
Total	155 (100)	222 (100)	239 (100)	329 (100)	945 (100)

TABLE C-14(b)

Frequencies (and Percentage Frequencies) of Negotiating Questions that Address Different Kinds of Information during a Standard Task Time of 28'30" for Group 2

Task type: Topic: Task code:	Shared		Split		Total
	Medical 1	Zoo 2	Medical 3	Zoo 4	
<i>Clarification of:</i>					
Grammatical and lexical meaning	5 (5)	28 (20)	1 (1)	5 (2)	39 (6)
Forms	7 (6)	26 (19)	84 (53)	77 (24)	194 (26)
Spelling	-	-	17 (11)	36 (11)	53 (7)
Content	8 (7)	9 (6)	36 (23)	206 (63)	259 (35)
Opinions	93 (82)	78 (55)	14 (9)	-	185 (25)
Procedures	-	-	6 (3)	2 (0)	8 (1)
Total	113 (100)	141 (100)	158 (100)	326 (100)	738 (100)

TABLE C-17(a)

The Quality of Interlocutor Responses for each Word (or Phrase) which was Subject to a Lexical Search

	Accurate	ss + Sup	Sup only	Avoided	Incorrect	Form	Total
MSH1							5
likely to..	*						
fair			*				
on the point..				*			
Hindu	*						
Medical Suitability	*						
ZSH1							11
disturbing	*						
alarmed~		(*)			*		
enclosure	*						
filled	*						
harmless	*						
predator	*						
zebra	*						
hippos				*			
wolves						*	
flamingos	*						
fox	*						

	Accurate	ss + Sup	Sup only	Avoided	Incorrect	Form	Total
MSP1							6
qualification	*						
that does not require...	*						
fluent	*						
written	*						
volleyball						*	
trades-person		*					
ZSP1							10
public shelter						*	
swings	*						
first aid						*	
aquarium	*						
cafe	*						
zoo dump						*	
bear	*						
play-ground	*						
seat	*						
fountain						*	

	Accurate	ss + Sup	Sup only	Avoided	Incorrect	Form	Total
MSH2							1
fraud	*						
ZSH2							8
alarmed					*		
deer	*						
llamas		*					
camel	*						
dolphins	*						
giraffe	*						
hippo		*					
hyena		*					
MSP2							3
moderate						*	
qualified	*						
trades-person	*						
ZSP2							5
childrens' swings						*	
gorillas	*						
reptiles						*	
palm						*	
pond						*	
Totals	29	4	1	2	2	11	49

~ Two outcomes have been noted for the word alarmed in ZSH1 since this word was defined incorrectly by one learner and then defined correctly by the supervisor and another learner

TABLE C-19(a)

Post-test Results for Words Negotiated for Meaning and
Words not Negotiated: Group 1:

	Words for which meaning clarification was sought			Words for which meaning clarification was not sought	Total
	Adequate information provided	Information provided on word form only	Wrong information or no information provided		
Known by all (pre and post-test)	1	1	-	33	35
Not known on pre-test: post-test improvement	10	3	1	33	47
Not known on pre-test: no improvement	2	1	-	25	28
Attrition	-	-	-	1	1
Not tested	10	1	2	-	13
Total	23	6	3	92	124

TABLE C-19(b)

Post-test Results for Words Negotiated for Meaning and
Words not Negotiated: Group 2

	Words for which meaning clarification was sought			Words for which meaning clarification was not sought	
	Adequate information provided	Information provided on word form only	Wrong information or no information provided		
Known by all (pre and post-test)	-	-	-	32	32
Not known on pre-test: post-test improvement	8	3	-	36	47
Not known on pre-test: no improvement	3	2	-	25	30
Attrition	-	-	1	1	2
Not tested	-	-	-	-	-
Total	11	5	1	94	111

TABLE C-19(c)

The Relationship between the Response to Lexical Searches for Particular Words (or Phrases) and Post-test Gains for these Words (or Phrases).

