

Sheffield Hallam University

Language switching and concept development in young Welsh/English bilingual children.

PIETTE, Brec'hed.

Available from the Sheffield Hallam University Research Archive (SHURA) at:

<http://shura.shu.ac.uk/20228/>

A Sheffield Hallam University thesis

This thesis is protected by copyright which belongs to the author.

The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

Please visit <http://shura.shu.ac.uk/20228/> and <http://shura.shu.ac.uk/information.html> for further details about copyright and re-use permissions.



Sheffield City Polytechnic Library

SHEFFIELD CITY
POLYTECHNIC LIBRARY
COLLEGIATE CRESCENT
SHEFFIELD S10 2BP

REFERENCE ONLY



ProQuest Number: 10700873

All rights reserved

INFORMATION TO ALL USERS

The quality of this reproduction is dependent upon the quality of the copy submitted.

In the unlikely event that the author did not send a complete manuscript and there are missing pages, these will be noted. Also, if material had to be removed, a note will indicate the deletion.



ProQuest 10700873

Published by ProQuest LLC (2017). Copyright of the Dissertation is held by the Author.

All rights reserved.

This work is protected against unauthorized copying under Title 17, United States Code
Microform Edition © ProQuest LLC.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

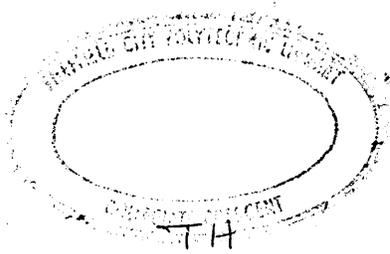
LANGUAGE SWITCHING AND CONCEPT DEVELOPMENT
IN YOUNG WELSH/ENGLISH BILINGUAL CHILDREN

BREC'HED PIETTE

A thesis submitted in partial fulfilment of the
requirements of the Council for National Academic Awards
for the degree of Doctor of Philosophy

JUNE 1990

Sheffield City Polytechnic



404.2

PI

ABSTRACT

This thesis is a study of language switching and concept development in Welsh-English bilingual children aged between 3 and 7 years. The main aim is to study these from an interdisciplinary perspective. A second aim is to increase knowledge of Welsh/English bilingualism.

The literature review is wide-ranging, discussing both language switching, and bilingual language development. Studies of switching both within sentences and within conversations are considered, as are linguistic, sociological and psychological explanations for the phenomenon. Studies on cognitive differences between bilingual and monolingual children are also discussed.

The empirical part of the thesis utilises data drawn from a study carried out at the University College of Wales, and funded by the Welsh Office. The data consists of language switches produced in recordings made of the language of three to six year old Welsh/English bilinguals. These switches are described and analysed in the light of previous literature on the topic, with particular reference to children who switch frequently and to the types of switches produced. Models previously used in the literature for the analysis of such data are discussed and an alternative approach - the levels-of-analysis model - is presented.

The second empirical part of the thesis is the analysis

of results on a range of concept tests carried out on children aged between five and seven years old. The results obtained by Welsh preferred language children (bilingual) and English preferred language children (monolingual) are compared. It was found that overall there were few differences between these two groups, supporting the original hypothesis that bilingualism does not have a marked effect on cognitive development. Small differences in the direction of a superior performance by English preferred language children are also discussed and possible explanations considered.

It is emphasised in this thesis that bilingualism needs to be studied from an interdisciplinary perspective. The levels of analysis model presented here is offered as an approach for doing this.

CHAPTER 1	INTRODUCTION	
	1.1 Background	1
	1.2 Aims	6
	1.3 Background of the Thesis	8
CHAPTER 2	LITERATURE SURVEY: LANGUAGE SWITCHING BETWEEN CONVERSATIONS	
	2.1 Defining the Field	11
	2.1a) An Introduction to Language Switching	11
	2.1b) Different Approaches to the Study of Language Switching	14
	2.1c) The Terminology of Language Switching	21
	2.2 Studies of Language Switching between Conversations	26
	2.2a) Early Studies	26
	2.2b) Studies Using the Concept of Domain	29
	2.2c) Studies on the Context of Language Switching	35
	2.2d) Psychological Explanations of Language Switching	39
	2.3 Summary and Conclusions	51
CHAPTER 3	LITERATURE SURVEY: INTRA-SENTENTIAL LANGUAGE SWITCHING	
	3.1 Intra-sentential Language Switching: Linguistic Studies	53
	3.1a) Background to Linguistic Explanations	53
	3.1b) Triggering	55
	3.1c) 'Rules' of Language Switching	58
	3.2 Intra-sentential Language Switching: Sociological and Psychological Studies	65
	3.2a) Background to Sociological/Psychological Explanations	65
	3.2b) Early Approaches	66
	3.2c) Reasons for Language Switching	70
	3.2d) Models of Language Switching	83
	3.3 Summary and Conclusions	96

CHAPTER 4	BILINGUAL CHILDREN, LANGUAGE SWITCHING AND COGNITIVE DEVELOPMENT	
4.1	Introduction	99
4.2	Language Switching in Bilingual Children	100
4.2a)	Bilingual Language Acquisition	100
4.2b)	Separation of Languages in Bilingual Children	107
4.2c)	Language Switching in Bilingual Children	114
4.2d)	Attitudes Towards Language	122
4.3	Bilingual Children and Cognitive Development	129
4.3a)	Bilingualism and Intelligence	129
4.3b)	Bilingualism and Metalinguistic Awareness	138
4.3c)	Bilingualism and Abstract Thought	140
4.4	Summary and Conclusions	144
CHAPTER 5	LANGUAGE SWITCHING AND COGNITIVE DEVELOPMENT IN WELSH/ENGLISH BILINGUAL CHILDREN: BACKGROUND AND CHARACTERISTICS OF THE CHILDREN	
5.1	Introduction	147
5.2	The Language Situation in Wales	149
5.2a)	Numbers and Distributions of Welsh Speakers	149
5.2b)	Education in Wales	153
5.2c)	Welsh Language Television	154
5.2d)	Bilingualism in Wales	155
5.3	Information about Children in the Language Switching and Concept Development Studies	159
5.3a)	The Language Switching Study	159
5.3b)	The Concept Development Study	165
5.3	Summary	170
CHAPTER 6	LANGUAGE SWITCHING IN WELSH/ENGLISH BILINGUAL CHILDREN: DESCRIPTION OF DATA	
6.1	Introduction	171
6.2	Recording Procedure	173
6.2a)	Selection of Children	173
6.2b)	Setting of Recording	174
6.2c)	Participants	175
6.2d)	Summary of Procedure	177
6.3	Explaining Language Switching	178
6.3a)	Problems of Definition	178
6.3b)	Definition of Language Switching	179

6.3c) Linguistic Fluency and Ability	181
6.3d) Meaning of Children's Utterances	182
6.3e) Selection of the Data	184
6.4 Language Switching in Three year olds	187
6.4a) Background to the Material	187
6.4b) Examples of Switches	188
6.5 Language Switching in Four year olds	209
6.6 Language Switching in the 5/6 year old Cohort	211
6.6a) Background to the Material	211
6.6b) Examples of Switches	214
6.7 Summary and Conclusion	236
 CHAPTER 7 LANGUAGE SWITCHING IN WELSH/ENGLISH BILINGUAL CHILDREN: ANALYSIS OF DATA	
7.1 Introduction	238
7.2 Amount of Language Switching	241
7.2a) Background of the Material	241
7.2b) Findings of the Language Switching Study	245
7.2c) Differences between Children in Amount of Language Switching	252
7.3 Types of Language Switching	265
7.4 Developmental Patterns	278
7.5 Categories of Language Switching	283
7.5a) Categories Presented in the Literature	283
7.5b) Categorisation Scheme for the Language Switching Study	288
7.5c) Application of Categorisation Scheme	294
7.6 Summary and Conclusions	299
 CHAPTER 8 CONCEPT DEVELOPMENT IN BILINGUAL CHILDREN	
8.1 Introduction	304
8.2 The Concept Development Study	308
8.2a) Background and Hypotheses	308
8.2b) Characteristics of the Sample	313
8.2c) Description of the Concept Tests	314
8.2d) Administration of the Concept Tests	323
8.3 Discussion of the Results of the Concept Development Study	325
8.3a) Language Differences	325
8.3b) Sub-test Differences	327
8.3c) Developmental Trends	336

8.4	General Discussion and Application of Levels of Analysis Model	339
8.4a)	Explaining the Results	339
8.4b)	Levels of Analysis Model	341
8.5	Summary	351
CHAPTER 9	CONCLUSION	353
APPENDIX A	Loanwords	372
APPENDIX B	Summary of Test Methods and Purposes	375
APPENDIX C	Instructions for Test Administration	379
	REFERENCES	384

LIST OF TABLES

TABLE 2.1	Type of Explanation Offered	19
TABLE 3.1	Explanations for Language Switching	71
TABLE 4.1	Explanations for Language Switching in Children	118
TABLE 5.1	Total Number of Children in the Language Switching Study	160
TABLE 5.2	Preferred Language of Children in Language Switching Study	163
TABLE 5.3	Numbers of Children in Each Type of School at each Age Group	168
TABLE 5.4	Total Number of Children Tested in Concept Development Study	169
TABLE 5.5	Numbers of Children in Longitudinal Analysis	168
TABLE 5.6	Numbers of Children with Preferred Language Welsh or Preferred Language English for Each Category of Tests	169
TABLE 6.1	Changes in Language Use Between Year 1 (3 year old) and Year 2 (4 year old)	188
TABLE 6.2	Types of Language Switching in 3/4 year old Cohort	210
TABLE 6.3	Changes in Language Use Between Year 1 (5 year old) and Year 2 (6 year old)	213
TABLE 6.4	Types of Language Switching in 5/6 year old Cohort	235
TABLE 7.1	Number of Children Language Switching at Each Age	246
TABLE 7.2	Estimated Number of Utterances Produced During Half-hour Recording	247
TABLE 7.3a)	Number of Language Switches Produced by Language Switching Children - 3 year olds	252
TABLE 7.3b)	Number of Language Switches Produced by Language Switching Children - 4 year olds	253
TABLE 7.3c)	Number of Language Switches Produced by Language Switching Children - 5 year olds	253
TABLE 7.3d)	Number of Language Switches Produced by Language Switching Children - 6 year olds	254

TABLE 7.4	Number of Switches Made in Both Years of Recording by Children who were Frequent Switchers in at Least One Year	255
TABLE 7.5	Language Background Scores for all Children in Language Switching Studies	258
TABLE 7.6	Language Background of Frequently Switching Children	259
TABLE 7.7	Language Background of Frequently Switching Children Compared with the Language Background of their Interlocutors	261
TABLE 7.8	Types of Language Switching in Children in Current Language Switching Study	266
TABLE 7.9	Types of Language Switching in Adults	267
TABLE 7.10	Types of Language Switching in Children	268
TABLE 7.11	Frequency of Different Types of Language Switches	275
TABLE 7.12	Number of Children Producing Each Type of Language Switch	276
TABLE 7.13	Number(%) of a)Switches Indicating Lack of Competence, and b)Switches Indicating Communicative Skill	282
TABLE 7.14	Language Background of Frequently Switching Children at the Personal, Interactional and Immediate Context Levels	296
TABLE 8.1	Tests Used in Concept Development Study	323
TABLE 8.2	Comparison of Welsh Preferred Language and English Preferred Language Children on 4 Categories of Concept Tests (cross-sectional)	326
TABLE 8.3	Comparison of Welsh Preferred Language and English Preferred Language Children on 4 Categories of Concept Tests (longitudinal)	326
TABLE 8.4	Comparison of Welsh Preferred Language and English Preferred Language Children on Tests of Conservation	329
TABLE 9.1	Factors at the Four Levels of the Levels of Analysis Model	358

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

The main aim of this thesis is to increase understanding of the experience of bilingualism, particularly in children. Here, bilingualism will be viewed in positive terms as potentially giving a child a wider repertoire of both communicative and cognitive possibilities than is available to a monolingual child. Stated in this general way, this may seem over obvious, but what is perhaps less obvious is how this wider potential is realised in practice. Bilingualism relates both to the child's social experiences (how he/she communicates with other people) and to the child's internal, mental world (how bilingualism affects intellectual development). It is not possible to consider all aspects of bilingualism here and most of this thesis will be concerned with two features of bilingualism, reflecting both the social and the cognitive; firstly, children's use of language switching and secondly, the bilingual child's concept development. Of these two areas, this thesis will concentrate primarily on language switching, with the analysis of bilingual children's concept development as a secondary focus. By considering both these areas it will be possible to see how bilingualism may shape aspects of children's communicative experiences, and also

potentially influence their cognitive development.

The data that will form the basis for analysis was collected from children aged from three to seven, living in Wales and bilingual in Welsh and English. However, the literature review will consider studies from many other countries, and also include work on adults as well as on children of different ages.

This data was gathered as part of a large scale project on concept and language development. (Project on "Concept and Language Development in Children aged 3-7" carried out from 1974-1977 at the Department of Education, University College of Wales, Aberystwyth. This project was funded by the Welsh Education Office, and directed by Professor C. Dodson.) This large scale study collected data from some 400 children over a period of three years. The children were studied longitudinally in two cohorts, aged 3 to 5 and 5 to 7. Each child was seen once a year and during each visit the child's language was recorded and concept tests were administered. Information was also obtained on each child's social and linguistic background by means of a questionnaire to parents. As can be seen from this description this project generated a large amount of data, which could potentially be analysed in a wide variety of ways. The data analysed in this thesis is a subset of the data obtained during the course of the larger study. It consists of a description and analysis of examples of language switching from some of the tapes and transcripts, and an analysis of some of the concept test results. An analysis of language switching was not carried out as part

of the funded project, and is therefore original to this thesis. An analysis of concept test results was carried out as part of the main study and results were presented in a report to the Welsh Office (Department of Education, U.C.W. 1988); these results will however be discussed in this thesis for rather different purposes from those of the project report. I was employed as a research officer on the project, my main responsibility being the administration of concept tests.

While both language switching and concept development in bilinguals have, by now, been fairly extensively studied, the specific approach taken here offers some new contribution to the literature. It does so in the following ways:

a) Despite the considerable amount of work in this area there is still a paucity of work on the Welsh/English bilingual situation. Most of the work on language switching has been carried out in North America, with particular emphasis on Spanish/English switching, and most of the work on bilinguals' cognitive abilities has been undertaken in Canada. While there are undoubtedly some similarities to the experiences of bilinguals in different parts of the world, there are also many aspects of it which are specific to different settings. It is therefore important that as wide a range of different bilingual situations as possible are studied. This study is therefore a contribution to the range of bilingual situations that have been studied.

b) This is an interdisciplinary study. Bilingualism has traditionally been studied from a range of different

disciplinary perspectives. These have included linguistics, sociolinguistics, cognitive psychology, social psychology, sociology and education. The reasons for this have been discussed elsewhere (Piette, 1987); one of the results of this fragmentation is that restricting a study to one discipline area inevitably leads to a partial and incomplete view of bilingualism. Romaine (1989) says

"Bilingualism is not a unitary concept"

and this view is reflected in this thesis which aims to be both wide-ranging and integrative. In order to achieve this I have drawn from material from several disciplines in writing this thesis. This has led to a literature review (chapters 2,3 and 4) which inevitably ranges selectively through a number of discipline areas, and to analysis and discussion of theories and concepts with which I am less familiar (linguistic and sociological) as well as those where my knowledge base is stronger (psychology).

This approach also puts bilingualism on the central stage, rather than a topic of peripheral interest, as tends to be the case when it is studied as a topic within one discipline only. As Romaine (1989) says

"In each of these disciplines (linguistics, psychology, sociology, education, cross-cultural communication) bilingualism is too often seen as incidental and has been treated as a special case or as a deviation from the norm. Each discipline on its own therefore seems to add little to our understanding of bilingualism with its complex psychological, linguistic and social interrelationships."

c) Another feature of this thesis is that I have tried to consider bilingualism as both an individual and a social

phenomenon. Many studies on bilingualism have tended to concentrate on either the bilingual individual's experience of bilingualism or on the social and political environment in which it occurs. This study does tend towards the former emphasis but without ignoring the latter viewpoint.

d) Finally I wish to present a model that attempts, in the first place, to explain the patterns of language switching found in the particular group under study, and secondly to extend this model to look at other aspects of the bilingual child's experience.

1.2 AIMS

The aims of this thesis are as follows:-

1) To present a literature survey that critically discusses work on a range of relevant topics and from a number of interdisciplinary perspectives. This will include work on language switching in both adults and children, studies of bilingual language acquisition in young children, and studies of cognitive differences between bilingual and monolingual children. It is important to consider this wide range of material to get a full understanding of the way bilingualism can affect the whole range of a child's social and cognitive experiences. This literature will be surveyed in chapters two, three and four.

2) To present a descriptive account of the range and types of language switches produced by three to six year old Welsh/English bilingual children. As Welsh/English language switching has virtually not been studied at all, and as relatively little work has been done on children in this particular age range, this data is unusual in the literature. This data is presented and described in chapter six, and chapter five includes background material on the particular social context, and gives details of the sample of children.

3) To present an analysis and categorisation of the language switches presented in chapter six in relation to previous categories developed in the language switching literature. Because of the wide interdisciplinary scope of the literature survey this analysis will draw on a wider

range of theories and concepts than is often found. This analysis is given in chapter seven.

4) To present a comparison of the results obtained by bilingual and monolingual children on a range of concept tests.

5) To present a model that offers an analysis of the different factors affecting language switching. This draws on the original data here and on other theories discussed in the literature in the survey. This model will be presented initially in chapter seven and discussed in relation to concept development in chapter eight. It will be discussed more fully in chapter nine.

1.3 OUTLINE OF THE THESIS

This introduction is followed in chapters two and three by a review of the literature on language switching. The emphasis here is on breadth, and studies are discussed that present sociological, psychological and linguistically oriented explanations of language switching. Chapter two discusses some general issues and problems in the study of language switching and also looks more specifically at studies of language switching at the level of discourse. Chapter three looks at studies of language switching within sentences, and discusses both studies which have looked at linguistic constraints on language switching and others that have dealt with social explanations for the same phenomenon.

The emphasis in both these chapters is on language switching in adults, while language switching studies that specifically relate to young children are discussed in chapter four where these are considered in relation to the wider literature on bilingual language acquisition. This chapter also discusses the literature on cognitive development in bilingual children.

The empirical section of the thesis starts with chapter five which gives details of the sample and how the language and concept data was collected. Chapter five also includes a brief description of the language situation in Wales. Chapter six gives examples of language switches collected at all age levels, shows how explanations of them were arrived at, and how categories of language switching were devised. Chapter seven looks at this material more analytically, and

includes some quantitative analyses. It relates back the findings presented here to the categorisations put forward by previous authors and also presents a model for analysing language switching. Chapter eight includes a brief review of the literature on concept development and bilingualism, and presents and discusses concept test results that compare bilingual and monolingual children. Chapter nine draws together the material on both language switching and concept development and attempts to expand on the model outlined in chapter seven.

My interest in bilingualism has personal as well as academic roots. I was brought up in Wales by a Welsh speaking mother and a French speaking father and acquired an active knowledge of both Welsh and English and a passive knowledge of French during my childhood. At the time of writing up this thesis I have a young daughter who is bilingual in both Welsh and English although she has lived all her life in England. Helping her acquire her bilingualism and observing her language switches renewed my fascination and interest in the development of bilingual children.

Professionally I have spent several years in a Department of Communication Studies with linguists and sociologists as well as psychologists as colleagues in an atmosphere which is committed to interdisciplinarity in teaching and research. This experience has strengthened my desire to make this an interdisciplinary thesis and also my belief that this is the only valid approach to a fuller understanding of bilingual children.

Finally, as is common with most researchers into bilingualism I do not approach the issue in a purely neutral manner. I share the common belief of many researchers in this area that bilingualism is valuable both for the individual and for society at large. This does not preclude an examination of the issues as they exist, rather than as one might wish them to be.