Response Column

✓ =An accurate response

0 =No response was forthcoming

X =An inaccurate response

F =The response dealt with form only, either through spelling or a repetition.

Outcome Column

↓ = Attrition

+ =Post test gain.

- =No post test gain

NT =The word was not tested.

100% =The word was recognised by all subjects in the pre-test despite being subject to negotiation.

	Response	Outcome
MSH1		
likely to..	✓	NT
fair	✓	NT
on the point..	0	NT
Hindu	✓	+
Medical Suitability	✓	NT

	Response	Outcome
ZSH1		
disturbing	✓	+
alarmed	✓	+
enclosure	✓	+
filled	✓	NT
harmless	✓	+
predator	✓	-
zebra	✓	NT
hippos	0	+
wolves	F	NT
flamingos	✓	NT
fox	✓	100%
MSP1		
qualification	✓	+
does not require	✓	NT
fluent	✓	+
written	✓	NT
volleyball	F	100%
tradesperson	✓	+

	Response	Outcome
ZSP1		
public shelter	F	-
swings	✓	+
first aid	F	+
aquarium	✓	-
cafe	✓	+
zoo dump	F	+
bear	✓	NT
playground	✓	NT
seat	✓	NT
fountain	F	+
MSH2		
fraud	✓	+
ZSH2		
alarmed	X	↓
deer	✓	-
llamas	✓	-
camel	✓	+
dolphins	✓	+
giraffe	✓	+
hippo	✓	-
hyena	✓	+

	Response	Outcome
MSP2		
moderate	F	+
qualified	✓	+
tradesperson	✓	+
ZSP2		
childrens' swings	F	+
gorillas	✓	+
reptiles	F	-
palm	F	-
pond	F	+
Totals	49	49

TABLES C-23(a) & (b)

Talk on Task Measured in Frequency of Words per Minute in a Standard Task Time of 28'30"

(a) Group 1

Task:	1	2	3	4	Total
Task type:	Shared		Split		
Topic:	Medical	Zoo	Medical	Zoo	
S1	52	71	49	41	213
S2	13	41	26	38	118
S3	36	24	22	38	120
S4	15	17	23	18	73
	116	153	120	135	524
	269		255		524

(b) Group 2

Task:	1	2	3	4	Total
Task type:	Shared		Split		
Topic:	Medical	Zoo	Medical	Zoo	
S5	11	26	12	25	74
S6	29	16	25	37	107
S7	42	47	46	51	186
S8	14	13	30	33	90
	96	102	113	146	457
	198		259		457

TABLE C-27(a)

A Comparison of the Occurrence of Certain Prepositions in Texts Produced by Groups 1 & 2 Respectively

	Tasks							
	Med shared		Zoo shared		Med split		Zoo split	
	Group							
	1	2	1	2	1	2	1	2
about	11	6	7	6	6	4	6	-
above	-	-	-	-	-	5	1	32
across	-	-	-	-	-	-	1	-
after	-	3	-	-	-	1	4	-
around	-	-	6	1	-	-	-	3
at	-	3	4	-	7	2	2	1
before	-	5	-	-	1	-	-	-
behind	-	-	-	-	-	-	2	-
below	-	-	-	-	-	10	-	-
beside	-	-	3	-	-	-	13	6
between	1	3	1	-	7	10	38	11
by	-	-	1	2	-	1	-	-
for	7	14	24	12	15	5	8	6
from	-	1	10	9	3	-	3	5
in	37	4	50	33	22	11	44	57
inside	-	-	1	1	9	-	21	33
into	-	-	-	-	1	-	2	-
near	-	-	20	9	-	-	27	10
next	-	-	3	13	-	-	7	3
of	16	10	17	26	14	5	55	19
on	7	-	9	6	-	2	71	76
opposite	-	-	4	1	-	-	-	4
outside	-	-	-	-	12	-	10	14
over	-	-	1	3	-	2	-	-
through	-	-	-	-	-	1	-	-
to	2	1	27	30	3	8	6	4
under	-	-	-	-	5	10	20	41
underneath	-	-	-	-	-	-	-	1
up	-	-	-	-	-	-	2	-
with	2	1	6	12	2	-	2	8
within	1	-	-	-	-	-	1	-
without	-	-	1	-	1	-	-	1
Total number of prep. tokens	84	51	195	164	108	77	346	335
Total number of words in corpus	2,673	1,590	4,806	3,616	3,507	2,529	4,388	4,860
Preps. as percentage of corpus	3.14	3.21	4.06	4.54	3.08	3.05	7.89	6.89