CHAPTER 2

LITERATURE SURVEY; LANGUAGE SWITCHING BETWEEN CONVERSATIONS

2.1 DEFINING THE FIELD

2.1a) An introduction to language switching

A central attribute of the bilingual, or multilingual, speaker is his or her ability to switch languages. This is something that monolinguals often find surprising, or confusing, but is generally taken for granted by bilingual speakers themselves. Wallwork (1978), for instance, quotes the following description of the language choices of an Asian girl living in East Africa. The extract is from a language diary kept by an undergraduate.

"Breakfast: mother, father and rest of family - all greeted each other in Hindi, but the conversation was all in Punjabi with a little English used only for better comprehension..... Lunch: at home with family - spoke in English and Punjabi.... Evening - went for dinner to my Auntie's house. Spoke most of the time in English and Hindi to the Parsee guests. In the kitchen spoke to my mother and Auntie in Punjabi. English is considered to be a very formal language, and it is used whenever two people meet for the first time, provided they both know it. On Saturday night there was a party at one of my uncles' house. All my relatives were there, and so were many other teenagers. English was mostly used, whereas among the older people no matter what they were talking about, Punjabi was mainly used, although a

few ideas were expressed in English. And I saw that it came naturally to me to greet my elder relatives with 'namante' whereas I called out 'Hi' or 'Hello' to the teenagers there. It's perhaps a mark of respect or reverence that we talk to our elders in Punjabi rather than English....

After a lecture in English I proceeded to talk to an Indian (Sikh) professor in college. Our talk....was entirely in English. The reason for this was that our relation was not informal enough for us to speak in a language which is our mother tongue. An attempt on my part to speak in Punjabi was not met halfway, because we could not speak in Punjabi, having a sense of oddness about it.....'

This is in some ways a fairly extreme example. Not all bilinguals switch languages with such frequency, but Gumperz (1982) claims that

"language switching can be found in almost any corner of conversational life".

Most bilinguals, however, do switch languages with the same degree of ease, and this quotation does not mention the large amount of language switching within a single conversation, and even a single sentence, that is also part of the linguistic repertoire of many bilinguals. The apparent strangeness of this way of speaking does however tend to vanish when it is realised that bilinguals only do more obviously what is done by all monolinguals, and therefore all speakers. Dell Hymes pointed this out as early as 1967 -

"Bilingualism par excellence is a salient special case of the general phenomenon of linguistic repertoire. No normal person and no normal community is limited to a single way of speaking, to an unchanging monotony that would preclude indication of respect, insolence, mock seriousness, humour, role

distance and intimacy by switching from one mode of speech to another."

If one accepts Hymes' point it can be seen that the only difference between bilinguals and monolinguals is that language switching in bilinguals is more apparent than code-switching in monolinguals but not in essence different.

Indeed, later studies (for example, Scotton 1988a, 1988b) have developed models for language switching that can also be applied to style shift in monolingual discourse. However many or few languages we speak, we all switch between styles as appropriate, for example, to mark off formal from informal occasions.

However Hymes' claim that language switching between languages and code-switching within languages is part of the same general phenomenon is controversial. Languages are more complex, and have more rules, than codes within languages so it can be expected that the rules governing language switching are likely to be more complex, at least at a linguistic level, than those governing code-switching. It is also more apparent when somebody has changed language rather than merely code so the effects of language switching may well be different. Another important difference is that speakers themselves are far more aware of language switching and have strong and frequently negative opinions about it. Grosjean (1982) reports the following comments from bilinguals about their own and other people's language switching:

"switching is done mostly out of laziness"
"switching is not very pure"
"it might be dangerous if it becomes too common"

It is indeed very common for language switching to be stigmatised. In the United Kingdom for instance Romaine (1989) claims that Punjabi/English switching is stigmatised, as does Jones (1981) for Welsh/English switching.

2.1b) Different Approaches to the Study of Language Switching

Although there are similarities between bilingual language switching and monolingual code-switching, this literature survey will concentrate on studies of bilingual language switching only. This is, itself, a very extensive and wide-ranging field as the following quotation from Paradis (1980) indicates

" bilingual language switching has been studied from many angles. Linguistic studies have investigated where in the sentence a switch is more likely to occur, whether within or between constituents, for instance.

Social psychologists have probed the reason why a bilingual is likely to switch between languages.

Sociolinguistic studies, by far the most numerous, have looked into the external social conditions that control when switches are likely to occur. How bilinguals are able to keep their languages apart and are able to switch from one to the other has been the subject of investigation of psycholinguistic studies, and the neurolinguist has asked what brain mechanisms are responsible for the switching."

A reasonably comprehensive literature survey of bilingual language switching will also need to take account of studies that vary in several ways.

Firstly, studies of language/code switching have been

carried out at different levels of speech. Some, for instance, have concentrated on the intra-sentential level; others have looked at switches between sentences within a discourse or conversation, and yet others have studied switching between conversations or 'domains' (Fishman 1972).

The last of these sometimes comes under the name of language shift. The following examples should clarify these distinctions:-

a) intra-sentential switching - an example of Spanish/English switching from Sankoff and Poplak (1981).

There was a guy you know, que ha se monte (got up). He started playing with congas you know, and se monte y empezo a brincar (got up and started to jump)

b) switches within a conversation - an example in Hungarian/German from Gal (1979).

Grandfather: Poor little one.
Grandmother (to child): Don't fool around like that if you're sleepy!
Mother: Just give her a good slap.
Grandmother: Oh sure.
Grandfather (to child): It's a good thing your mother's not home (all day) because you'd get an awful lot of slaps from her.
Mother: You bet, there has to be order!
Grandmother: She sure is bad.

(Mother's final utterance is in German; the rest of the conversation is in Hungarian)

c) switches between conversations - An example of this would be a bilingual child who uses Spanish at home, and English at school.

The three categories used here (intra-sentential switches, switches within a conversation, and switches between conversations), are by no means the only ones used in the literature. For instance, a more fine-grained level of analysis has been used by Poplak (1980) and also by Romaine (1989). They categorise switching into switching for tags; intra-sentential switching where the second language is syntactically embedded in the first; and inter-sentential switching which includes switching at phrase boundaries, as well as at sentence boundaries.

Gibbons (1987) uses the same three categories as have been used here, but refers to them as code-mixing, rhetorical switching and situational switching.

A closer look at different ways of categorising switches, and the range of terms used, will be carried out later in this section. For the purpose of this review, all the above examples are considered to be examples of language switching.

Paradis's comment quoted above hints at another variation in studies of language switching, namely the academic discipline from which the topic is approached. It is clearly a central topic in sociolinguistics, but it is possible to discern more sociological or more linguistic approaches to the question. Psychologists have also considered language switching, from both a cognitive, and a social, perspective.

Finally, it is also important to introduce a political/ideological dimension to the topic. Increasingly it has become recognised that this is necessary for a fuller

understanding both of attitudes to language, and language use (Gal 1988).

In the last decade work in the area of bilingualism has become increasingly inter-disciplinary. In 1979 de Vries wrote

"It has been my experience that, in the study of characteristics of language behaviour (such as second language acquisition), members of the various scientific disciplines have only rarely expressed a common view."

but in a later paper (1987) he commented that there were increasing signs of interdisciplinarity.

This variety of disciplines, while clearly enriching as far as the topic is concerned, does also make a literature survey somewhat daunting.

Another variant arises in the way language switching has been analysed. A few studies have limited themselves to merely documenting language switching. Most studies however have attempted to offer explanations of one kind or another, and these types of explanations have differed quite markedly. The main division has been between linguistic explanations and sociological/psychological ones. That these two (or more) approaches are complementary rather than competing is made clear by Poplak's (1979) comment

"Much of the literature on code-switching has focused on its social and pragmatic functions. While there is little doubt that functional factors are the strongest constraints on the occurrence of code-switching, it is clear that linguistic factors also play a role."

Studies offering both types of explanations will be

discussed in this chapter and the next one, although the primarily psychological focus of this thesis will make concentrating on much linguistic detail inappropriate.

The final variation leads on from the other three. As one would expect, the type of data utilized has varied, from surveys of attitudes towards language switching, to language samples collected in natural or semi-controlled situations, experimental data and indeed no data at all. Methods used have thus been very varied, and there seems little consensus on what constitutes the most appropriate method of approaching language switching. An ethnographic approach has been particularly popular. Heller (1988) argues in its favour as the method most suited to an analysis that places language switching within an individual's repertoire, and the individual within the context of the speech community. Gal (1988) also favours an ethnographic approach and wants it combined with conversational analysis and the use of sociohistorical evidence. Gibbons (1987) believes that there are problems with relying purely on ethnographic approaches and prefers to combine it with experimental approaches.

This survey of language switching studies will use variations around points 1) and 3) above as a means of systematising the field; that is, levels of switching, (intra-sentential, switching within a conversation and switching between conversations) and types of explanations (primarily linguistic or primarily sociological/psychological). This is outlined in table 2.1.

TABLE 2.1

TYPE OF EXPLANATION OFFERED

<u>Sociological/Psychological explanations offered</u>	<u>Linguistic explanations offered</u>
Switches between sentences and conversations (macro-level)	Switches between sentences and conversations (macro-level)
CELL A	CELL B
<u>Sociological/Psychological explanations offered</u>	<u>Linguistic explanations offered</u>
Switches within sentences (micro-level)	Switches within sentences (micro-level)
CELL C	CELL D

Studies of language switching have been divided along 2 axes, giving 4 possible cells.

The vertical axis relates to the level at which switching is studied. The two categories relate to the macro and micro ends of what is really a continuum rather than two discrete categories. However, studies on the whole do tend to concentrate either on switches within sentences or switches between conversations. Examples of switches between sentences but within conversations, for instance, example b) from Gal above, will generally be discussed here at the macro level. Where studies have considered data at both micro and macro ends of the continuum they will be discussed within the section which best accords with the main thrust of the investigation.

The horizontal axis classifies according to the type of explanation offered. Here linguistic explanations are considered separately from sociological and psychological explanations. Most studies have concentrated on

explanations of one or other of these types. No separation has been made between sociological and psychological types of explanation as many studies deal with both. Again, where both linguistic and sociological/psychological types of explanations are offered they will be dealt with in the section that seems most appropriate.

It should be pointed out that cell B (switches between conversations/ primarily linguistic types of explanations), does not in fact exist as an area of study. A moment's consideration will make it obvious that a purely linguistic explanation for switches between conversations is inherently implausible. The only possible explanation would be along the lines of not having the linguistic facility to deal with a certain topic in both languages, thus resulting in a switch. This is quite clearly a common reason for this type of switch but cannot be considered a linguistic explanation as the reason or reasons why the language for that particular situation is not known will be social or possibly psychological, and not linguistic. There are, for instance, many Welsh/English bilinguals who would find it difficult to discuss certain types of technical matters in Welsh. This is unlikely, however, to be a limitation of the language per se (despite the fact that the bilinguals themselves may see it as such), but a lack on the part of the bilingual speaker. The other three main cells all contain a substantial number of studies.

The empirical work of this thesis, which will be described in chapter 5 onwards, fits into cell C - a study of switches within sentences for which

sociological/psychological explanations have been offered. Studies in this cell therefore are more directly relevant here than those in cell A and cell D, and will be discussed in more detail. Some of the theoretical concepts and tools of analysis for the present study have however been developed in studies within cells A and D so some discussion of these is required.

The material in cell A - switching between sentences and conversations - will be discussed in this chapter. The material on the more micro level - cells C and D - will be considered in the following chapter.

This discussion will be preceded by a section on the different terminologies used in the area.

2.1c) The Terminology of Language Switching

One of the earliest workers in the field - Weinreich (1953) - made useful contributions in setting out the various terms, and attempted to outline the range of ways in which a bilingual's two languages could affect one another.

Weinreich coined the term 'interference' for the phenomenon of one language appearing in another. He defines it as

"...instances of deviation from the norm of either language which occur in the speech of bilinguals as a result of their familiarity with more than one language"

The term 'interference' has also been used, with fairly similar definitions by Mackey (1968), and Haugen (1956). Weinreich divides interference into three types: phonic, syntactic and lexical. Phonic interference includes factors

such as over and under differentiation of phonemes and phonic substitution. Syntactic interference includes the transfer of morphemes and of grammatical relations, and lexical interference includes the transfer of words.

Weinreich states that interference can take place at all three levels but says,

"The majority of investigators agree that most interference involves first the domain of vocabulary, followed respectively by sounds and syntactic features."

Redlinger (1978), and Cornejo (1973) found in investigations in Mexico and Texas that interference from English to Spanish was most common at the lexical level, whereas in Spanish to English it was most common at the phonological level. It is likely that this pattern is found among other groups, including Welsh/English bilinguals.

Weinreich's term interference is not of course synonymous with language switching: language switching as the term has been used here would only include lexical interference. The term 'interference' can be criticised from two perspectives, its ambiguity, and its non-neutral connotations. It is an ambiguous term because it is not clear where the boundary lies between interference and language switching. Some workers, for example, Redlinger (1978) have considered some types of language switching to be a subset of the category of interference, whereas others, such as Baetens-Beardsmore (1982), consider language switching to be a separate category altogether. Another ambiguity is whether the term interference relates only to the language of an individual, or also, to a usage that is

common in the community. There are usually no real criteria available for making this distinction, so it tends to be left to the individual investigator to judge if a certain usage is common in a particular community or not. This difficulty is discussed by Mackey (1968) and DiPietro (1977). Interference as a term has also been criticised for 'its pejorative and disruptive connotations' (Fishman 1971), and Clyne (1987) criticises it for being non-objective.

There are also problems in defining the term 'language switching'. In the previous chapter it was mentioned that the terms 'code-switching' and 'language switching' are often used as if synonymous, although the first term can also refer to monolingual style switching within a language.

For this reason the term language switching has been preferred here.

Scotton and Ury (1977) offer a definition that is simple but also acknowledge the problems involved:-

"We define code-switching as the use of two or more linguistic varieties in the same conversation or interaction. The switch may be for only one word or for several minutes of speech. The varieties may be anything from genetically unrelated languages to two styles of the same language. The use of solitary, established loan-words or phrases is not considered code-switching. It is recognised, however, that to provide criteria to differentiate established loans from non-established loans is a difficult task and is beyond the scope of this paper."

Other definitions include DiPietro (1977)'s

"the use of more than one language by communicants in the execution of a speech act",

Valdes Fallis (1976)'s

"the alternation of two languages"

and Grosjean (1982)'s

"the alternate use of two or more languages in the same utterance or conversation".

All of these definitions are roughly the same and none of them deal satisfactorily with the problem of differentiating between interference, borrowing and language switching.

Baetens-Beardsmore (1982) considers that it is possible to make a distinction at a theoretical level -

"The triggering mechanism for either phenomenon is different. Whereas interference phenomena tend to operate at the subconscious level, and are intrusive in that the speaker is not aware that he is producing features alien to monoglot norms, code-switching operates nearer the surface of consciousness in that it tends to manifest itself only in situations where it is meaningful to the interlocutor."

This is an interesting suggestion but it does not suggest a very clear-cut distinction. Defining levels of consciousness must be at least as difficult and open to different interpretations as is making the distinction between borrowing and language switching in any other way. Grosjean suggests that the difference between a language switch and a borrowing is that the former involves a complete shift to the other language, whereas a borrowing is adapted phonologically and morphologically to the language being spoken. Poplak, Sankoff and Miller (1988) claim that it is always possible to distinguish between the two; in switching there is alternation between one coherent grammar and another, whereas in borrowing only one grammar is being

used. In opposition to this view, Clyne (1987) points out that the distinction between switching and borrowing is likely to be ragged. In the study to be described in chapter 6 there were many difficulties in making this distinction, thus supporting Clyne's position.

A radically different approach to the problem of distinguishing between switching and borrowing is taken by Scotton (1988a). She approaches the distinction in terms of social content rather than structure; examples which convey social significance are switches, and those which do not, are borrowings. The main problem with this approach is that the question of whether language switches always carry a social significance then becomes impossible to ask, as this is presupposed by the definition.

Another term, which Clyne himself favours in his earlier work (1967), and which is also used by Auer (1988), is transfer. However, this term implies that the speaker is returning to the language originally used, something which does not necessarily occur with all switches.

The terminological problems in this area are discussed in some detail by Baetens-Beardsmore (1982). It is sufficient to say here that there are still many unresolved problems and to alert the reader to differences in usage.

2.2 STUDIES OF LANGUAGE SWITCHING BETWEEN CONVERSATIONS

(CELL A)

The data discussed in the empirical section of this thesis, (chapter 6 onwards), consists of intra-sentential switching. It is considered appropriate however to extend the literature review more widely than this as some of the concepts that will^{be} used in the discussion and analysis have been developed in studies of language switching between conversations. This is the main justification for including this part of the literature review. As, however, studies of this are of less direct relevance to later sections, and as the literature in this area is large, this section of the review will concentrate on a limited number of studies.

After a brief summary of early work in the area, the rest of this chapter will consider the following three areas;

- i) studies using the concept of 'domain', in particular, studies carried out in Great Britain.
- ii) studies on the 'context' of language switching
- iii) studies using psychological approaches.

2.2a) Early Studies

Much of the seminal work on language switching involved developing descriptions of language switching, and characterising these descriptions. Such work was carried out by, for instance, Ervin-Tripp (1964, 1967, 1973) Hymes

(1967) and Fishman (1964, 1967, 1972).

Ervin-Tripp in her 1964 paper was one of the first workers to characterise some of the important features. She particularly mentions topic, setting, participant and function of interaction, and gives examples of how these features influence language switching both within, and between languages. In many of her studies she used experimental data. This is not a methodology that has been much used in this area, where the preference has been for an ethnographic approach.

The value of Ervin-Tripp's early work lies in the fact that it pointed out a potential area of study, namely the social correlates of language switching, and showed that interesting results could be obtained.

Compared to the analysis of language switching in later experimental work by for instance Giles and his co-workers (Giles 1973, Giles and Powesland 1975, Giles and Byrne 1982,) Ervin-Tripp's studies are relatively crude. She tells us that people will talk about different things in different languages, and also that participant is an important factor in language choice.

However a large number of questions still remain. For instance, what relationship is there between the experimental results she obtains, and people's language behaviour in the real world? Can different factors be ranked in terms of importance? For instance, is interlocutor more or less important than topic or place, as a determinant of language switching? And very importantly, are these kinds of behaviours to be commonly, or even

universally, found in bilinguals, or are there wide differences from community to community, and even from individual to individual?

Hymes (1972) developed some of the ideas put forward by Ervin-Tripp. He outlines what he considers to be the seven main features of the social situation that are important in language switching. These are: setting, participants, end (or purpose), form, key (or tone), instrumentalities (resources of the speech community), norms and genres.

While these are useful additions to the list of factors that may, in some situations, affect switching, Hymes goes no further than producing this list, and a claim that all the above factors are of importance. The factors themselves are ill-defined, and the whole approach over-simple.

2.2b) Studies Using the Concept of Domain

The utilisation, and development, of the concept of domain is the main contribution made by Fishman and his co-workers to the field of language switching, and to bilingualism more generally. Fishman (1964) sees 'domain' as a concept that can clarify the notion of 'topic', a feature introduced by Ervin-Tripp and Hymes. He feels that topic

'appropriate though it may be for analyses of individual language behaviour at the level of face to face encounters'

is not a term that relates language choice to widespread socio-cultural regularities. A 'domain' is a concept better suited for doing this

because

"A domain is a socio-cultural construct abstracted from topics of communication, relationships and interactions between communicators and locales of communication, in accord with the institutions of a society and the spheres of activity of a culture, in such a way that individual behaviour and social patterns can be distinguished from each other and yet related to each other."

The domains that Fishman found important for language choice were home, neighbourhood, school and religion. His respondents (Puerto-Ricans living in the Barrio in New York) often reported marked differences in language usage between the different domains, with Spanish commonly being used at home and in the neighbourhood, while English was used at work and in school. Fishman's construct of domain has an intuitive appeal but can also be criticised for its lack of specificity. Is, for instance, a child talking to her brother in school in the 'family' domain or the 'school' domain? What about when she is walking home from school? Where does the neighbourhood start and end? At first glance domain seems an easy construct to apply but in the lives of most people, people and topics are found in more than one locale. We may have neighbours who are also work-mates. We may talk about work matters in the home or in the pub. In establishing a domain is the locale paramount, or the participants? If we need to ask this last question, does not the construct of domain break down into these components anyway? Some, (for example, Platt 1977), who use the concept of domain, have found it necessary to break domain down into sub-domains, depending on age of family member.

That all these, and many other criticisms, can be made of the concept suggests that as a rigorous operational construct it is not very valuable. Fishman does however make a point that cannot be overstressed namely that an individual's language choices or language switches are not made solely in response to the immediate social context, but also reflect wider social, political and economic values and norms. This is a theme of central importance in this thesis. When a child chooses to use English rather than Welsh in a particular situation, for example at play with another child in school, this cannot be considered only in the context of this particular situation. It must also be seen in a wider context where English is perceived as the language of authority and status, although the child or even the adult will not necessarily be conscious of this when producing the utterance.

The process by which a bilingual community's values, attitudes and beliefs are translated into language choices and then these choices are made by particular individuals in particular situations is obviously extremely complex. Fishman's main contribution is not the concept of domain itself but the way in which he emphasises the importance of the wider context. What is contentious about his claim is that he considers the individual use of language to be generated from stable patterns that are found in the community at large. In other words individual choice is not considered to be an important factor.

Some of these criticisms have been made in some of the British studies that have utilised the concept of domain.

The most extensive of these is probably McKinnon's study of the bilingual Gaelic/English community on Harris in the Western isles of Scotland (McKinnon 1977). This study was carried out in 1973, when the population numbered some 2,200, of which 91.6% was bilingual.

McKinnon analysed his results according to five 'domains', - personal, familial, communal, transitional and official. He found that Gaelic was strongest in the familial and communal domains and weakest in the official and personal domains (personal included the activities of dreaming, swearing, counting and personal prayers.) However despite initially approaching his data through the idea of 'domain' McKinnon does not consider it to be a very useful tool in this type of analysis, largely because the language patterns in each domain do not hang together. For instance, he found that many respondents used Gaelic in the Post Office but English in the bank, Gaelic with the district nurse but English with the doctor, Gaelic when talking to their families but invariably English in letters sent home. It is obviously difficult to explain such results in any analysis that relies solely on the concept of 'domain'.

In its place, McKinnon suggests an analysis of language use that considers what aspects of life are integral to local life and symbolise values of solidarity, and which do not. This development of the 'domain' concept is very similar to the analyses presented in the next chapter by Hill and Hill (1979), and Scotton (1979, 1988a, 1988b) that also emphasise the importance of 'solidarity'.

Another British study, this time in Wales, that uses

the 'domain' concept, was carried out by Clayton (1979). He studied a bilingual community in North Wales, using interviews and semi-participant observations. The domains used by Clayton - home and family, social life, work, education, religion, officialdom - differ slightly from both those of Fishman, and McKinnon. The tendency to adapt the list of domains according to the need of the particular situation, although understandable, makes comparisons between studies difficult. However there do appear to be considerable differences in the distribution patterns of language over domain in different bilingual communities. The most outstanding feature of Clayton's analysis is his finding that in North Wales religion is a hundred percent Welsh domain. This differs from Fishman's findings in the Barrio of New York, where religion is a domain that is only fifty percent Spanish. The other main difference is in the domains of social life; this is primarily an English domain in North Wales but primarily Spanish in the Barrio, and Gaelic on the island of Harris. One might expect the 'domain' of social life to be firmly dominated by the local language, in this case Welsh, and it is interesting to find that in some cases at least, it is not so.

Like McKinnon, Clayton finds that domain is not a subtle enough concept to explain all the possible language switches, especially when these are considered historically.

In the domain of education for instance, he found that secondary education had been seen as a totally English domain for those who had been educated some twenty or thirty years previously, although some of the participants

(teachers) when in a different locale (the street) would use Welsh with their pupils. In the 1970s however, this pattern changed with Welsh speaking teachers using Welsh with Welsh-speaking pupils within the primarily English school domain although not necessarily within the classroom for all subjects. This is a good example of how the concept of domain is of itself not enough but needs to be looked at in connection with place, topic, participant and so on.

Betts (1976) also used the concept of 'domain' in an attempt to analyse the linguistic situation in Wales although he did not carry out any empirical work. He divides Wales into regions, according to the percentage of Welsh speakers in them, using 1971 census data. The areas he dubs the Welsh heartland are those with over 60% Welsh speakers. It is only in these areas, says Betts, that there are Welsh only domains, namely those of the family and religion. In the rest of Wales these domains have become bilingual and there are no Welsh only domains remaining. This leads Betts to predict the rapid demise of Welsh in the non-heartland areas of Wales, and to see the survival of Welsh as having to take place in areas where there are still Welsh only domains. It also leads him to denounce parents who rear children bilingually rather than preserving the language of the home as Welsh alone. This denouncement of early bilingualism certainly goes against a weight of evidence that will be discussed in a later chapter. However Betts' arguments are entirely logical in the context of Fishman's approach.

The problems in Betts' analysis can be seen as partly

originating from the limitations of the domain concept, in particular what is ignored by it. Omissions include, for instance, political and/or economic factors operating at a more macro level than that of the speech community. Thus Betts' predictions about the likely demise of the Welsh language can be challenged if one imagines political or economic factors changing or arresting the position of Welsh/English in the different domains.

Another omission is that this type of analysis fails to allow for any possibility of individuals having control over their own language use. Within the domain of the family, for instance, it is possible for two languages to be used side by side without this necessarily leading into language-shift in the direction of the stronger language, in this case English. This is partly because factors such as attitudes and motivation of the parents play a part (see Harrison, Bellin and Piette 1981 for a fuller exposition of this in a Welsh context.)

It is a weakness of Fishman's model that it is entirely sociological. Political factors at one end and psychological factors at the other also need to be considered. Despite these limitations, these studies illustrate the usefulness of the concept of domain as a starting point of analysis. It is also an analytical tool that has been used in some studies of the Welsh situation, and these have been discussed here as they offer useful background for the language switching study that will be discussed in chapter 6 onwards.

More recently, more complex models, such as those put

forward by Gibbons (1987), and Scotton, offer some empirical support for its reality in language behaviour although the term preferred by Scotton is 'social arena'. Her work has been primarily on inter-sentential switching and will be discussed in the next chapter. The main value of the concept of domain would appear to be its use in conjunction with other forms of analyses.

2.2c) Studies on the 'Context' of Language Switching

An early, but nevertheless relatively sophisticated analysis of the factors involved in language switching, that takes account of many of the points made in the previous section is put forward by Herman (1961). He focuses on the different factors that affect what he refers to as language choice. Although Herman's study is not referred to very much in the language switching literature, it has some similarities to the levels of analysis model that is discussed in chapters 7 to 9. It will therefore be described in some detail here.

The term language choice is used by Herman to refer to language switching between conversations.

In talking about language choice, he says -

"The position of a bilingual speaker required to choose one language rather than the other, in situations where either could serve as the medium of conversation may usefully be analysed as that of a person in an overlapping situation. He may be influenced by factors in the background situation or by personal needs or by the demands of the immediate situation. The choice depends upon the relative potency of these situations."

He gives examples from Israel of how language choices

could be influenced by these three different factors. For example, immigrants to Israel living on a kibbutz might use English to each other in their own rooms, but Hebrew in the kibbutz dining-room. This would be an example of the influence of background factors, such as wanting to show solidarity with the new country, taking precedence. An example of personal needs dominating, would be where someone uses their first, or preferred language, because it is the one in which they find it easiest to express a complex idea.

People who are not marginal in the society are more likely to use the language that best suits the demands of the immediate situation, for example giving introductions in a workplace in a common first language. Those who are more marginal may select a particular language in order to demonstrate solidarity with a particular group. These examples which Herman gives are based on hypothetical events rather than actual illustrations. While they sound plausible, it is obviously useful to obtain confirmation of the framework using examples that have actually been observed.

Such examples, using Herman's framework, are given by Hunt (1968) from the essays of Philippino students, all of whom knew at least three languages. Hunt's examples can be fitted reasonably well into Herman's scheme although he finds it difficult to separate immediate situation from the other two categories of personal need and background situation. The difficulty of differentiating between the categories is probably the main problem with Herman's analysis. Consider the following example from Hunt's corpus

"In my present home, however, I speak mainly Cebuano being married to one. But when discussing serious topics like politics, science and religion my husband and I prefer to use English. We can express ourselves more effectively in English especially with technical matters. "

Hunt gives this as an example of a language choice dominated by the immediate situation, the immediate situation being in this case that English is essential for the discussion of certain concepts. One could however argue that this is a good example of the importance of background factors. Perhaps the particular values of the community of which this respondent is a member include that of English being the appropriate language for certain types of discussion. It is very unlikely to be the case that Cebuano does not have the vocabulary with which it is possible to discuss these topics but it may be that there are social norms which makes discussion of the topics in Cebuano very unlikely.

An alternative explanation of this particular example would be in terms of the respondent's own personal needs. Perhaps because of the type of education she has had she is unable to discuss certain topics in Cebuano as her vocabulary may be deficient in these particular domains. A plausible explanation of this language choice can therefore be made using any of Herman's three categories, and this is equally true of many other language choices one can think of. This certainly suggests that this model is not really well enough specified for use as a tool in describing

language choices. However I am still left with the feeling that Herman has pinpointed certain very important ideas. It is not enough to merely look at the immediate situation (or domain, to use Fishman's terminology) when attempting to locate the cause of a language switch. Although the terms - personal needs, immediate situation and background factors - have not been developed, they indicate the range of levels of analysis needed to explain language switching.

The psychological nature of his discussion is also appealing. Motivation for any type of behaviour is complex and multi-faceted and conflicting needs can lead to unexpected behaviours. Herman gives examples of this in the area of language switching. He also, despite his use of the term language choice which implies a conscious decision, appears to allow for motivations to be both conscious and unconscious. Because of this, Hunt's use of his model is inadequate as his data consists of explanations, perhaps even rationalisations, by respondents of their own linguistic behaviour. There is an element of naivete in the way Hunt appears to accept at face value people's explanations of their own behaviour. This naivete is not apparent in Herman's paper. Although there are some differences, the model put forward, and discussed in chapters 7 and 8, owes a great deal to Herman's ideas. What is found to be of particular value is his emphasis on the need for analysis at a number of different levels. This allows for the possibility of looking at the wide range of factors that can influence language switching.

2.2d) Psychological Explanations of Language Switching

Gal's study (1979) does not explicitly use a psychological approach or refer to psychological theory, but her detailed descriptions and her emphasis on the characteristics of the participants in an interaction, gives her analysis a psychological flavour. Although her basic approach is an ethnographic one, she is well aware of the importance of wider socio-political factors (Gal 1988). Hers is an interdisciplinary approach, but is included in this section as it is her discussion of psychological factors that are of particular interest.

Gal's study is a fairly detailed ethnographic study of one small Austrian town where German is gradually replacing Hungarian in what is still a largely bilingual community. She looks both at switching between the two languages and style shifting within each language but says that

"Choices between languages are more salient linguistically and more important socially than style differences within each language,"

In her discussion of language switching Gal's study differs from those discussed previously because she considers the participants involved to be the determining factor in any model that attempts to predict language choice. She observed other changes in the situation, such as place and topic, but did not find these to be useful predictors of language switching. This emphasis on other people (or interlocutors) has been picked up in the levels

of analysis model in chapter 7. The features of the participants that were important determiners turned out to be both demographic and psychological. The demographic features that were important were age (the younger age-groups used far more German than the older age-groups, and the middle-aged were somewhat in between), sex (younger women used more German than younger men) and social class, defined here as workers and peasants (workers used more German than peasants).

The peasant/worker factor however turned out to be more subtle than was at first thought. While having a peasant status correlated at .67 with language choice, the correlation between language choice and having a peasant social network was much higher, at .78. This is an extremely interesting finding as it suggests that the people her respondents chose to mix with socially, were more important than their own actual social class in predicting language use.

The question of individual choice would seem to be very significant here. Gal's analysis suggests that aspects of people's lives over which they have some choice, for example, their friends and their choice of language, are more closely related to each other than to aspects of life over which people have less control such as their social status. Most of the factors that have been concentrated on by workers on language switching have been static features, such as locale, domain and age of participant. These are features over which people have little choice. Gal's work suggests that it may be profitable to study features that

are, to a certain extent, things over which the individual has some control, such as their social network, choice of marriage partner, and their political affiliation. This emphasis leads to a more dynamic approach to language switching.

Gal also looks at how values are related to language choices in several within conversation switches that she observed. While these are similar to examples which will be discussed in the next chapter (cell C), they will be considered here within the general context of Gal's work.

In the following example the different approaches to child rearing taken by a three year old's mother and her grandparents are reflected in a switch to German made by her mother. The child is normally looked after in the day by her grandparents while her mother is at work. On this particular evening the child is whining and this leads to the disagreement between the mother and the grandfather, the mother having stricter and therefore, in this context, more modern views about child-rearing. (The main conversation was in Hungarian. The mother's switch to German is underlined)

Grandfather: Poor little one.

Grandmother (to child): Don't fool around
like that if you're sleepy!

Mother: Just give her a good slap.

Grandmother: Oh sure.

Grandfather (to child): It's a good thing
your mother's not home (all day)
because you'd get an awful lot
of slaps from her.

Mother: You bet, there has to be order!

Grandmother: She sure is bad! We go to buy
shoes and she gives the lady a
good kick, the lady's trying to
fit her with shoes. Some nice
litle girl.

A similar example involving a clash between traditional (and therefore implied Hungarian) values and contemporary (implied German) values can be seen in the following exchange between a husband and wife. The wife has bought pastry from a different baker to her usual one thus violating the implicit agreement between merchant and customer that is the tradition in the town. More modern shopping habits allow the customer the choice of shopping wherever he or she prefers. The husband is angry at the wife's changed shopping habits.

Wife: I bought it cause he was there and he was yelling so much and he said hello to me so I went over, then yesterday he was here across the street, so I told him I'd buy something today. He always pays you, I didn't want him to be able to say, well to say -

Husband: At Pindler, you shopped at Pindler! Well, don't tell -- because he'll kill you (i.e. original merchant)

Wife: Well, I went to him too, I bought from him too, he saw

Husband: If this one sees you buy at Pindler's he'll be mad

Wife: I can't buy everything just from him

Husband: This stuff's no good.

(switch to German underlined)

A contrast in values might not be enough, of itself, to trigger these switches. Both these switches occur in family arguments where the German conveys both authority and social distance in addition to reflecting a particular set of values - essential weapons in coming off best in a domestic dispute!

An important contribution of Gal's work is her emphasis on dynamic features of the individual as a salient factor in

language choice and her perceptiveness in relating psychological characteristics of the individual to detailed examples of inter-conversational language switching, as well as to language switching more generally. Her participant observation methodology is rich in detail and illuminating anecdote, but as with all such studies many questions remain. One of the most important is whether the examples she cites are exceptions to the general rule which stand out for that very reason, or illustrative examples of a common practice. Such questions can never really be answered using a methodology such as Gal's, and the work of Giles and his colleagues, which will be discussed next, has for this sort of reason, preferred a very different kind of methodology. In making this criticism, however, it is important to say that examples such as Gal's could not be obtained other than by using her judicious blend of participant observation and occasional recording.

Gal's approach is a traditionally ethnographic one but she uses psychological constructs such as values and individual choice to explain her findings. The work of Giles and his colleagues was originally developed very much within a traditional, social psychological framework although the questions he addresses are also sociolinguistic ones. Giles names his model an 'interpersonal accommodation theory' and it draws on four social psychological theories in its development.

The aim of his model is to explain and hopefully predict the processes of convergence and divergence, these being the terms used to describe the process whereby a

speaker shifts his/her speech style towards or away from, that of his/her interlocutors. The four social psychological theories that Giles uses are similarity-attraction; social exchange; causal attribution and Tajfel's theory of intergroup distinctiveness. In brief, the way in which they are combined to form accommodation theory is as follows.

Similarity-attraction theory proposes that when people are attracted to others and desire their approval they will try to appear more like them. So, assuming that many interactions are between people who like each other, this will mean that speakers' speech-styles tend to converge. There are however costs as well as rewards in convergence (for example, loss of perceived identity) and social exchange theory states that we evaluate the relative costs and rewards before acting. This would explain why convergence does not always take place. For instance, a Welsh-English bilingual who places a strong premium on his identity as a Welsh speaker might not converge to an English monolingual by speaking English. Giles' theory however goes further than actual linguistic behaviour and looks at how we explain the cause of others' linguistic behaviour in terms of motives and intentions. In particular, whether, in a situation of convergence, the speaker is converging from internal motives (she wants to) or from external motives (the situation forces her to). Finally Tajfel's theory is incorporated into accommodation theory to provide a context to explain the importance of group identity in language behaviour. People often use language as a way of

emphasising a difference between their own in-group and other out-groups. Tajfel's theory proposes that when groups are in contact they will seek to emphasise their own distinctness. More recently (Coupland and Giles 1988), speech accommodation theory has been changed to communication accommodation theory and is now considered to be a generalised model of communicative interaction.

It can be seen that Giles's theory is a subtle and complex one. Although, generally speaking, speakers will converge linguistically, many other factors are involved which may lead them not to do so. Communication accommodation theory attempts to explain these factors through the dynamic consideration of social and individual change.

The way Giles has generally chosen to test this theory has been through experiment, and a favoured technique has been the 'matched-guise'. In experiments using this technique judges listen to a number of different voices reading the same passage and evaluate each of them on rating scales or bipolar adjective scales. Unknown to the judge, the different speakers are all, in fact, the same speaker. This is in order to eliminate any differences in evaluation of the speakers that could be made on features other than the independent variable of the experiment. Using this technique, Giles and his collaborators have provided evidence for many of the claims of his theory (see Giles and Powesland 1975, Giles 1973, Giles, Taylor and Bourhis 1977, Bourhis, Giles and Lambert 1975, Thackerar, Giles and Cheshire 1982, Coupland and Giles 1988, Genesee and Bourhis

1988) in both monolingual (accent change) and bilingual contexts.

Some of their studies were carried out in Wales (Bourhis, Giles and Tajfel 1973; Giles, Taylor and Bourhis 1977) which proved to be an interesting testing ground for accommodation theory. In the 1973 study, using a matched guise technique, Welsh speakers, Welsh learners and non-Welsh speakers were used as judges and the guises were Welsh with a South Wales accent, English with a South Wales accent and RP accented English. The most interesting finding was that the two Welsh speakers were upgraded when compared to the English RP speaker on many dimensions- more patriotic, romantic, desirable as a superior and the judge would like to be like him. This study indicated that Welsh speakers do not have a negative self-image (unlike French-Canadians for instance), as far as the Welsh language or a Welsh accent is concerned and this was true of all three groups of Welsh subjects. In the 1977 study Bourhis and Giles found that Welsh learners who have a strong Welsh identity responded to an English RP speaker who challenged this identity by suggesting that they were learning a 'Dying language which had a dismal future' by diverging from him. Some broadened their Welsh accents, others used Welsh verbs and

"in one case, a woman did not reply for a while, and then was heard instead to conjugate Welsh verbs very gently into the microphone."

These two studies are only a small, although fairly typical, sample of the now very large

number of studies that have been carried out within the framework of this theory. They have undoubtedly added an important new dimension to the study of language switching. As Giles and Hewstone say

"Just as the field of developmental psychology has moved away from considering children as mere victims of their environment to thinking of them as reactive beings often capable of selecting their own input and negotiating their status with other children and adults, so too should sociolinguistics reconsider its view of speech behaviour as if it were a blob of clay moulded by situational constraints. The perspective adopted in accommodation theory is aimed at correcting the lop-sided reliance in sociolinguistics upon descriptive sociological methods in understanding spoken behaviour, and at indicating the contributions that can be made by social psychology, and by theories of 'naive' psychology (attribution theory, for example). To understand why individuals speak the way we do, we must know something not only about their descriptive characteristics, but also about the manner in which they interpret 'the situation', and the procedures they use to act on these interpretations." (1982)

The psychologically sophisticated studies of Giles and colleagues certainly make an important contribution to the field. By focusing on the question of social outcome, that is, what do people gain or lose by using language in certain ways in certain interactions, this leads to a quite different and more dynamic analysis than other, more descriptive studies.