TABLE C-28(a)

A Comparison of the Occurrence of Certain Conjunctions in Texts Produced by Groups 1 & 2 Respectively

	Tasks							
	Med. shared		Zoo shared		Med. split		Zoo split	
	Group							
	1	2	1	2	1	2	1	2
although	-	1	-	-	-	-	-	-
and	36	24	60	56	55	35	79	79
because	33	14	44	32	14	3	3	2
but	19	22	19	32	18	8	13	7
either	-	-	-	2	-	-	-	-
if	28	5	27	11	11	6	-	2
or	21	5	27	16	13	8	15	7
otherwise	-	-	-	2	1	-	-	-
so	31	26	68	58	24	29	19	32
though	1	-	-	-	-	-	-	-
Total tokens	169	97	245	209	136	89	129	129
Words in corpus	2,673	1,590	4,806	3,616	3,507	2,529	4,388	4,860
% of corpus	6.32	6.10	5.10	5.78	3.88	3.52	2.94	2.65
No. of types	417		574		458		487	

Appendix D

DESCRIPTION OF SUBJECTS

All subjects were attending a pre-sessional English course at the English Language Institute, Victoria University. Most, but not all, were planning to attend mainstream university courses after the present course.

Subjects	Gender	Age	Ethnicity	Proficiency ¹
Group 1:				
S2	m	25	Taiwanese	103
S2	f	22	Japanese	110
S3	f	27	Indonesian	114
S4	m	26	Iranian	95
Group 2:				
S5	m	25	Iranian	107
S6	f	22	Japanese	110
S7	m	33	Taiwanese	87
S8	f	22	Indonesian	94

¹ The scores in this column are from the English Language Institute placement test battery which included a C-test, vocabulary test and dictation. The subjects were selected from the second to lowest of the nine classes streamed largely on the basis of the test scores. The test scores ranged from 40 to 210 across all the classes, and between 86 and 114 for this class. Although not intended as a reliable measure of overall proficiency, these scores indicate that the students were at a lower intermediate level of proficiency when they began the course.

Appendix E

INSTRUCTIONS TO SUPERVISORS OF THE EXPERIMENTAL SESSIONS

Procedure

- 1 Pick up the required number of task sheets from room vz 103 between 8.30 and 8.55 a.m. on the day of supervision.
- 2 Go to your designated room. The students will arrive between 9.10 and 9.15 a.m.
- 3 Turn on the tape recorder before introducing the task and giving instructions.
- 4 When the task is completed, collect the task sheets (named) and return them with the cassette player to my room. The students return to class.

General guidelines

- 1 No dictionaries
- 2 It is important that the members of your group do not see the information belonging to each other during the split information tasks. Cardboard dividers have been provided to avoid this.
- 3 Your role is to introduce the task and then to provide help when it is needed, but you should aim to get the group working independent of your involvement and so the less you say the better once the tape is rolling.
- 4 You may wish to spend a final 5-10 minutes reviewing the task, providing answers and getting feedback on what was difficult etc. Keep the tape rolling for this.
- 5 Aim to finish around 9.45 a.m., but feel free to continue to 10.00 a.m. if the group are still working on the task. Completing the task is more important than keeping to the time limit.
- 6 Retrieve all activity sheets (named) and instructions when the task has been completed. Ensure that students do not write on the sheets after the end of the group discussion.