These studies do, however, also beg many questions and largely because of difference of methodology are difficult to compare with the previous studies in this section. Judged by the standard criteria of experimental social

psychology Giles's studies are ingenious, interesting and informative. However, relating their results to 'real-life' observations and recordings remains problematic. Many of the studies rely on the use of judges and there is an assumption that judges used in this way react in an experimental situation in the same way as they would in a real-life interaction. This assumption may well be unwarranted. Communication Accommodation Theory is certainly an interesting development of a branch of social psychology but it does not necessarily tell us a great deal about language switching in actual settings. This may be because the aim is prediction rather than explanation, and while the theory is to a large extent predictive of experimental results it is less clear how it can be applied to language switching in natural contexts.

Reviews of the work of Giles and his collaborators have also remarked on the way this body of work only partly relates to other work and approaches in sociolinguistics. Gal (1980) notes that work on co-occurrence and style shifting is ignored and that the concept of 'rule' as used by linguists is misunderstood by Giles. Erickson (1978) points out that accommodation theory overemphasises convergence and does not take enough account of conflict models of societal change. This seems a valid criticism when one considers the insights that conflict models can offer in many of the bilingual situations that Giles et al discuss (French-Canada, Wales). It would appear that by concentrating almost exclusively on psychological dimensions, both the micro linguistic and the macro

political aspects have been either ignored or superficially treated.

However later work has taken on board some of the criticisms. For example a development of accommodation theory deals with 'ethnolinguistic vitality' (Giles and Byrne 1982, Giles and Johnson 1987), an attempt to look at a language's vitality both objectively and from the subjective point of view of the speakers themselves. This adds a sociolinguistic dimension to Giles's theory, although the concept of ethnolinguistic vitality has also been criticised (Husband and Saifullah-Kahn 1982, Edwards 1985). Their main criticism is that vitality theory despite its claims, pays only superficial attention to economic, social and political influences.

In an attempt to move away from experimental results only, Giles and Hewstone (1982) outline a number of predictions concerning language use in the 'real world' made by accommodation theory -

"The theory proposed that linguistic behaviour and particularly the use of ethnic speech markers, can be understood in terms of i) the relative status positions of the ethnic groups concerned, ii) the group members' desire for a positive social identity and the degree of importance attached to ethnic group membership iii) the construal of the interethnic situation in terms of the awareness of cognitive alternatives or the lack of them iv) the subjective impression of ethnolinguistic vitality as high-low, and v) the perception of ethnic boundaries on both linguistic and non-linguistic dimensions as hard-soft. Ethnic groups are, as pointed out by Ryan and Caranza (1977) and others, not homogeneous wholes and hence individuals within them can be differentially considered along these dimensions. Given that some of the important (albeit undoubtedly not all) social

psychological dimensions operating in an interethnic encounter have been specified, we may be better able to understand by means of the foregoing hypotheses when ethnic speech markers are adopted."

Few sociolinguistic studies have addressed all or even most of these variables so accommodation theory remains untested in the real world. It does however offer useful suggestions and insights that deserve to be taken up in future studies. Recent work in this framework does, unlike earlier work, genuinely integrate sociological, social psychological, and sociolinguistic processes, and it has been taken up by non-psychologists. Scotton's work, for instance, owes much to the framework of accommodation theory (Scotton 1980, 1988a, 1988b). (This will be discussed in chapter 3 as it relates primarily to intra-sentential switching). Gibbons (1987) too, in using a range of methodologies to study language switching in Hong Kong finds the matched guise technique a useful approach for eliciting attitudes. These studies go some way to responding to Edwards' (1985) suggestion that accommodation theory needs to be integrated with approaches from disciplines other than social psychology. This has happened to a certain extent, but as communication accommodation theory is very clearly rooted in social psychological theories and frameworks, it is still relatively inaccessible to those working within different paradigms.

2.3 SUMMARY AND CONCLUSION

In this chapter I have indicated the range of language switches that can occur, and considered the diverse disciplines in which they have been studied. Some of the problems and ambiguities of terminology in this area were also discussed. Studies have been carried out on switches both between and within conversations, and both linguistic and sociological/psychological types of explanations have been offered. The remainder of this chapter considers studies which concentrated on language switches between conversations, and on the sociological and psychological explanations that have been offered. After a brief summary of some of the early studies in the area, studies that have used the concept of 'domain' were discussed. This was followed by a discussion of Herman's work on the context of switching. This approach acts as a bridge between those studies and approaches that concentrate entirely on situational variables, and those that focus on psychological attributes of participants. The final, more psychologically oriented section, discusses Gal's ethnographic study, and Giles' communication accommodation theory. It was concluded that the studies discussed in this final section, showed more awareness of the complexity of language switching, but in turn tended to emphasise some factors at the expense of others. Giles, for instance, includes social psychological ideas, but at the expense of linguistic and political factors.

The selection of studies for discussion in this chapter has been done on the basis of relevance to the empirical work that will be described in later chapters. The model to be presented in chapter 7, for instance, draws to some extent, on the ideas of Herman. The concept of domain, while problematic, is also one that was found useful in discussing some of the examples in chapter 6. The general approach of the studies discussed in this chapter's final section that attempt to integrate psychological factors such as attitudes and needs with wider sociological considerations is also the approach favoured in the present study.

CHAPTER 3

LITERATURE SURVEY: INTRA-SENTENTIAL LANGUAGE SWITCHING

3.1 INTRA-SENTENTIAL LANGUAGE SWITCHING - LINGUISTIC STUDIES

3.1a) Background to Linguistic Explanations

As outlined previously this chapter will discuss studies that have been carried out on intra-sentential language switching. The first half of the chapter will deal with studies that have concerned themselves with primarily linguistic explanations for this kind of switching, and the second half with those that have offered sociological or psychological explanations. This is similar to the distinction made by Romaine (1989) who divides explanations into those that are grammatical/syntactic, and those that are related to discourse or pragmatics. Not all studies have limited themselves neatly to one or other of these, but in the main it is possible to divide studies into these two categories. The division also generally reflects the main disciplinary orientation of the investigator.

The empirical work to be discussed in chapters 6 and 7 mainly concentrates on the latter type of explanation. The former type of explanation will also be discussed here, but briefly. Discussion will be brief for two main reasons.

The first is that most of the literature is on Spanish/English switching, and despite early attempts to develop universal linguistic rules it now seems to be accepted that many of the rules put forward as candidates for universal rules may in fact be limited to Spanish/English language switching. The literature then is arguably of limited relevance to those studying different language pairs, such as English/Welsh. The second is that it did not prove possible to analyse the data to be discussed in chapter 6 in this linguistic way. This was partly because of the quality of the recordings, which was in itself largely due to the age of the children, and also because close phonetic transcriptions were not made.

Compared to the studies described in the previous chapter, the studies of linguistic explanations constitute a reasonably coherent body of work. It largely occurs within a linguistic tradition and the authors appear to be generally familiar with each other's work. All these papers address themselves to the question 'What are the linguistic reasons for language switching within sentences?' Many of those working in this area (for instance Poplak 1979, 1980, Poplak, Sankoff and Miller 1988) are also interested in sociological/psychological reasons for language switching but this section will concentrate primarily on the linguistic explanations they offer. Timm (1975) articulates the reasons for focusing on linguistic explanations, saying

"My own research on Spanish/English switching reinforces the view that appeal to nonlinguistic variables is the only satisfactory approach to explaining WHY bilinguals switch languages. However in

examining samples of bilingual talk produced by Mexican-Americans living in California, I noticed that some segments of speech were never internally switched, though they might occur now wholly in English, now in Spanish - from the lips of one speaker."

The main question for this section then is not WHY bilinguals switch but WHEN.

The term language switching is being used here although the most commonly used term in the literature is code-switching. As was discussed in the previous chapter there are problems involved in subsuming language switching under code-switching more generally, as the latter also refers to switching within languages as well as to switching between languages. However, as all the studies to be discussed here refer to two languages rather than two codes the term language switching is used. One of the first studies to attempt to look at when bilinguals switch was carried out by Clyne (1967, 1987,) who introduced the concept of 'triggering' into the language switching literature.

3.1b) Triggering

Clyne's data was collected from German immigrants living in Australia who were asked to describe pictures in German. Very frequently words from English were transferred into these descriptions. As Clyne (1967) says

"Transference may sometimes be attributed to limitations on what speakers are able to utter and on the amount of effort or strain they require when expressing certain ideas or concepts and/or planning sentences.... the

dual set of 'name tags' which the bilingual has at his disposal makes it easier for us to pinpoint manifestations of speech capacity limitations."

As well as the actual word or phrase that caused difficulty being transferred or switched, Clyne thought that words or phrases coming before or after could also be affected. He calls this feature triggering and distinguishes between four different types of triggering:-

a) consequential triggering - certain words may constitute an overlapping area between the two languages which causes the speaker to lose linguistic bearings and to continue in the second language for one or more words or phrases beyond what needs to be actually transferred, for example,

"Ich nehm die SUN every day." (I take The Sun every day.)

Here the use of the English proper noun has caused the speaker to continue to use English instead of switching immediately back to German after uttering the word "SUN".

b) anticipational triggering - a speaker, thinking ahead to what s/he's about to say, will sometimes anticipate the use of a word that belongs to an overlapping area and which serves as a trigger word. Anticipation of that word may cause the speaker to transfer several words immediately before uttering the actual trigger-word, for example,

"Wir nehmen unse Biecher (unsure Bucher) fur vier/for four periods."

Here the trigger word is the English word "periods".

c) sandwich words - words sandwiched between two overlapping areas will often all be triggered.

d) contextual triggering - here transference or switching is set off by the entire context rather than by any specific word.

Triggering is an interesting concept that may explain within-sentence language switching that otherwise would be inexplicable. Of Clyne's four categories of triggering, consequential and anticipational triggering are probably the most useful. The other two categories add little and in Clyne's later work, he himself only discusses consequential and anticipational triggering. The concept however does need refining and a more exact definition is needed than Clyne gives. For example, how many words on either side of the main transference can be considered as examples of triggering without a further explanation needing to be sought for the language switch? There are also problems Clyne (1987) says, in knowing sometimes if a particular word is part of a switch, or not. He gives the example

"Wir haben sie gehabt, but oh, grosses Feuer [KaM] thro' and killed the trees."

Here [KaM] could be in either language.

As will be seen, this type of example is also common in the material to be discussed in chapter 6. This is perhaps because the 'language neutral zone' (words that are identical or very similar in the two languages) is quite large. Appel and Muysken (1987) suggest that the language neutral zone is very likely to be one where switches will commonly take place, and Clyne's data certainly supports this.

Despite some problems of definition, triggering is a useful explanation of some examples of language switching

and one that has been found useful in explaining some of the language switches described in chapter 6.

3.1c) 'Rules' of Language Switching

However, not all language switches are lexically motivated in this way. An alternative approach is to consider the role of syntactic 'rules' in determining when language switching may take place. The use of such rules was pointed out by Ervin-Tripp (1973), although her examples mainly involve code-switching within a language rather than switching between languages as in the bilingual case. She mentions, in particular, the importance of rules of co-occurrence.

She illustrated these by the following imaginary episode.

"How's it going, Your Eminence? Centrifuging OK? Also have you been analyzin' whatch' unnertook t'achieve?"

This utterance is unacceptable because it includes both formal and casual speech. Similar rules of co-occurrence may also determine when two different languages can be combined, as well as different monolingual codes.

If it is established that language switches are in all probability constrained by certain linguistic rules, the next task is to establish what these rules might be. One method for doing this used by Gingras (1974) and Timm (1975) is that of 'acceptability judgements.' This method involves getting bilingual subjects to make acceptability judgements for a range of sentences that have different language switches in them. Gingras found that some language switches were far more acceptable than others. For instance,

switches at the sentence's major constituent boundaries were more acceptable than sentences where the switches were random.

It was also found that bilinguals varied in their judgements of acceptability, depending on whether they had acquired their second language during childhood, or as adults.

However there are problems with the use of acceptability judgements. Bilingual subjects are being asked to judge the relative acceptability of what are, by most standards, all unacceptable utterances. Certainly the data suggests that they are able to do the task, but there must always be some doubt as to whether the judgements necessarily accord with the actual utterances of bilinguals themselves.

This particular problem is overcome by the studies of Pfaff (1979), Poplak (1979, 1980), and Poplak, Sankoff and Miller (1988) who used real data. Pfaff carried out analyses in order to determine which parts of speech were likely to be switched in which types of sentences. From these she deduced that speakers who switched from Spanish to English did so according to a number of constraints. One of the constraints she mentions is that of 'triggering', as discussed above. Others were perhaps specific to the Spanish/English pairing, for instance switches to English verbs were only permitted when preceded by an inflected Spanish verb.

The speakers Pfaff recorded spoke a somewhat stigmatised variety of speech known as Tex-Mex or Espanol

Mixtureado, and, not surprisingly, there were many language switches in her data. But despite appearances to the contrary, there were many constraints on the switches into English.

A large amount of evidence in support of the claim that language switching is not linguistically random is produced in this study. It would however be a mistake to suppose that the constraints established by Pfaff are followed 100% by all speakers. What she finds are no more than very strong tendencies. Some of the constraints she documented do not accord with those suggested from acceptability studies. In such cases of doubt, her data would appear to be the more reliable, but the huge variability in findings do cast some doubt on the whole enterprise. Other studies have also produced conflicting data. Some have found constraints similar to those put forward by Pfaff, for example Huerta-Marcias (1981), and Zentella (1981), whereas others have not (Sobin (1984), and Singh (1985)).

There are several possible explanations for this kind of discrepancy. Perhaps the linguistic rules are very complex indeed, and the rules developed so far too simple to account for all possibilities. Perhaps there are very large differences from sub-group to sub-group, so that a slightly younger sample, or one from a different region will produce different results.

In view of the difficulties involved in the specifying of many linguistic rules, Poplak and her co-workers put forward suggestions of more universal constraints, involving only three major linguistic constraints on language

switching.

These are-

- a) the free morpheme constraint - languages may be switched after any constituent in discourse provided that constituent is not a bound morpheme.
- b) the equivalence constraint - switches will tend to occur at points in discourse where juxtaposition of L1 and L2 elements does not violate a syntactic rule of either language.
- c) the size-of-constituent constraint.

According to this, switches occur more frequently at major constituents such as clauses, than at smaller boundaries such as single words. The one exception to this is nouns which are frequently switched.

Poplak and Sankoff's extensive data corroborates the hypotheses of the free morpheme and equivalence constraints with less than 1% of the 1,835 switches going against them. These findings are impressive, and the relative simplicity of these rules, makes it likely that they may apply generally to language switching. They have however been criticised for not being specific enough by, for example, Sridhar and Sridhar (1980), and significantly, studies from different parts of the world have failed to find even these very general constraints adhered to (Berk-Seligson 1986, Bentahila and Davis 1983, Clyne 1987).

Poplak and her co-workers did not limit themselves to looking at linguistic rules but made many other observations about language switching. Those that are most relevant to the empirical data of chapters 6 and 7 will be discussed

here. Firstly, they claimed that language switching is a very skilled activity, and is therefore most frequently found amongst the most balanced bilinguals. Language switches are generally made smoothly, and rarely include pauses, hesitation or editing phenomena.

On the basis of their studies of Spanish/English Puerto-Rican bilinguals, they say

"These findings...provide strong evidence that code-switching is a verbal skill requiring a large degree of linguistic competence in more than one language, rather than a defect arising from insufficient knowledge of one or the other. ...It is also striking that precisely those switch-types which have traditionally been considered most deviant by investigators and educators, those which occur within a single sentence, are the ones which require the most skill. They tend to be produced by the 'true' bilinguals in the sample: speakers who learned both languages in early childhood and who have the most on-going contact with the monolingual English-speaking world. Code-switching, then, rather than representing deviant behaviour, is actually a suggestive indicator of degree of bilingual competence."

In case this seems relatively obvious, it may be worth quoting the diametrically opposite view of Weinreich (1953), a noted authority in the field. He says that the ideal bilingual is one who

"switches from one language to the other according to appropriate changes in the speech situation (interlocutor, topic, etc.) but not in an unchanged speech situation, and certainly not within a single sentence"

The view taken in this study, and put forward in the Introduction is much more like Poplak's than Weinreich's.

The second point made by Poplak is apparent in the second part of her quotation above. She studied both

Spanish/English bilinguals in New York and French/English bilinguals in various Canadian communities, and came to the conclusion that there were differences in the language switching patterns of different communities. In the Puerto-Rican community, language switching was considered to be emblematic of a dual identity and people were proud of their ability with both languages. Here skillful language switching was common. Conversely, in some of the French-Canadian communities, bilinguals down-graded their abilities, and rarely switched between languages.

A third claim made by Poplak, based on her Puerto-Rican study, was that the very generalised use of intra-sentential switching found in some speakers could represent an overall discourse mode. She contrasts this discourse mode with what she calls a discourse strategy that is used to achieve certain effects, which she also found, particularly in her Canadian sample.

She asked the question what sort of speakers were most likely to use this discourse mode, and came up with some useful suggestions. She found, for instance that females, balanced bilinguals, and those who acquired L2 early rather than late were particularly likely to use it. Attitudes towards ethnicity were also considered but showed no significant findings. Some of the points made in the previous chapter in the discussion of Gal's (1979), and Giles' work may be relevant here. In particular, the question of individual choice (choice here need not necessarily imply a conscious process) - why do some individuals choose to language switch intersententially

while others do not and why is it chosen more frequently by individuals in some bilingual communities than in others? Questions such as these remain unanswered by Poplak's work, as she does not move beyond the demographic indicators to consider more psychological factors.

This finding is of particular interest here as several of the children whose language is described in chapter 6 did seem to be using a discourse mode very similar to that described by Poplak.

The main trend of the work on linguistic explanations of language switching has been to move away from a search for specific linguistic constraints. As empirical findings threw doubt on many of these, rather more general constraints were put forward. These too have been found to be problematic, although it is felt by Poplak, for instance, that such rules can be found. However, the alternative point of view, namely that there are no linguistic constraints to language switching has also been put forward (Lance 1975). In order to find such rules however, it is important to consider the individual's repertoire within the speech community, and to know what the norms are, if only to see if an individual's switching pattern is specific to him or her, or occurs widely within the community.

This makes the point that it does not seem possible to look at linguistic reasons for switching without also considering psychological and sociological factors. It is to these we turn in the next section.

3.2 INTRA-SENTENTIAL LANGUAGE SWITCHING - SOCIOLOGICAL AND PSYCHOLOGICAL STUDIES

3.2a) Background to Sociological/Psychological Explanations

Studies in this section consider switches at the same level (that is, within sentences) as those discussed in the first section of this chapter, but concentrate largely on the kinds of explanations that were described in chapter 2 where the level of switching was between conversations or discourses. The work described in the first half of this chapter considered differences between languages largely in terms of their syntax, and used this as an explanation of language switching. In this section, in contrast, the social situation in which the two languages are used is the main focus of consideration, and in particular their relative prestige. Most, if not all, the language pairs from which the switches to be discussed in this section are drawn, consist of a majority language (frequently English), and a minority language. This latter may be a language which is only spoken by a small number of people (for example, Nahuatl discussed by Hill and Hill 1980), or may be a language such as Spanish which is a minority language in a particular social situation but a majority language elsewhere. In either case, the most significant point is the way the languages are ranked for prestige in the bilingual communities, with the minority language usually being the one whose speakers have a lower social class and less social prestige.

It is however true to say that the position is often a great deal more complicated than this. One has only to

consider the complex example of the different prestige accorded Welsh in different parts of Wales and among different social groups to realise that there is by no means always a straightforward equation between minority language and low prestige and majority language and high prestige. A school which teaches through the medium of the minority language, for example, may deliberately enhance its prestige within the school.

The relatively low prestige of a minority language may help explain why, in principle, bilinguals will switch to another language at times, but it is not usually a sufficient explanation of why a particular switch is made rather than another. The studies to be described in this section often attempt to explain the latter point, so that a discussion of the individual's speaker's attitudes and interpretation of the situation are relevant as well as the wider social context involving the prestige of the languages.

After looking at some early studies in this area, I will analyse studies that have attempted some kind of taxonomy offering lists of suggested reasons for the switches in their particular data. Then I will go on to look at studies where attempts have been made to develop theories and models that go beyond a purely taxonomic approach.

3.2b) Early Approaches

One of the first to discuss reasons for language switching was Weinreich (1953). Many of the areas delineated by him have since been developed by other writers

and his ideas do not now have the novelty they did when first published in 1953. The main extra-linguistic factors that are suggested by Weinreich include

- a) the speaker's verbal facility in general, and in particular his/her ability to keep the two languages apart.
- b) the manner and age at which the speaker learned each language
- c) the speaker's relative proficiency in each language.
- d) specialisation in the use of each language by topic.
- e) individual and community attitudes towards the two languages.

These reasons however are only answers to the question of why a speaker might switch languages in principle; they do not explain particular switches.

In fact Weinreich, in contrast with the authors described in the first half of this chapter, did not acknowledge the possibility that language switches could be evidence of a speaker's communicative proficiency, as is indicated by the following quotation:

"the ideal bilingual switches from one language to the other according to appropriate changes in the speech situation, and certainly not within a single sentence."

This means that Weinreich's list only includes reasons which can be interpreted as relating to a speaker's failure in communication rather than those which show switching in a more positive light.

A more useful approach is that of Haugen, whose main work 'Bilingualism in the Americas' was published in 1956, three years after Weinreich's work. He was particularly

interested in the language of Norwegian immigrants to the US though he also considered the languages of other immigrant groups and bilingual communities in Europe. His data-base is wide-ranging, including historical sources, newspaper articles, other contemporary written sources and questionnaire data. He is interested in both borrowing and switching, although primarily in the former. In contrast to Weinreich, he points out that language switching is rule-governed and not arbitrary. He explicitly points out that the language spoken by the Norwegian/English immigrants, is not a confusion

"Our study of the confusion of tongues in the immigrant community has led us to the conclusion that it is not identical with a confusion of communication. The language used may seem barbarous and baffling to the outside observer, but those who join the social group soon discover that they have to follow the customary norm if they wish to be understood. There exists within the group a general sense of purism, which keeps the movement from proceeding too rapidly. Individuals who go too far in the direction of English are laughed at. A special word was coined to make fun of them: they were said to be 'Engelsk-sprengt' or 'Yankee-sprengt', 'Anglified' or 'Yankeefied', one of the very few AmN creations. Stories are current about the excesses of 'mixing', and the speakers show a certain self-consciousness about it when they know that potential critics are listening. But most of them show relatively uniform behaviour with respect to the usual loan-words, which means that the adoption of the words leaves the main structure of their Norwegian untouched. They think they are speaking Norwegian even though they admit it may be a 'Minnesota-Norwegian', and in these contentions they are right. American Norwegian is indeed Norwegian, though we may wish to designate it as a bilingual dialect of that language".

He also describes some of the difficulties involved in collecting and analysing this sort of data. For instance,

it was not always possible to tell which words were loan words borrowed by immigrants from English on arrival in the US, and which words had already been borrowed into Norwegian in Norway and were known to immigrants before they left. Speakers themselves were not good informants on this sort of issue, sometimes thinking that quite old Norwegian words were borrowings if they were phonologically similar to English words. Similar problems occur with other language pairings, including Welsh/English.

Most of Haugen's work looks at borrowings but he offers some explanations for why his informants switched languages.

They would for instance switch from Norwegian to English when they needed to quote English-speaking people, when they used English terms which they didn't want or couldn't adapt to Norwegian, and for humorous effect. Haugen also records examples where switching carries on beyond quotations from English - the phenomenon of triggering described by Clyne, and already discussed previously.

There is clearly a contrast between Weinreich and Haugen's approach to switching; the one censorious and the other tolerant. A view akin to Haugen's but held more extremely is that of Lattey (1981). She considers that switching is not only common in bilinguals, but is indeed the normal mode of communication for bilingual speakers, saying

"exploitation of both languages at the speaker's convenience is the unadulterated norm for a bilingual....Only when there is a constraint on the conversation produced for example by absolute formality of the situation, as in a public address, or by the presence of monolinguals, or by the fact that

dealing with a particular topic is more natural in one or another language, does the bilingual fall into a monolingual track... we shouldn't be trying to explain the bilingual's departure from a monolingual utterance - that's the norm - we should rather seek to account for the situation in which he is constrained to behave monolingually."

Lattey's views are perhaps rather extreme and she certainly goes further than do most workers, and probably many bilinguals themselves, in asserting the total acceptability of continuous language switching.

3.2c) Reasons for Language Switching

While there is no absolute consensus on the desirability or otherwise of language switching, other workers have followed more in Haugen's footsteps than Weinreich's, and have suggested various reasons for the language switches that they found in their data. The number of explanations offered varies considerably but there is considerable overlap between the studies in the type of explanations proffered. These are outlined in Table 3.1.

Table 3.1

EXPLANATIONS FOR LANGUAGE SWITCHING (AND NAMES OF AUTHORS
CITING THEM)

CONTENT 1) for quotation (Haugen 1956, 1973, Hasselmo
1972, Gumperz 1982, Gumperz and Hernandez 1971, Hatch 1978,
Valdes-Fallis 1976, Gibbons 1987)

2) because of the topic (Valdes-Fallis, Lance 1975, 1979,
Zentella 1985, Mclure and Mclure 1988, Auer 1988)

3) for technical terms e.g. mathematical or medical (Haugen,
Scotton 1979, Gibbons)

4) for proper nouns (Valdes-Fallis)

5) because of lexical need (Blom and Gumperz 1972,
Valdes-Fallis 1978, Grosjean 1982, Auer, Mclure and Mclure)

6) switching triggered by other word or other phrases (Clyne
1967, 1987, Haugen, Hasselmo, Valdes-Fallis, Gibbons,
Zentella)

INTERLOCUTOR 7) to indicate direction of question or
comment when there are several interlocutors present (Blom
and Gumperz, Gumperz)

8) to exclude someone from conversation (Scotton and Ury
1977, Grosjean, DiPietro 1977)

9) to accommodate to somebody else's language switch
(Valdes-Fallis)

10) to stress in-group membership (Valdes-Fallis, DiPietro,
Gumperz and Hernandez)

11) to show a change in the social role of speakers, for
example to sound more authoritative, or more educated
(Valdes-Fallis, Hill and Hill 1979, Scotton and Ury,
Gumperz, Mclure and Mclure, Zentella)

STYLE 12) for humorous effect, particularly the
punch-line of a story or joke (Hasselmo, DiPietro, Haugen)

13) as a rhetorical device (Hasselmo, Gumperz, Hatch,
Rayfield 1970, Valdes-Fallis, Auer, Mclure and Mclure)

14) as a linguistic routine e.g. for introductions
(Hasselmo, Valdes-Fallis)

15) to emphasise or reinforce. Will sometimes signal end of interaction (Hasselmo, Gumperz, Hatch, Valdes-Fallis, Grosjean, Gal 1979, Gibbons)

16) to amplify or add to remarks - (Hill and Hill, Redlinger 1978, Mclure and Mclure, Gibbons)

17) to make parenthetical remarks or to comment on a message (Hatch, Gumperz, Auer, Mclure and Mclure)

EMOTION

18) in situations of intimacy (Gumperz)

19) to show anger (Gumperz, Redlinger)

20) when teasing or swearing (Hatch, Gumperz, Mclure and Mclure)

21) random switches, no clear reason (Valdes-Fallis)

A fuller discussion and some examples of these explanations will now be given. The content of what is being said frequently leads to language switches. (Explanations 1 to 6 in the table are in this category.) As might be expected many authors find that switching takes place for quotations. To translate a quotation when one is speaking to a bilingual person would seem unnecessarily pedantic, and loses the flavour of the original.

Certain topics, also, are frequently associated with particular languages. This may lead to a language switch at the level of the conversation as discussed in the previous chapter, or may lead to a briefer switch just while a particular topic is mentioned. One example of this is given by Lance (1979) who observes that Mexican Americans frequently switch from Spanish to English when talking about money. Related to this reason is the very common finding that bilinguals frequently switch languages when using technical terms. Scotton (1979) quotes examples of a switch from Kikuyu to English when using geometrical terms, and Valdes-Fallis (1976) notes a similar tendency with medical terms. Several examples of switching for numbers was found in the data discussed in chapter 6. This is presumably related to the context or domain in which these terms are first acquired.

Proper nouns, for example, the names of places are similarly often used in the original form in which they were learnt, rather than translated. It is not always clear whether these topic based switches take place because

speakers feel that a particular language is more appropriate to a particular topic, or because they don't know the relevant words in the main language they are using. The latter will frequently be the case where technical terms are used, particularly where one of the languages is always used with other bilingual speakers, making it unnecessary for such terms to be acquired in both languages.

Often only one word in the utterance may not be known by the speaker, but the language switch may be considerably longer because of the effect of triggering. This was first observed by Clyne, but the term has been used by several other workers. Valdes-Fallis (1976), for example, gives several examples, including the following:

"No yo si brincaba en el (no, I really did jump on the) trampoline. When I was a senior..."

Here the word 'trampoline' acts as a trigger and the speaker carries on in English.

It might be supposed that switching because of a lexical gap would account for a very large percentage of language switches. Indeed, this is often the suggestion made by bilingual speakers themselves. Romaine (1989), however, claims that few switches are of this kind and Zentella (1985) found that less than 10% of her corpus came into this category, which she calls 'crutching'.

Reasons 7 to 11 are all reasons for switching which relate to the other people present, rather than to the topic under discussion. Reasons 7 and 8 are examples of language

switching being used either to include or exclude other people present. It can be used effectively to address a remark at a particular person in a gathering which includes both monolinguals and bilinguals, perhaps a remark which is not meant to be heard by other people. It can also be used to exclude. DiPietro (1977) points out that parents frequently use language switches of this kind if they want to keep something secret from their children. In my observation, monolinguals sometimes believe that exclusion is the main and perhaps the only reason for bilinguals' language switch. This of course is far from being the case.

The other person in an interaction can also affect the amount and type of a speaker's language switching.

Valdes-Fallis (1976) notes

"Certain speakers tend to associate their own switching patterns to those used by the other participant. This switch is particularly evident at those times in which a speaker is seeking to please the other speaker, that is when he is taking pains to be polite, to agree with what is said, and to make himself pleasant in general. This switch is particularly common in situations which involve total strangers or the interaction of a superior with an inferior."

Valdes-Fallis found in her study of Spanish/English bilinguals that women were more likely to switch for this reason when they were in conversation with men than with other women.

This example shows that language switching may be affected by a speaker's perception of her or his lack of power in an interaction but it can also be used in a bid to gain power. Scotton and Ury (1977) describe an interaction

between a bus-conductor and a passenger in Nairobi. The interaction begins in Swahili, and the conductor asks the passenger to wait for his change. As the passenger is nearing his stop he starts to get anxious about the non-appearance of the change and switches to English to say that he's about to get off, making, say Scotton and Ury, a bid for authority. The conductor counters in English saying that he isn't going to run off with the passenger's change.

This is a good example of language switching being used to convey quite subtle social information. Interestingly, the switching was also interpreted by nearly all those who heard it in the same way, showing that bilinguals themselves and not just researchers make these kinds of subtle interpretations.

In the above example, switching is used as a way of increasing distance but it can also be used to increase feelings of group solidarity, particularly among immigrant groups. Here most of the conversation may take place in the majority language, with switching to the minority language for greetings or leave-takings as a way of expressing solidarity (Gumperz and Hernandez 1971).

Explanations 12 to 17 all illustrate the ways in which language switching can be used as a verbal strategy.

Gumperz' views echoes those of many others in this field when he says

"Code-switching ----- is a communication skill which speakers use as a verbal strategy in much the same way that skillful writers switch styles in a short story."

Hatch (1978) enumerates several examples of this stylistic

or rhetorical use of language switching. Her examples include

- a) the repetition of statements in two languages for emphasis
- b) to heighten a contrast by a switch at a central point
- c) to emphasise the unexpected
- d) for parenthetical remarks
- e) to include the listener by tags which are emphasised
- f) to emphasise quotations
- g) to use proverbs in another language
- h) for affection, good-humoured teasing and swearing.

It is likely that this type of language switching is done consciously and requires a high level of mastery of both languages. Gumperz (1982) gives an example where a message is introduced in English, clarified in Spanish, and then the speaker returns to English (translation in capitals):

"We've got all these kids here right now. Los que estan ya criados aqui, no los que estan vecien venidos de Mexico (THOSE THAT HAVE BEEN BORN HERE, NOT THE ONES THAT HAVE JUST ARRIVED FROM MEXICO). They all understood English."

DiPietro (1977) describes how in an Italian-American family, jokes were told in English but the punchline would be delivered in Italian.

The main hallmark of these types of switches is that the speaker is in control of them and switches deliberately.

In contrast, language switching may also take place when the speaker is experiencing some kind of strong emotion.

In the following example, given by Gumperz and

Hernandez (1971) language switching is associated with embarrassment on the part of the speaker.

E. That's all you smoked.
M. That's all I smoked
E. An'how about.... how about now?
M. Estos....melos halle.....estos Pall Malls me los..... me los hallaron (THESE.... I FOUND..... THESE PALL MALLS I THEY WERE FOUND FOR ME). No, I mean... that's all the cigarettes.. that's all. They're the ones I buy.

The woman M is relating her attempts to give up smoking and reverts to Spanish when she mentions her failures, about which she is very ashamed.

Gumperz and Hernandez also give an example of switching to show anger, for example

"Puerto Rican calls her child 'Ven aqui, ven aqui.' If the child doesn't come immediately, this followed by 'Come here, you.'"

Redlinger (1978) questioned 15 Spanish-American mothers about their language switches and found that most of them reported that they would switch to Spanish when scolding their children but would use both languages or English when praising or teaching them.

These, and other examples, suggest that for some bilinguals at least, certain kinds of feelings or emotions are best expressed in one language or another. The different emotional connotations of a bilingual's two languages are interestingly expressed in the following quotation from the novel 'Earthly Powers' by Anthony Burgess (1980). The character who is speaking is a French/English bilingual:

"I was grateful for French; it distanced a little, though not enough. Acting the vowels and the intonation, I was also acting the predicament. But French was literally my mother-tongue. It had the power to knock down solidseeming English, language of my education and street-games and craft, disclosing the solidities as mere stagefloats. It had this power because it had floated and hurled through my fetal bones and flavoured my milk and soothed me to sleep. But it was still a language of the brain; its words for faith and duty and home would never make me cry."

The final explanation given in the table is in effect a non-explanation. It is noted by Valdes-Fallis that some switches of high frequency items are apparently random. She does not however discuss this finding any further. There are at least two possible interpretations of this. One is that the person who is studying the data cannot provide an explanation although there may well be one. This can easily be the case as a researcher is hardly likely to be in a position to know all the salient facts about the speaker's background and may not be aware of all the relevant context of the utterance. That there is no obvious explanation does not have to mean that one does not exist. The second possibility is that the switches are indeed random. This point has already been made in reference to Poplak's discussion of a 'discourse mode'. Her claim would be that some bilinguals use a particular discourse mode which involves frequent switching. This has implications for what is seen as appropriate analysis -

"It may well be possible in some cases for the analyst to impute situational motivations or consequences to specific intra-sentential switches, but the evidence presented suggests

that this has little if any pertinence for the speakers themselves. More important, there is no need to require any social motivation for this type of code-switching, given that, as a discourse mode, it may itself form part of the repertoire of a speech community. It is then the choice (or not) of this mode which is of significance to participants rather than choice of switch points."

While one can seek an explanation for why speakers use this mode there is little point in trying to explain each individual switch within it as they will be random within certain linguistic constraints. Hatch (1978) graphically describes this kind of switching by saying that 'you can't tell which way the cat will jump!'

The list presented in table 3 runs to 21 explanations and this undoubtedly does not include all the explanations that have been put forward in the literature.

Providing explanations of this sort for language switches is an exercise that has its difficulties. For instance, how can anybody know that their explanation is the correct one? Should one attempt to explain all switches? How long should the list of explanations be? The initial point made by many workers, namely that language switches are not entirely random and that using them can involve a degree of skill, has probably been demonstrated fairly uncontroversially but once one attempts to go beyond this it is easy to be critical. How, for instance can we know that a particular explanation is the correct one? Most of the workers here have relied on their own judgements in coming to an explanation. Many switches can however be interpreted in other ways by somebody else looking at the same data.

DiPietro (1977) for instance looks at Gumperz and Hernandez (1971)'s data and offers alternative explanations for some of the switches and claims quite reasonably that his interpretations are equally valid. One methodological way of surmounting this problem is provided by Scotton and Ury (1977) who taped 4 realistic but fabricated examples of interactions involving switches and asked 70 judges from the same community to provide explanations for the switches. From this study they did indeed find that most of the judges agreed with their explanations. A drawback with this approach is the small number of switches that can be studied, and the element of artificiality that is introduced into the procedure.

There is probably no acceptable way of getting around this problem of interpretation but it certainly needs to be acknowledged, and will be discussed further in chapter 7.

Another problem is implied in the discussion of switches that occur at random. If it is acknowledged that some switches do fall into this category, then it may be difficult to show satisfactorily that not all switches are random and all explanations offered may be spurious. Again it may not be possible to counter this possibility totally, but the type of explanations shown here should go some way to indicating that at least some (and indeed probably most) language switches can be explained.

A third difficulty with producing lists of explanations of this kind is that the list can go on indefinitely with as many explanations being produced as there are switches. A way around this has been attempted by many workers who have

not attempted to explain switches individually but have looked more generally at factors determining different types of switches. Such attempts have become increasingly more sophisticated, so that by 1988, Heller was saying:

"The study of code-switching has moved away from typological or deterministic models relating form and function to each other and to context, and towards a dynamic model in which code-switching can be seen as a resource for indexing situationally-salient aspects of context in speakers' attempts to accomplish interactional goals. The study of code-switching then becomes a means of understanding how such verbal resources, through use, acquire conventional social, discourse or referential meaning."

The next section will be a discussion of a selection of models of such higher order determining factors.

3.2d) Models of Language Switching

Three models, or approaches, will be discussed here, that are representative of models that have been put forward in the literature. They have been selected for discussion as aspects of them contributed towards the development of the model that is discussed in chapters 7 and 9. The three models are:

situational and metaphorical switching,
switching for power and solidarity,
switching to define the social arena.

Situational and metaphorical switching

In Blom and Gumperz (1972)'s study of language switching between two varieties of Norwegian, switches were analysed into situational and metaphorical. Situational switching was defined by Blom and Gumperz as follows

"When within the same setting, participants' definition of the social event changes, the change may be signalled among others by linguistic cues. When researchers as outsiders, stepped up to a group of locals engaged in conversation, their arrival caused a significant alteration in the casual posture of the group. Hands were removed from pockets and looks changed. Remarks also elicited a code-switch marked simultaneously by a change in channel cues (e.g. sentence speed, rhythm, pauses etc.) and by a shift from R. (dialect) to B (standard grammar). Similarly, teachers report that while formal lectures - without interruptions - are delivered in B., speakers will shift to R. when they want to encourage free and open discussion among students. Each of these examples involve clear changes in the participants' definitions of each other's rights and obligations. We use the term situational switching to refer to this kind of language shift."

Not all switching is of this kind however, and Gumperz (1982) discusses a very different kind of switching - metaphorical switching - in the following way:

"Rather than claiming that speakers use language in response to a fixed, predetermined set of prescriptions, it seems more reasonable to assume that they build on their own and their audience's abstract understanding of situational norms, to communicate metaphoric information, about how they intend their words to be understood."

Blom and Gumperz give examples of four encounters in which switching takes place, to illustrate this distinction between situational and metaphorical:

- a) unknown researchers stepping up to a group of locals - change from dialect to standard - situational.
- b) teacher lecturing to students changing to teacher encouraging discussion among them- change from standard to dialect - situational.
- c) clerks in office talking about non-office and then office affairs - change from dialect to standard - metaphorical.
- d) local resident talking to clerk in an office and discussion changing from family affairs to business - change from dialect to standard - metaphorical.