What to do about unfamiliar vocabulary

Explain unknown vocabulary items during the course of the task when negotiation between students fails to illuminate an item and they request help, or when they have clearly got a wrong meaning and this is an obstacle to progress through the task. However, you should, as a general rule, encourage the group to try and work on a word between themselves before you intervene.

Guidelines for supervision of the backup groups

Your task is somewhat different in that you will be supervising the backup groups, data from which I do not expect to analyze.

Nevertheless you will be recording performances for these groups to provide backup data. Recording also shows the backup groups that their performances are of equal value to those of the other groups.

One of the three backup groups may only contain three learners. You can either join this group yourself to complete the group, or make the fourth task sheet available to the whole group.

Guidelines for supervision of individual tasks.

Task 1: Medical Ranking

- 1 When the students are seated, hand out the instructions sheet and read through it with the group.
- 2 The problem (which needs to be made explicit) is that there is not enough time nor are there enough hearts for six operations. Some patients will miss out which is why the ranking is necessary.
- 3 Hand out the information sheet.
- 4 Tell the group they have 3 - 5 minutes to read through the information sheet. During this time they do not talk. Each member should decide what information is important for making this decision. Each member should do a personal ranking of the patients before the group discussion.
- 5 When individual ranking time is up, tell the group to discuss their opinions and to reach a group decision about the ranking of the patients.
- 6 Remind the group of the 30 minute time limit.

Task 2: Zoo Ranking

- 1 When the group is seated hand out the information sheets and plan of the zoo. Give them a few minutes to read silently.
- 2 During your spoken introduction to the task tell the group that the present layout of the zoo is not very good and needs to be changed because of some problems. As a group they have to decide how they would like to change the zoo to solve the nine problems. Point to the nine problems on the information sheets and answer any questions that arise. Requests for definitions should be directed towards the group where possible and only dealt with by the supervisor when the group cannot help.
- 3 Tell the group the task should be done in the following three steps. Write the **bold** part of each step on the board before the group arrives.

Step 1

Decide why each piece of information (1 - 9) will cause a problem for the zoo and what could be done to solve it.

Give an example and work it through with the group. e.g. The giraffe is about to give birth. Why is this a problem? cause it is caged next to the entrance. This is a busy and noisy place and may disturb the birth. What can be done? The giraffe could be moved to a quieter part of the zoo.

Step 2

Decide which moves are the most important and put them in order of importance

Step 3

Change the layout of the zoo. Make these changes on the empty zoo plan provided.

- 4 Tell the group that it may not be possible to solve every problem and that they have a time limit of around 30 minutes.
- 5 When the group has finished, spend some time discussing their solutions and comparing them with the model solution you have been given.

Task 3: Medical Completion

- 1 Hand out the material when the group is seated and they have their dividers in place.
- 2 Read the 'situation' part of the text aloud as the group follows it on their individual copies. Ask for questions.
- 3 Explain that there are two parts to the task. In Part 1 they exchange information to complete the patient records and in Part 2 they exchange criteria to decide which patient will be chosen for surgery.

4 Instructions for Part 1:

Read the instructions aloud. Tell the group that everyone has information about the occupations of the patients and they can use this to help them locate the other information. Remind the group that the patients are arranged in a different order on each record.

5 Instructions for Part 2

Read the instructions aloud and answer questions.

When the group has finished, show them the key for the completed records and discuss their answers and any problems or mistakes they made. Discuss the meaning of information in the task such as the various types of qualifications found in the test for the task.

Task 4: Zoo Completion

- 1 When the students are seated and their dividers are up, hand them the instructions and incomplete maps.
- 2 Read the instructions aloud. Show them what the 'key' is.
- 3 Write the following three guidelines on the black board before the group arrive. When you go over the instructions, remind the group that this is the order in which they should do the task.

Exchange:

- i the names of the animals in the cages and the other buildings in the zoo
 - ii the symbols in the key and what they represent
 - iii the places where the symbols are on the map
- 4 Remind the group of the 30 minute time limit.