The examples of situational switching would seem to be reasonably straightforward although Scotton (1988a) makes the very valid point that what is important is not the situation itself, but how it is defined and interpreted by the participants.

The examples of metaphorical switching are not very clear but seem to be rather similar to the examples of

rhetorical switching given in the taxonomy of switches in the previous section. The distinction between the two types is somewhat clarified by Scotton and Ury (1977) who make the important point that metaphorical switching depends for its effect on a departure from the language which is the norm, whereas situational switching involves conforming to it.

In later work Gumperz has moved away from this distinction, and offers the objectivisation/personalization distinction as a development. Here the difference is between speech which is personal and intimate, and that which is more distant and formal. Generally speaking, the personal is likely to be reflected in the minority language, and the more distant or objective in the majority language. Romaine (1989) points out that is very similar to the we/they distinction, with the minority language symbolising the in-group and the majority language the out-group.

This distinction is rather different from the situational/metaphorical starting off point, and is in fact quite similar to the power/solidarity distinction that has been used by other workers.

Switching for Power and Solidarity

One, or both, of the concepts of power and solidarity have been used to explain language switching in many studies. Hill and Hill (1979, 1980) in their study of Nahuatl/Spanish bilinguals consider that the language switches they observed can be explained by the twin concepts of power and solidarity. This distinction was first made in relation to language study by Brown and Gilman (1960) in

their work on pronominal usage. According to the Hills' analysis, the use of Spanish phrases and sentences in Nahuatl is an indication of the greater power of the Spanish language and the ambivalent status of Nahuatl as a language of authority. This type of language switching is seen in the majority of bilinguals in the area. There is also language switching from Spanish to Nahuatl and this use of Nahuatl is related to solidarity and is important on occasions such as drinking with compatriots, and for ritual insulting of non-Nahuatl speaking outsiders. Even people who use very little Nahuatl use it on this kind of occasion.

Men make switches related to power more frequently than women, in particular young men and better-off older men. This appears to be related to the greater status and power of these two groups. There is however much ambivalence about this type of switching and a lot of reassertion of the use of Nahuatl in an attempt to increase ethnic solidarity.

A similar analysis was made in Canada by Heller (1988), of students at a French language school who came from English or Italian speaking homes. Heller explains their switching as illustrative of a refusal to commit themselves to all the obligations of being French while still maintaining their right to be at the school. Language switching helped the students mediate the conflict and pressure they felt from the different parts of their social networks, and of maintaining access to both. This is an analysis which focuses particularly on the solidarity aspect of the distinction.

Auer (1988) uses the concept of power as his starting off

point in his study of Italian immigrant schoolchildren in Germany. Their tendency to switch from Italian to German rather than vice versa he sees as illustrative of the greater power and status of German in their community.

The concept of power adds considerably to an understanding of language switching between conversations, and inter-sententially. However it is difficult to believe that all language switches within sentences can be explained using only the categories of solidarity and power. The relevance of those will be great in some bilingual communities, but less so in others; however, it must be acknowledged that they are very relevant constructs indeed in the Welsh situation. Hill and Hill themselves suggest that their particular analysis may also hold true for Wales, although the data for testing it has not been collected. Nevertheless not all the language switches that have been discussed in this chapter, nor those that will be described in chapter 6, can be considered to involve changes in identity or power. These factors can only in part explain language switching. In particular, this type of approach can only predict that switching is likely, but it does not explain in more detail the circumstances in which switching is most likely to take place.

Switching to define the social arena

Scotton and Ury (1977) draw on the solidarity/ power dimension but attempt a more complete categorisation system than that offered above. They also discuss the metaphorical/situational distinction and make the point that

although it is useful in explaining when language switching occurs it does not have anything to say about why language switching takes place or what it means to the speaker. Essentially they are interested in looking at the issue from a more psychological point of view. To try and overcome this problem they put forward the idea of a "social arena". They define this as follows:

"The social arena is a construct used to correspond to a set of norms. Each social arena corresponds to a different set of norms. Each set of norms and therefore each social arena represents cognitions about what behaviour is expected for interactions, along with the limits for tolerable behaviour deviating from this expectation."

The three arenas that they present in their data are

- a) the identity arena. This is interaction between people who have a shared identity, for example the same family or the same ethnic group.
- b) the power arena. This involves interaction where there is a difference in power between participants.
- c) the transactional arena. This is defined negatively as interactions where neither power nor identity is salient.

These three arenas are clearly fairly similar to the categorisation system used by Hill and Hill.

In an example already described earlier in this chapter, a bus passenger switches from Swahili to English in order to remind the conductor that he has not received his change, Scotton and Ury describe this as a switch to redefine the social arena from a transactional one to a power arena.

In another example a young man asks a hotel clerk to

sponsor him in a marathon and during the course of a short conversation while making this request, the young man switches from Swahili to English, then to Luyia, then back again to Swahili and finishes off the conversation in Luyia.

This is seen as reflecting his uncertainty as to which social arena is appropriate for the interaction if he wishes to further his cause. The speaker is not sure if he is trying to persuade the hotel clerk to sponsor him through an appeal to a shared identity, or whether he is trying to exert authority over him and emphasising his greater power.

In later work (1988a, 1988b) Scotton adds the concept of 'markedness' to this model. Switching is contrary to usual (or unmarked) language behaviour, and this is important in how the listener interprets it. Scotton says:

"Making marked choices when unmarked choices exist rock the social boat. Marked choices are signals of the speaker's intent to change the relationship with the addressee or bystanders in terms of the balance of rights and obligations."

In the identity social arena language switching may be the unmarked choice. As a language symbolises identity, and speakers may have many identities, they may wish to signal these through language switching. So, for example, a speaker may switch between using a mother-tongue (tribal identity), and English (identity as an educated person).

In the power arena it is likely to be a marked choice, used by the speaker as part of a bid for power.

In most of Scotton's examples, including those given above, switching is relatively unusual and therefore, she claims, a marked choice. However there are situations where

a marked switch may be common, for example, to encode deference or to take account of a speaker's lack of ability in a particular language.

Compared with other categorisation systems discussed here this one is the only one that has a dynamic aspect.

There is an emphasis here on negotiation and on the participants' own perception of the encounter:

"It is claimed that choice is not so much a reflection of situation, as a negotiation of position, given the situation." (Scotton 1988a)

The concepts of social arena and markedness are useful, and can be transposed to other cultural and social contexts.

Unlike the solidarity/power categorisation there is an acknowledgement of the possibility of a large number of arenas, and the solidarity/power distinction will not be salient in all of them.

Scotton's model draws on Giles' communication accommodation theory in its emphasis on the importance of interlocutors' perceptions of the situation. However she also concerns herself with wider issues of the social and political context, making it less open to the criticisms made of Giles' work that it focuses only on social psychological aspects.

It is an approach that has been taken up (with some modifications) by McConvell (1988), and Gibbons (1987). McConvell, unlike Scotton, did not specify in advance what the social arenas were going to be, and in his study of aboriginal butchers in Australia found that there were four, each with its own linguistic code. The speakers switched

from one language to another a great deal, in order to keep their linguistic obligations to all fellow-workers, and their customers simultaneously.

Gibbons' Hong Kong study also draws on some of Scotton's ideas, and develops them into a model that emphasises the ways in which social relations and identities are continually being negotiated and changed. The different language codes that are associated with the different identities are crucially important in this process.

The studies of Scotton, McConvell and Gibbons seem to have in common that they take place in complex multilingual societies where there is much interaction between members of different language groups. It seems likely that this model is particularly appropriate when analysing societies of this kind.

Other approaches to switching

Hatch divides switching into two major categories. Based on the work of Oksaar (1976), she talks about external and internal switching. External switching includes switching for setting, interlocutor and topic, and internal switching includes the speaker's fluency, the ability to use a set of rhetorical devices, and the structures of the languages themselves.

This division (which is also discussed by Valdes-Fallis 1978) is useful as far as it goes, but obviously needs to be considerably elaborated. Hatch merely gives examples of reasons that fit into these two categories, but does not go any further in developing definitions.

The relationship between external and internal factors would also need to be further elaborated, for example how aspects of the situation (external) are understood (internal) by the speaker. It is obvious that Scotton's model discussed in the previous section has already gone some way down this road, and compared to it Hatch's division is crude and simplistic.

A rather different system is put forward by DiPietro (1977), who differentiates between conscious and unconscious switching. While there is some intuitive appeal to this distinction, it would be very hard to operate with it. Implied in it is the notion that all examples where switching is used as a rhetorical device involve deliberate language switching. This is very unlikely to be the case. The bilingual who language switches to deliver the punchline of a joke probably does not consciously decide to do so. It is nevertheless a skilled use of language.

The distinction between conscious and unconscious is also used by Baetens-Beardsmore when he attempts to offer a definition of language switching. For him language switching is conscious, whereas interference operates at an unconscious level. Again while this appears to make sense, it is very difficult to check it out empirically.

Gibbons too finds it a useful construct, dividing switches into those that a speaker makes deliberately; those that are not made consciously, but which are open to introspection; and those of which the speaker remains completely unaware.

The conscious/unconscious distinction is possibly

useful as part of a wider model, but by itself it is difficult to define, and therefore of limited value.

Most of the models, or approaches, that have been discussed here are acknowledged by their authors to be tentative and provisional. They are also generally attempting to explain their own data, which more often than not is drawn from a small number of respondents and is quite limited. It is therefore not surprising that the factors defined as relevant do not necessarily fit other data collected in different ways from very different speech communities. This is an important point to make as it seems very likely that there will be differences between speech communities, not only in their patterns of language switching, but also Appel and Muysken (1987) suggest, in their reasons for doing so. Gumperz (1982), suggests that language switching will be most common in certain kinds of communities:

"...switching is perhaps most frequently found in the informal speech of those members of cohesive minority groups in modern urbanising regions who speak the native tongue at home, while using the majority language at work, and when dealing with members of groups other than their own. The individuals concerned live in situations of rapid transition where traditional inter-group barriers are breaking down, and norms of interaction are changing."

Heller (1988) attempts to generalise from this, and says that switching is most likely to occur when the two languages have separate domains, but where individuals commonly cross from one to another.

This sounds as though switching is likely to be found

in most urban bilingual communities, but there are also factors militating against switching. Woolard (1988), for example, says that there is very little switching from Catalan to Castilian in Barcelona. She attributes this to the high prestige of the Catalans, and their fear of seeming disloyal to their language community.

There are also undoubtedly individual differences among members of the speech communities, relating to their attitudes and their abilities with the two languages. Poplak, Sankoff and Miller (1988) found that Puerto-Ricans in New York switched three or four times as much as French/Canadians in Hull, Ottawa. They believe that this was due to the more purist attitudes of the French/Canadians, but Romaine (1989) found that English/Panjabi speakers in Birmingham switched frequently despite having purist attitudes.

Another omission from these studies is any kind of developmental perspective.

Adolescents may well be candidates for frequent switching, as they are perhaps less likely to hold purist attitudes, and are more likely than older people to move in a wide range of domains. Dabine and Billiez (1986) found that Arabic/French speaking bilingual adolescents in France were, in some cases, switching in as many as forty to sixty percent of utterances produced. This seems very high indeed, but as few studies report frequencies of switching it is difficult to make comparisons with other studies.

As switching of this kind has frequently been characterised as a skill it is reasonable to suppose that it

is something that improves and develops as children get older but there is no information relevant to this point in studies discussed here. A few studies have however looked at this and will be considered in the next chapter.

3.3 SUMMARY AND CONCLUSIONS

The topic of this chapter has been intr@-sentential language switching and the explanations that have been offered for its occurrence. These explanations have been divided into two main categories: linguistic and psychological/sociological. Under the linguistic heading the concept of 'triggering' was considered. This term refers to language switches that occur as a result of being triggered by other words in the phrase or sentence, for example, loan words. Many of the studies that put forward linguistically based explanations have made the point that language switching is not random but follows clear linguistic rules. Specifying these linguistic rules, however, has proved to be far more difficult and there is little agreement on them. In any case they are likely to vary according to the language pair being studied. There are also individual differences, with some bilinguals switching so frequently that their language performance is best described as a language switching discourse mode.

No attempt was made in the language switching study to be described in chapter 6 to look for the linguistic rules underlying language switching. However, some of the concepts introduced in this section are relevant to it. Triggering proved to be a useful explanation for many of the examples that were studied. There were also examples in the sample of children who switched very frequently, who could be described as using a language switching discourse mode, as outlined by Poplak. Many of the studies on linguistic

constraints in language switching have emphasised the skill that is involved, and this is also a theme present in the descriptions and analyses of chapters 6 and 7.

The second half of the chapter examines explanations for language switching that draw on more social and psychological factors. It starts by looking at the reasons that have been offered to explain language switches. There is general agreement between studies about the taxonomy, but the list is long.

As well as listing reasons there have been several attempts at defining the more general factors that are responsible. The most developed of these attempts, or models, is probably that put forward by Scotton, who uses the ideas of social arena and markedness in an attempt to develop a model of language switching. The model of language switching put forward in chapter 7, and also discussed in chapters 8 and 9, draws on some of the ideas presented in this section.

There have been a large number of studies on language switching but it is still not possible to arrive at many conclusions. Many of the studies are largely descriptive, with explanations being offered retrospectively but with little attempt at prediction. It may well be that this is as much as can be expected. There are evidently very many possible situations in which bilinguals may switch languages. However it does not seem possible to predict with accuracy when in fact they will do so. Most communicative functions that are served by language switching can also be met in many other ways including those at the disposal of monolinguals. A bilingual may, for

example, switch for emphasis or to indicate solidarity with another person. These same goals can however be reached in other ways. It is possible to be emphatic by, for instance, repeating a qualifier or through tone of voice. Solidarity can be expressed through gesture or facial expression. It does not seem possible to predict when these things will be expressed through language switching and when in some other way.

It is likely too that there are differences between individuals and also between different speech communities. There may also well be differences between adults and children. It is to language switching in the latter that we turn in the next chapter.

BILINGUAL CHILDREN, LANGUAGE SWITCHING AND COGNITIVE DEVELOPMENT

4.1 INTRODUCTION

This first section of this chapter will examine material on language switching in bilingual children, carrying on the theme of chapters 2 and 3. The empirical study to be discussed in chapters 6 and 7 is of language switching in Welsh/English bilingual children, so this first section is of direct relevance to those chapters. The second section of this chapter deals with a different area - cognitive development in bilingual children, looking particularly at the question of whether bilingualism has any effect on the child's cognitive development. This question will also be addressed in chapter 8 with material which compares Welsh/English bilingual children, with English monolingual children.

The emphasis that is found in this material is much less related to the social context, and much more related to the bilingual child's individual psychology, than most of the material discussed in the previous two chapters. Whereas the discussion there generally focused on social factors outside the bilingual individual, the material here has the same individual and somewhat cognitive perspective as is found in studies of monolingual child language acquisition.

4.2 LANGUAGE SWITCHING IN BILINGUAL CHILDREN

In this section the discussion on language switching will be continued but with specific reference to children. It is difficult to discuss language switching in young children without referring to bilingual language acquisition more generally as it has generally been studied as part of this process. This differs from the studies on adults where language switching is usually considered as a feature of the speech of bilinguals in whom the acquisition of the two languages is generally complete. In this chapter I will describe and discuss briefly some studies on bilingual language acquisition, with particular reference to the way that children learn both to keep their languages separate and to switch between them.

This viewpoint will then be broadened out with a discussion of the way the attitudes of those around them can influence the way in which bilingual children view the languages they speak and the effects this can have on their language use.

4.2a) Bilingual Language Acquisition

There is by now a substantial number of studies of bilingual language acquisition, and with the growth in the number of studies in recent years a very clear characteristic is the enormous variety of ways in which children become bilingual. Several of the studies are not

just descriptions of children's bilingual language development but also, in part, a practical guide to parents with the aim of showing that they too can bring up their children to be bilinguals (Saunders (1983), Fantini (1985), Arnberg (1987), Harding and Riley (1986), de Jong (1986)). The children whose language is described tend to be 'success stories' who are not only fluently bilingual but also good academic achievers.

The studies are however severely limited in terms of the samples included. The typical example is of the child or children of professional, well-educated parents, with the study usually being carried out by the father or mother, themselves a psychologist or linguist. The children themselves appear to be of above average intelligence and in many cases are obviously quite gifted. The parents themselves are nearly always bilingual and in several cases multilingual; they are likely to have a very positive approach to bilingualism and see languages generally as interesting and important. Some of these points about the atypicality of these studies are made by Arnberg (1981).

She lists three ways in which children become bilingual. These are

- a) through living in a bilingual community
- b) through being brought up by parents who speak more than one language,
- and c) through attending a school which uses a language different from that of the community and the home.

In nearly all the studies mentioned above, children become bilingual through method b), probably not the

commonest way of achieving bilingualism.

Studies, also, nearly always refer to children who have become bilingual through acquiring their two languages simultaneously rather than sequentially, and the latter is probably just as common, if not a commoner route to bilingualism.

The main method that has been used in studies of bilingual acquisition has been that of diary studies. This typically involves transcriptions by linguist parents of utterances made by their children over a period of years in a variety of contexts but with the emphasis naturally on language in the home. A diary of this kind may be supplemented by some recordings (for example by Fantini, 1985). There are many advantages to this kind of methodological approach - a longitudinal study is possible as the parent-investigator can continue with the study for many years quite easily; the child is well-known to the investigator so there are no problems with shyness or atypical behaviour; new features of the child's speech are noticed early on, and so on. Overall there is no doubt that a parent does have the most complete knowledge of a child's linguistic repertoire, and when this is combined with knowledge of the relevant literature and a high level of linguistic expertise the study will be a very in-depth one of a particular child. However there are also some problems inherent to this particular approach. The obvious one is the very small number of subjects available, which makes it difficult to judge which aspects of the child's language development are quite idiosyncratic and which are fairly

general. For instance a certain amount of negativism towards bilingualism is reported by some investigators (Itoh and Hatch 1978), whereas others do not indicate this at all.

This may be related to differences in the children's personality (many children hate to be different from other children, some revel in it) or to selectivity in the data recorded (not all investigators would consider this to be of sufficient interest to make a note of it), or to the social circumstances in which the child is developing bilingualism.

Some aspects of bilingual language acquisition can be fruitfully studied through diary studies of a very small sample, for instance the developing ability to separate out the two languages, but increasingly, (Romaine 1989), studies on bilingual development are very concerned with pinpointing the factors that determine whether a child will become fluently bilingual or not. These factors are likely to be social, and may well be related to social class. For instance, Fantini had a Spanish speaking nanny to look after his bilingual Spanish/English son being brought up in an English speaking community. This makes it difficult to generalise from this sort of limited, biased sample.

Another problem relates to the selectivity of the material that is collected. When an outside investigator records a child's language on a specific day for a particular length of time each month many interesting utterances will be missed but at least the selection of the child's utterances analysed will be random. In a diary study this is unlikely to be the case. It may be that the investigator in many cases does give a representative view of the child's

language but the reader is perhaps having to take the selection of material somewhat on trust.

Yet another problem which is not often acknowledged is that the child's language development may itself be affected by being the object of study. A parent who is investigating a child's bilingualism may ask questions about language use that would not otherwise be asked and this may make the child more aware of the language he or she is using, or such a parent may simply spend more time talking to the child than would otherwise be the case with likely positive effects on the child's language development generally. For instance, Romaine (1989) comments that studies of bilingual children acquiring the two languages in a mix are not present in the literature, probably because this would be an unusual strategy for a linguist to adopt, but such experiences may be quite common in the bilingual population generally.

A final problem is that such diary studies are likely to see publication if the children do become bilingual rather than if this fails to happen (although there are some interesting exceptions, for example, Sondergaard 1981; Metraux, quoted in Arnberg, 1987) which again may make the picture seem somewhat rosier than is justified. At an anecdotal level I am aware of many examples of parents failing to bring up children bilingually, despite genuine attempts to do so. Arnberg suggests two possible reasons for the discrepancy between the rather negative experience of many people, and the generally positive results reported in much of the literature. One reason is that some of the

parents reported in the literature use unusual strategies, for instance, only allowing playmates with a particular language, or requesting a grandmother not to speak to a child in her native language. Such strategies may be effective in promoting bilingualism but are unlikely to appeal to most parents.

Diary studies certainly provide information about bilingual language acquisition that cannot be gained any other way but their lack of representativeness make it unclear how much they can be generalised to other commoner bilingual situations.

Other methods have been used in the study of bilingual language acquisition. For instance Arnberg (1981) and Swain (1972) both carried out studies on a small number of children but were not the children's parents. There is a benefit here, in that the parents are non-academics and the children are perhaps more typical of bilingual children as a whole but some of the other problems of small number studies remain. For instance, both these are also studies of simultaneous bilingualism occurring because of individual mobility and through parental choice, rather than of children living in bilingual communities.

These studies are therefore of limited relevance to the empirical findings of chapter 6 and 7. The study reported there deals with ordinary children who, in most cases, are being brought up in a bilingual community. They are acquiring their two languages sequentially, and do not have parents with any particular interest in language. A brief discussion of these studies has been included however, as

most of the knowledge that we have of the development of
bilingualism comes from such studies.

4.2b) Separation of Languages in Bilingual Children

Before a bilingual child can switch between the two languages, it is necessary for him or her to have learnt to separate the two languages. This is of particular concern when children acquire two languages simultaneously. It is also an important consideration in the study described in chapter 6, particularly when looking at the language of the youngest cohort (three and four year olds). It is important not to label examples as language switching if they are in fact illustrative of a child's inability to separate out the two languages. Knowing the general pattern by which children learn to separate out the two languages should make it possible to distinguish between the mixed code of a child who hasn't yet learnt to separate the two languages, and language switching in a child who has gone through this stage.

Most of the available evidence suggests that children acquiring two languages go through much the same processes as those acquiring one language. Mclaughlin (1978) says

"In short, it seems that the language acquisition process is the same in its basic features and in its developmental sequence for the bilingual child and the monolingual child. The bilingual child has the additional task of distinguishing the two language systems, but there is no evidence that this requires special language processing devices."

For instance, bilingual children produce their first words at approximately the same age as monolinguals (Doyle, Champagne and Segalowitz 1978) and these may be in one or

both languages.

This similarity between bilingual and monolingual acquisition may, however, be less true for children acquiring their two languages sequentially. Dodson (1985) considers that even when children acquire their second language at a very young age, there will be differences between the acquisition of their first and their second language.

The one particular problem that all bilingual children face, is that of separating out the two language systems. Vihman (1985) says:

"Whereas from a linguistic point of view the chief task of bilingual infants is sorting out the vocabularies and grammars, before they can make any real progress in acquiring either code, from a broader perspective the child must additionally be sensitive to the pragmatics of his bilingual situation, observing the language practice of his interlocutors and following them in his or her own behaviour."

There are basically two conflicting positions within the literature on how this is done. One position is that the child keeps the two systems independent from the very start, including having two different phonological systems. Bergman (1976) supports this view, putting forward the following hypothesis

"As it is being acquired, each language is able to develop independently of the other with the same pattern of acquisition as is found in monolingual children learning that language."

This is illustrated by the following description by Hoffman (1985) of the early language development of her

daughter Christina, who hears German from her mother and Spanish from her father.

"She is equally consistent in speaking to each of us in the right language, and she has been so from the very beginning. She may not have been conscious - indeed she can't have been at 18 months - but the fact is that even at this early age her responses were in the language she was spoken to. Nothing extraordinary here of course. But when she started a conversation she always began in the appropriate language, without a single exception, and she never mixed the two languages when speaking to each of us."

Christina may, however, be an exceptional case.

The second position which is suggested in most studies, is that children start off with a single system and gradually learn to differentiate into two. This is described by Volterra and Taeschner (1978), and Taeschner (1983) who believe that children go through three stages.

In the first stage, the child has one lexical system which includes words from both languages; this one system will be used indiscriminately with everybody. It is also suggested that children rarely have overlaps in their vocabulary; Volterra and Taeschner (1978) found very few overlaps in children's early vocabularies and when these were present they tended to be used with slightly different meanings. At this stage, while the bilingual's vocabulary in one language may be smaller than that of the comparable monolingual child, the total conceptual vocabulary will probably exceed that of the monolingual child (Taeschner 1983).

In the second stage there are two different lexical systems but only one syntactic system. During this stage,

when two lexical systems are being developed, there will be many mixtures but this is likely to be of quite short duration. Fantini (1985) reports this stage as lasting for about three to four months in his son's case.

In the final stage the child has two completely separate systems although there may be some interference from one to the other. If they associate each language with a particular person, children will stick to this rigidly. Volterra and Taeschner say

"The act of labelling a person with one of the two languages makes the choice of words and rules a kind of automatic process, thus reducing the effort she has to make."

At this stage Taeschner suggests that children may develop a tendency to use one language more than another, and it may be at this point that some children fail to develop their bilingualism any further, and move towards monolingualism in the language they hear most frequently.

The speed with which children go through these stages will vary but the final stage is normally reached well before age three. Vihman (1985) notes that her son reached this stage by about age two.

Individual children may however not always fit neatly into this framework, and the age by which a particular child reaches the third and final stage will be very varied. One factor that will speed this development is the feedback received from other speakers. When the child uses the inappropriate language with a monolingual their lack of understanding will ensure that the child does not repeat the same error. When the child mixes largely with other

bilinguals this may increase the time it takes the child to separate the two systems completely. Taeschner (1983) says that parents' corrections at this stage will help the child to realise that there are two labels for each referent.

Another relevant point is that it may not always be obvious from an examination of the language produced by the child whether two or only one system is being used. Vihman considers that her data supports the Volterra and Taeschner outline but Pye's (1986) reanalysis of it suggests that in fact Vihman's son has two systems from the very beginning. The problem arises because of the use of loan words by other bilingual speakers. If, for instance, all bilinguals in the child's environment use a particular English word when they talk Estonian (as in Vihman's example), as far as the child is concerned that word is part of his Estonian lexicon and should be analysed as such. This kind of problem is also found when analysing Welsh/English bilinguals where one will find many English words commonly used in Welsh by large numbers of bilinguals when speaking Welsh.

A factor which has been much discussed in relation to the process of separating the two languages is that of the strategy adopted by the parents. The term strategy suggests a conscious decision to follow certain rules and this has often been the case in some of the diary studies discussed above.

However in many other cases the strategy seems largely to emerge and is by no means followed consistently. Arnberg (1981), Vihman and Mclaughlin (1982), and Harding and Riley (1986) discuss the range of strategies available to parents.

The main ones discussed by Arnberg are

- 1) mixed strategy - both parents use both languages
- 2) one parent - one language strategy
- 3) one language first and then the second language
- 4) one language inside the home and another outside.

It is by no means clear that any particular strategy is more successful than others in helping children through the three stages or in ensuring that they eventually become bilingual. Some strategies may however be difficult to carry out particularly if they involve very unnatural behaviour on the part of the parents. In many of the studies reported parents have tried to avoid too much language switching feeling intuitively that this sort of input will be confusing to the child. There is no evidence however that this happens and Schmidt-Mackey (1977), and Harding and Riley (1986) report cases where a strategy of both parents using a language switching code successfully produces bilingual children who themselves frequently switch languages. Genesee (1989), however, believes that the theory of an initial mixed system which then becomes differentiated has not been proven. Information about parental strategy, he points out, has largely been obtained from parents' own reports of their language behaviour. If the parental models were studied directly, Genesee believes that few of them would be seen to really adhere to the one person/one language model. If this is true then it is the parents' models that are producing the mixed stage. It cannot be considered an essential part of every bilingual child's language development.

This survey of the literature on how bilingual children learn to keep their languages apart indicates that the main area of contention is between those who believe that the two systems are separate from the very beginning, and those who believe that they are initially mixed but generally become separated during the second or third year. For the purposes of this thesis the important question is whether children at three and a half (the youngest in the language switching study) could be expected to have separated out the two systems. The answer, based on the literature, is that in the vast majority of cases they will have done so. It is however worth bearing in mind that some of the examples of language switching found in the youngest children could be due to them not having yet separated out the two languages. This is discussed further in chapter 6.

4.2c) Language Switching in Bilingual Children

Because the main concern has been in proving that bilingual children are able to separate out their two languages, the studies of language switching in children have been relatively few. Those that have been carried out have frequently emphasised how little language switching there is in the language of bilingual children.

Lindholm and Padilla (1978) collected speech-samples from 18 Spanish/English bilingual Mexican American children between the ages of 2 and 6. These speech samples were collected in a situation which would seem likely to maximise the production of switches and mixes as the children were interacting simultaneously with two experimenters, one who (supposedly) spoke only Spanish and the other only English. However only 1.7% of the children's utterances included switching within a sentence, or mixes. Lindholm and Padilla's analysis of the switches and mixes produced lead them to the following conclusion

"The systematic lexical mixing and translations together with environmental communicative aspects of bilinguals lead us to conclude that the children are able, from an early age, to distinguish between their two language systems."

Garcia (1980) agrees finding fewer than 2% of utterances containing language switches in the language of two and three year old Spanish/English bilinguals interacting with their mothers. The mothers used considerably more, approximately 10%, but many of these were in utterances that were instructional in nature.

Garcia sums up her findings as follows:

"It seems clear that switched language utterances in both mother and children were not a result of linguistic interference. Children tended to keep the languages quite separate and to mix languages primarily at the lexical level. On the other hand, mothers seemed to use language switching as a clarification device or teaching aid."

Both Lindholm and Padilla, and Garcia seem to take the view that young bilingual children are able to separate out their languages and when they switch, do so purposefully.

Interestingly, both these studies, unlike the others cited so far in this chapter, used children from low socio-economic groups. It is thus very unlikely that these children have learned to separate their languages so well as a result of the very conscious control of input that is probably far more characteristic of highly educated parents.

They may however have learnt to minimise mixing and switching because of negative feedback from monolingual interlocutors such as childminders or nursery school teachers.

A similar level of switching was found by Boeschoten and Verhoeven (1987) in their study of Dutch/Turkish switching. In interviews with 69 six year olds, they found that 11 of the children did not switch at all, and in the others the percentage of utterances containing switches varied from two to five percent.

This low level of switching may however not be characteristic of children in all bilingual situations. As with adults, there are likely to be differences between different speech communities, and from individual to individual.

For instance, Ellul (1978) considers that in Malta there is a large amount of language switching between the two commonly used languages, Maltese and English. It is difficult to be certain whether this is in fact the case as Ellul's paper does not clearly distinguish between language switching and language mixing. From a small speech sample collected from children under the age of five, she finds that some two-thirds of utterances contain either mixes or switches. She claims that these switches happen completely at random, but her very negative attitude towards the whole phenomenon make this a dubious conclusion. It may well however be the case that there will be a great variation in the amount of switching in children's speech depending on the norms of their particular environment.

Families too may have different norms. Bergman (1976) notes that her daughter started producing inter-sentential language switches after spending time in a family, where unlike her own, these were commonly produced.

Huerta-Marcias (1981) studied a family which used a large amount of switching, and found that the members of this particular family were producing switches in approximately one third of their utterances.

This observation is similar to some of the data discussed in chapter 3 which suggests that there are differences in the amount of language switching both between individuals and between different social groups.

There may well be differences too caused by developmental factors. One possible outline of developmental stages is that offered by Vihman (1985). She

considered that her child first had a single system, but by age two had learnt to separate these out and generally confined his utterances to one language or another. However as he grew older he started to use language switching as part of his linguistic repertoire, but with other bilingual speakers only. With monolingual English speakers he limited himself to English. Vihmann sees this as 'a step forward in metalinguistic and pragmatic sophistication'. There is, therefore, according to this model, likely to be a stage when the child has learned to keep the two languages separate, but has not yet developed the ability to switch between them.

As with all aspects of language switching there is likely to be great variation in the actual ages at which a child reaches the stage of deliberate switching in this way.

There are fewer studies of children that give examples of different types of language switches, than there are of adults. However there are some studies that examine this, in children from a wide range of ages. Many of the same examples of language switching are found for children as for adults. These are summarised in Table 4.1, using the same general categories as were used for studies of adult switching in chapter 3.

TABLE 4.1

EXPLANATIONS FOR LANGUAGE SWITCHING IN CHILDREN, AND AUTHORS
CITING THEM

CONTENT 1) for quotation (Maclure 1981)
2) for topic (Oksaar 1976, Auer 1988, Zentella 1981)
3) for lexical need (Lindholm and Padilla 1978, Zentella,
Pedersen 1987)

INTERLOCUTOR 4) to exclude someone from a conversation
(Lindholm and Padilla)
5) to stress in-group membership (McClure, Boeschoten and
Verhoeven 1987)
6) a change in social role, e.g. to comfort a younger child,
to sound more authoritative (McClure, Zentella)
7) to gain attention (Oksaar, McClure, Boeschoten and
Verhoeven)
8) to check if someone knows a particular language (Lindholm
and Padilla)

STYLE 9) for humour (Lindholm and Padilla)
10) as a rhetorical device (Romaine 1989, McClure)
11) for emphasis (Oksaar, McClure, Boeschoten and Verhoeven)
12) to amplify or add to remarks (McClure, Boeschoten and
Verhoeven)
13) to make paranthetical remarks (Fantini 1985, McClure)

EMOTION 14) In situations of intimacy (Pedersen)
15) swearing (Zentella)

All these examples are similar to those found for
adults, and discussed in the previous chapter. There are,
overall, fewer categories than for the adult section. This
may be due to the smaller number of studies on which the
table is based, or because children do not produce the same
range of switches. However, all the overall categories -
content, interlocutor, style and emotion - are included.

Additional examples found here, but not in the adult

section, are number seven - switching for attention, and number eight - switching to check someone's language. Switching for attention is perhaps something that children are particularly likely to do in conversation with adults, and is reported by Oksaar in a child as young as two. The switch to check someone else's language probably occurs because of the particular situation in which the children were recorded, that is by interlocutors who pretended to know only one of the languages known to the children.

Some of the studies on children's language switches have made suggestions about the order in which switches appear in the child's development. For instance Maclure (1981) says that some types of switches were found in very young children; for example, a three year old switching to clarify an ambiguity. Another early occurring switch was to get attention (similar to Oksaar's two year old son). By about age six there were additional switches, for instance, when there was some kind of mode change, such as, from narration to commentary, or soliloquy to questioning. At age eight some examples of switching for emphasis occurred for the first time. Other late occurring switches include those relating to ethnic group membership.

Other results tend to support this sequence. Genishi (1981) reports that young children respond mainly to their interlocutor's linguistic competence, using the rule 'speak the language the listener knows best' to determine language switching rather than any knowledge they might have about the interlocutor's ethnic group. Maclure's general point, namely that type of switching is associated with age, is

supported by others. Auer (1979), for instance, divided children's language switches into those that related to the child's lack of linguistic competence (switching to the preferred language, or for unknown words or phrases), and functional switches (for instance, topic, mode of interaction). Up to age 11 the former predominate, while after this age most switches are of the functional type.

Genesee (1984) studying French-Canadian and English-Canadian children's responses to language switching found that eleven year olds were 'aware of situational, interpersonal and group factors' involved in language switching. The main difference between pre-adolescent and adolescent children is that the adolescents evaluate the speaker's personal qualities whereas the younger children are more concerned with the social rules of the situation. An understanding of these social rules however seems to have taken place fairly completely by the age of 11, and quite possibly several years earlier.

This kind of development is also found in the language choices made by children. Fantini (1985) notes that the language selected by his children was initially always related to the interlocutor's stronger language - if the interlocutor attempted to use a weaker language in order to gain some practice or to please the child, they were reluctant to use this language with him. Later on, language choice became less rigid and aspects of the situation were also used by the child in deciding which language to use.

Most workers in this field believe that language switching requires a high level of linguistic competence,

and also a degree of social competence, such as being able to make judgements about speakers' intentions, or their ethnic background. Children may produce fewer switches than adults because they lack skills in either or both of these areas. Young children are unlikely to be balanced bilinguals (Dodson 1985), so their linguistic skills may not be sufficient for language switching. However, there may be exceptions to this such as Oksaar's subject who produced many switches at age two. Children may also lack some of the social abilities necessary for language switching (Genishi 1981), but recent work (Dunn 1989) on children as young as one and two years old seems to show that they have more awareness of other people's intentions and emotions than has previously been believed.

This general outline implies that as children get older, language switching should increase in range, and some studies (Auer, Genishi) have found this. However, others (Pedersen, Zentella 1985) have found that language switching decreases as children get older. This may happen in speech communities where people commonly disapprove of language switching, with children becoming more aware of this as they get older.

Most of the studies on developmental aspects of language switching are based on a small amount of speech by a few children (or even one), in one speech community. Such discrepancies as are reported above, are perhaps to be expected. Overall, it seems that some language switching is found in young bilinguals, but some types of switches that demand most linguistic or social skills may emerge later.

However, there will be variants to this pattern depending on the speech community, and individual children's experiences, abilities and attitudes.

Chapter 6 examines the range of language switches found in Welsh/English bilingual children between the ages of three and six. Chapter 7 contains an analysis of developmental changes in the same data.

4.2d) Attitudes towards Language

Much of the emphasis in a developmental approach to language switching is on the skill that is necessary for switching. Of equal importance is a consideration of attitudes, both towards the bilingual's two languages generally, and also towards language switching.

Such attitudes are a crucial factor in determining whether a child will actually use a language once acquired and whether that language will be retained or eventually lost, a not uncommon phenomenon in bilingual children.

The attitudes of parents are probably particularly crucial. It is likely that they will be largely positive towards the language or languages they are using with their children. Harding and Riley (1986) believe that when children are young it is the parents' attitudes towards the languages which matter, not their status in the outside community.

"The parents' attitude towards their own language is perhaps more important than the objective situation of that language in the foreign society. This is especially true of women isolated in some way, either because they live in rural communities or in high-rise flats. If you live in an

out-of-the-way village, it really doesn't matter very much whether, objectively, the language you speak has 'high status' or not. The signs that yours is a high status language, for example, it is a subject offered in secondary schools, heads of state speak it, there is a television course for adult beginners and so on, can all seem pretty remote to a mother whose main company is one or more under fives: and it is precisely in this period that children are learning to talk. During these years it is the parents' views as to what is important and valuable which count, not those of the outside society. This can mean that parents drop a language which is valued by their own society, but it can also mean deliberately introducing a second language into the home simply because the parents have such high regard for it."

While this is undoubtedly true and there are many examples of parents bringing up children to speak a language that has little or no status outside the home, in general the values of the community will probably affect the parents' own attitudes quite strongly. This may mean that for many bilingual parents there will be some ambivalence about the languages they speak. Redlinger (1978) notes that the Spanish/English bilingual mothers she interviewed thought that their children should be bilingual but also reported having had bad experiences themselves at times related to their use of Spanish. This sort of ambivalence may be picked up by children and increasingly so as they get older.

As well as attitudes themselves being complex and multi-dimensional it cannot be assumed that they are easily elicited and discussed. In a study on Welsh/English bilingual mothers' attitudes, Harrison, Bellin and Piette (1981) found that mothers stated attitudes towards Welsh did

not correlate with their use of Welsh with their children, as virtually all mothers in the sample claimed to have very positive attitudes, including many who had never attempted to speak the language with their children. Parental attitudes towards language are therefore important as well as actual language use but it is not possible to predict children's own language use from them.

Another potentially important aspect of a mother's attitude are her general feelings about her children and their language use. Dopke (1986) produces evidence to support the claim that a mother who is more tolerant and child-centred, in other words more responsive to her child's contribution to conversation, will have children who will model their language on her language rather than on some other model in the environment. This is not important if a child hears a language from a range of sources but if the mother is the only source of a particular language it is very important that the child is prepared to model his or her language on the mother's. A somewhat similar point is made by Harrison, Bellin and Piette (1981) who found that mothers who reported themselves as tolerant of childish or incorrect talk were more likely to rear bilingual children successfully than were mothers who reported themselves as actively discouraging what they considered to be immature or 'babyish' language.

As children get older their own attitudes become increasingly important, and these may of course be different from those of their parents. Harding and Riley provide case-studies of older children rejecting the parental

decision to make the home bilingual and instead sticking resolutely to the language of the wider community rather than accommodating to the language choice of the parents. If the minority language is associated by adolescent children with their parents' worlds and values, this may in itself seem like an adequate reason for refusing to use it. Younger children too may develop a negative attitude towards the minority language. Hatch (1978) describes several studies of children refusing to speak a language sometimes as a result of unpleasant experiences with the speakers of that language.

Hamers and Blanc (1982) consider that the value placed by children on the language they speak is one of two vital factors in determining whether a child will become bilingual. The two factors they emphasize are firstly, the functions that are served for the child by the two languages, and secondly, the extent to which the languages are 'valorised' or valued by the child. When one of the languages serves only a few functions, for example it is not used at all for educational purposes, then the child is less likely to use it. If, however, the language, despite having relatively few functions, is nevertheless highly valorised, this effect will not take place. But if the language has low valorisation as well as few functions then the child will probably not become a fully functional bilingual.

This discussion of attitude can be considered to have both an individual and a group dimension. There will obviously be many individual differences in attitudes. One child may be quite happy with two languages and feel proud

of having an achievement not shared by friends. Another child acquiring two languages in exactly the same circumstances may hate to be seen as different and will be embarrassed when people remark on her ability. Harding and Riley (1986) and de Jong (1986) mention cases where considerable differences are found even within a single family. This individual difference may go beyond attitude, extending to the child's ability to learn one of the languages, particularly if it is being acquired after early infancy. Wong-Fillmore (1976) found considerable differences between children learning a second language in their readiness to start using it, some being quite happy to plunge in regardless of errors, while others were very wary of using it until they were certain how to.

As well as individual differences, there will be group differences too. If whole groups of bilinguals consider one of their languages to be of little use then they generally lose it very quickly (for example, some immigrant communities). In most bilingual countries the prevailing attitude towards the minority language is likely to be ambivalent at best and hostile at worst. These attitudes will form part of the value system of most members of the community and will be transmitted to children together with the language. This is a very complex area and cannot be discussed at length here. There is relevant material in Edwards (1985). The important point is that children's attitudes to language are not formed within a vacuum but come initially from the family and later through outside contacts, and these attitudes themselves arise from a

particular social and political context. Families too are not separate from the communities in which they live and will accept or reject the values around them. However, the individual child's relationship to prevailing attitudes is complex. There are plenty of examples of children (and adults) acquiring languages against the odds and also of children failing to acquire them in more conducive situations.

The discussion here has moved away somewhat from the topic of language switching, but attitudes towards language are part of the framework of attitudes to language switching. When adult models generally disapprove of language switching and do not themselves use it, it seems likely that children follow suit. However it is by no means uncommon for people to, on the one hand, express disapproval of language switching, but on the other hand use it quite extensively. Romaine (1989) used a matched guise technique to study attitudes to switching and found that extracts which contained a large amount of switching between Punjabi and English were thought to have been produced by a person who did not express himself well. Despite this negative evaluation language switching was quite common in the speech community. In this sort of situation it seems likely that children will do as is done rather than as is said.

It is easy in a discussion on language switching to limit consideration to variables of the speaker, the interlocutor and the topic. For a fuller picture it is also important to consider wider issues of attitudes and values in the speech community, as has been done here. This area

of influence on language switching will be incorporated in the model that is introduced in chapter 7 and discussed further in chapter 9.

4.3 BILINGUAL CHILDREN AND COGNITIVE DEVELOPMENT

Chapter 8 of this thesis will outline and discuss findings related to the concept development of bilingual children. It is therefore appropriate at this point to consider some of the studies that have examined the relationship between bilingualism and concept, or cognitive, development. First, I will discuss the relationship between bilingualism and intelligence generally, and then go on to look at literature relating to specific types of cognitive abilities.

4.3a) Bilingualism and Intelligence

The relationship between bilingualism and intellectual development is probably one of the issues relating to bilingual development that concerns parents and teachers most. Baetens-Beardsmore (1982) says

"For many, particularly parents, the major worry connected with becoming bilingual is its effect on personality development and intellectual capacities."

The tone of this quotation which considers bilingualism in terms of 'a major worry' is an accurate one in as much as it reflects early work on bilingual children's intellectual attainment. Much of this early work addressed itself to the relationship between bilingualism and intelligence, the latter being measured by IQ tests. Arsenian (1937), for instance, summarised 32 American studies and noted that 60% of the studies reported evidence that bilingualism was an intellectual handicap; 30% reported that there was some

handicap, but only a slight one, and 10% reported no ill-effects on intelligence. At a later date Jensen (1962) reviewing more than two hundred studies on childhood bilingualism, summarises the findings on intellectual development as follows:

"It is said that the bilingual child will tend to learn only by imitation and rote, that he will frequently suffer mental fatigue, and that his originality of thought will be impaired. He will be handicapped on intelligence tests, especially on those demanding language facility."

Typical of these findings were those produced in Wales by Saer (1924) who found that bilingual Welsh children in rural areas performed worse on I.Q tests than monolingual English children.

This general trend was reversed by the well-known water-shed study of Peal and Lambert (1962) who found that bilinguals showed a superior performance on both verbal and non-verbal IQs. The authors say

"It is not possible to state from the present study whether the more intelligent child became bilingual or whether bilingualism aided his intellectual development, but there is no question about the fact that he is superior intellectually."

This was not an isolated finding: for instance a large follow-up study by Anisfield and Lambert (1964) found the same bilingual superiority.

However this finding has also been questioned. McNab (1979) criticised the research design and sample selection of many of the studies that found a bilingual superiority, and studies by Cummins (1977) and Barik and Swainn (1976)

found no overall difference in IQ between bilingual (that is, attending French immersion classes) and monolingual children.

This third position is perhaps the most convincing for the following reasons.

Many of the studies on bilingualism and intelligence are notorious for not controlling the relevant variables. Bilinguals and monolinguals, for instance, are not likely to be distributed evenly across all social classes in any community, but this factor has not always been controlled for. Indeed this may be a factor that cannot always be controlled. Diaz (1985) points out

"In the real world, whether one ends up being bilingual or monolingual is determined by sociolinguistic facts that are, as would be true of most sociolinguistic facts, related to a wide range of social variables."

It may just not be feasible to find two groups of children that are similar on all potential relevant dimensions except for the bilingual/monolingual one.

A factor related to this problem is that the items in IQ tests may well be more appropriate or more relevant for some groups of children than for others from different cultural backgrounds; this again has not always been considered. More recent studies have attempted to control for these factors but other less obvious difficulties may still be present. It is sometimes the case, for instance, that children from some bilingual communities are not expected to reach the same standards of attainment as their monolingual counterparts and this may well affect their

performance on IQ tests. In some immigrant groups this is likely to be in the direction of an inferior performance being expected from bilinguals, but in other situations, for example children becoming bilingual through attending immersion classes, the expectation of parents and teachers might be in the direction of superior performance from bilinguals.

It is clearly important to take account of the fact that the testing of bilinguals has often been done in highly charged political situations. This has been well documented by Hakuta (1986). He points out that results showing a bilingual inferiority in the early years of the twentieth century in the United States were used to resist the flow of new immigrants into the country.

Conversely in the 1960s in Canada it was becoming clear that bilingualism was the way of the future and that those seeking political power needed to support it. This would be likely to explain in part the positive views on the effect of bilingualism on intelligence being expressed at this time.

It was not until some time later that more negative results from studies of immersion classes became publicised.

For instance, Trites (1984) studied the not inconsiderable numbers of children who had dropped out of French immersion classes because of academic difficulties and believes that there are some children on whom biligualism does not confer a cognitive advantage. It is clear that these children are likely to be omitted from studies on the cognitive attainments of children in immersion classes but their

omission clearly leads to a bias in the sample.

A second problem relates to the nature of intelligence tests themselves. They have been much criticised, particularly in recent years, as a method of measuring ability (Harn 1979). The items in IQ tests may well be more appropriate or more relevant for some groups of children than for others from different cultural backgrounds. The major problem of their possible bias in favour of, or against certain social or ethnic groups is very likely to affect any comparisons being made between bilinguals and monolinguals. It can be argued that when these IQ differences have been found, that they reveal more about the nature of the test or the design of the research than they do about the abilities of the children themselves.

There are also difficulties with measuring bilingualism. The earlier work which found that bilingualism had a negative effect, generally assumed that any child with some knowledge of the second language could be counted as bilingual. Many of the children included in these studies, for example, Saer's rural Welsh children in the 1920s, were probably far from being proficient in both languages. However, the more recent studies that have shown bilingualism as having a positive effect chose their bilinguals according to very strict criteria. McNab (1979) and Grosjean (1982) suggest that in Peal and Lambert's study, for example, the criterion set was that the children had to be balanced bilinguals. As Dodson (1985) points out, very few young children achieve equal facility in both languages. The children who knew enough of both languages

to satisfy the stringent criteria set were probably more able than the average and this would be a more likely explanation for the results obtained than their bilingualism.

Conversely, in summarising studies that did not control for linguistic proficiency De Avila and Duncan (1981) say

"A review of ... studies seems to suggest that the failure to operationalise and control for linguistic proficiency has resulted in the widespread belief that bilingual children must inevitably face a linguistic handicap with the ultimate effect of lowering both intellectual and academic performance."

Skuttnab-Kangas (1984) lists several studies that found bilingual children to be cognitively inferior to monolinguals and considers that most of them could be criticised for not adequately controlling for linguistic ability.

A persuasive explanation for these different findings has been put forward by Lambert (1975) and Cummins (1976, 1984). Lambert points out that most of the studies reporting an inferior performance from bilinguals were carried out on immigrant or minority language children whose home language was of low prestige compared to the second language they were forced to acquire at school. He terms this subtractive bilingualism. However most of the studies reporting positive effects of bilingualism have been carried out on anglophone children attending French immersion classes in Canada. Here the bilingualism is being acquired voluntarily and there is no danger that the L2 will supplant the prestigious L1 (English). This is termed additive bilingualism. It is assumed that subtractive bilinguals

will not become very proficient in either of their two languages whereas additive bilinguals will be highly proficient in both their languages. This distinction is complemented by Cummins 'threshold hypothesis'.

This proposes a lower and a higher threshold level of bilingual proficiency and suggests a relationship between these and cognitive attainment. For instance, if a bilingual child has a very low level of proficiency in both languages this is likely to hinder cognitive development. Such a child is described as being below a lower threshold. However a child with a high degree of proficiency in both languages is above the higher threshold and this will lead to accelerated cognitive growth.

According to this hypothesis, the studies which showed negative effects for bilingualism can be assumed to have been carried out on subtractive bilinguals who had not yet reached the lower threshold level mentioned by Cummins, whereas the studies which showed a positive effect were carried out on children who had gone beyond the higher level. Those studies which showed no difference were carried out either on a group of children who were between these two levels or, perhaps, on a mixed group of children containing both those below the lower threshold and those above the higher one. Within the whole group the performance of one subset would cancel out that of the other subset. A large number of studies (discussed in Cummins 1984) have been carried out which supports this position and it is a plausible explanation of the diversity of findings.

There have, however, also been some negative findings.

Diaz (1985) for instance, found that bilingualism accelerated cognitive development only at very low levels of language proficiency - just the opposite to what the threshold hypothesis would predict. There are also problems with Lambert's dichotomy. While many bilinguals do fit quite neatly into one or other of the two categories of subtractive and additive bilingualism it does not seem apt for other bilingual situations. In the Welsh situation, for example, English L1 children attending Welsh-medium schools are probably additive bilinguals whose parents have decided that they want them to acquire Welsh as an L2. There is no possibility of them losing English, the main language of the community. But what about Welsh L1 children attending bilingual schools? They are in some ways similar to Lambert's subtractive bilingual as the L2 that they are acquiring in part at school, and certainly in the community at large, is the high prestige language, English. But unlike the immigrant populations discussed by Lambert there is probably considerable official support for Welsh within the school and to an extent outside it, especially in counties such as Gwynedd. This would make it difficult to categorise them as subtractive bilinguals. As with many categorisations in this complex field the data does not always fit neatly.

Hamers (1981) considers that Cummins' hypothesis leaves a significant question unanswered. She says

"Although Cummins' threshold theory is of interest because it does give an explanation to apparently contradictory evidence, it does not explain why some children reach easily the upper threshold and why some others never

attain the lower threshold. A theory on the development of bilinguality must not only describe the bilingual's behaviour but also explain how the bilingual reaches or fails to reach a competent state of bilinguality"

One likely reason as McLaughlin (1984) points out is that there is a relationship between a child's ability and where he is likely to be placed on Cummins' thresholds. Those who are above the upper thresholds in both languages are perhaps found there because they are particularly able children. If this is so, and it seems a very plausible explanation, then this creates serious problems for Cummins' hypothesis. What needs to be determined is the direction of causality, that is, does bilingualism lead to greater intelligence, or are more intelligent children more likely to become bilingual. A longitudinal study by Hakuta and Diaz (1985) using a non-verbal measure of intelligence (Ravens Progressive Matrices) showed that in their particular study the direction of causality was from bilingualism to cognition, but of course it cannot be assumed that this is the case in all studies.

A point that has not been made in many of the studies on bilingualism and intelligence is that there are few theoretical grounds for assuming much difference in overall intelligence between monolingual and bilingual children whatever the difference in attainment. According to some theories of language acquisition, cognition is a prerequisite for language development rather than vice versa (Bates 1976, Macnamara 1972). It follows from this that bilingualism, an aspect of language, is unlikely to be a major factor in determining intelligence, an aspect of

cognition, at least at the early stages. For older children the picture may be rather different.

An interesting question that remains however, is whether there is a relationship between bilingualism and certain areas of cognitive development. I will turn to this in the next section.

4.3b) Bilingualism and Metalinguistic Awareness

The studies that have been carried out on specific areas of cognitive development have been divided here into two main categories; metalinguistic awareness, and abstract thought. A range of terms are used in the literature, but most of the studies seem to refer either to abilities that relate fairly specifically to language (metalinguistic awareness) or to a wider range of cognitive abilities (abstract thought).

Leopold (1939-1949) noticed that his daughter Hildegard was able to separate the meaning of a word from its phonetic realisation at a very early age. She did not, for example, when being read to, cling to the original wording of a story as many monolingual children do and had no difficulty in accepting names in a second language for objects already named in the first. This observation of Leopold's was examined more systematically in experiments carried out by Ianco-Worrall (1972). She administered a range of tests to bilingual and monolingual Afrikaans and English speaking children of different ages and came to the conclusion that bilingual children performed consistently better than monolingual children on tasks that required them to see that

the connection between a word and what it signifies is arbitrary.

Ben-Zeev (1977) carried out similar studies with Hebrew-English and Spanish-English bilinguals with results similar to Ianco-Worrall's in her Hebrew-English group of subjects, but found no significant difference between the bilinguals and the monolinguals in the Spanish-English group.

These results have been interpreted as supporting Leopold's position that the bilingual child has an early appreciation of the fact that a sound representation is not the same as the idea or object it represents.

Bialystok (1986, 1987) carried these ideas somewhat further with a range of different metalinguistic tests. She found that bilinguals were superior at separating out individual words in sentences, and at attending to the meaning rather than the form of words. She also found the same superiority in bilinguals as was found by Ianco-Worrall and Ben-Zeev in the children's ability to reassign names to different objects. Bialystok suggests that bilinguals are not necessarily better than monolinguals in tasks involving analysis of language, but do show a superiority in tasks involving their control of linguistic processing.

Ben-Zeev's study also shows a bilingual superiority in certain aspects of language control. For example, bilinguals excelled on the following item:

"This is named plane, right? (Experimenter holds up toy aeroplane)
In this game its name is turtle...
Can the turtle fly? (Correct answer: Yes)
How does the turtle fly? (Correct answer:

with its wings.)

Bain and Yu (1980) too, found in their study of much younger children that bilinguals were better than monolinguals at voluntarily controlling their cognitive processes through language, and that this advantage increased with age. Similar findings were obtained by Edwards and Christophersen (1988). These results, taken as a whole, do suggest some real metalinguistic advantages for bilingual children. Although the tasks carried out in these studies are, in themselves, rather artificial Bialystok suggests that the abilities she tested are an integral part of using language for literacy, as for instance, in tasks that involved attending to selective units, such as words. Some of these studies show clear age-trends with monolinguals tending to catch up some years later.

These particular abilities, despite their importance, are nevertheless fairly limited in scope. Those looking at the relationship between bilingualism and abstract thought have looked for evidence of bilingual superiority in a wider area.

4.3c) Bilingualism and Abstract Thought

Lambert (1980) summarises studies in this area by saying

"There is, then, an impressive array of evidence accumulating that argues plainly against the common sense notion that becoming bilingual, that is, having two strings to one's bow or two linguistic systems within one's brain, naturally divides a person's cognitive resources and reduces his efficiency of thought. Instead, one can now put forth a

very persuasive argument that there is a definite cognitive advantage for bilingual over monolingual children in the domain of cognitive flexibility.

Much of the work in this area has been carried out using Piagetian tasks but the evidence is patchy. Arnberg (1981) summarising studies on conservation and classification tasks, considers the results inconclusive - some studies (for example, Liedtke and Nelson 1968) show bilingual superiority in conservation tests whereas in Tenezakis' study (1975), there are no significant differences. De Avila and Duncan (1981), using Piagetian tasks, also found no significant differences. They criticised studies that had found a bilingual advantage for poor controls. It is probably worth noting here that conservation tests have been much criticised in recent years. This will be discussed more fully in chapter 8.

Bain (1976), using rather different tasks carried out a study where children had to work out underlying rules from sets of examples. In this test of logical ability, bilingual subjects' performances were quicker than those of monolingual subjects, but the difference was only significant at the younger age level. Kessler and Quinn (1987) found that bilinguals outperformed monolinguals at tests of scientific and linguistic creativity.

There does seem to be some evidence that bilingual children are more skilled at some cognitive tasks than monolinguals, at least when they are young. But it is not clear which aspect or aspects of bilingualism are responsible for this difference. Arnberg (1981) divides the

hypotheses that have been put forward into non-linguistic and linguistic ones. The non-linguistic ones include the bilingual's greater social interaction, cultural enrichment and flexibility resulting from language switching.

Linguistic explanations include the bilingual's ability to focus on the essential meaning of an object rather than on the label which identifies it, and also an ability to understand the non-physical nature of words (for instance, that the word 'dog' doesn't bark.) Additional linguistic explanations have been put forward by Kessler and Quinn, and Landry (1974).

Kessler and Quinn believe that bilinguals have to generate different language hypotheses and that this helps them to observe detail and, thus, their creative thinking more generally. Landry (1974) suggests that bilinguals have to overcome the negative transfer of their first language in learning the second and this gives them an adaptability that can be used cognitively in many other ways. This should give them an advantage in a large range of tasks which require the child to abstract the essential components of a situation where they may be misled by superficial appearances.

All the nonlinguistic explanations are plausible in some cases but none are likely to apply to all bilinguals. While some bilinguals, for instance, may be culturally enriched because of their bilingualism there must be many monolingual individuals who are culturally richer than many bilinguals. The same point can be made about social interaction. The linguistic reasons suggested are more

plausible but it must be remembered that monolingual children too are exposed to linguistic change. Learning two labels for one object is not just a bilingual's experience. A monolingual child learns very quickly that the household pet may be called 'dog' or 'Rover', and that 'bucket' and 'pail' mean much the same thing. The bilingual superiority is more likely to be related to the more formal aspects of language, as suggested by the hypotheses of Kessler and Quinn, and Landry.

4.4 SUMMARY AND CONCLUSION

This chapter started off by examining studies of bilingual language acquisition. Most of these have been diary studies of one or two children acquiring two languages, simultaneously, within the family setting. There are problems with the atypicality of the children studied and also with the method used. Although they provide information about bilingual language acquisition that cannot be gained any other way, their lack of representativeness makes it unclear how much they can be generalised to other, commoner bilingual situations.

One area of interest and concern in the study of bilingual language acquisition is how the young child learns to separate out the two languages and to use them appropriately. There is some disagreement in the literature about this process, but the most likely model is that of Volterra and Taeschner (1978) who suggest that children move from a single system to a differentiated one.

Not a great deal is known about language switching in young children. Some claim that there is very little evidence of it at all in the utterances of young children, but others have produced examples of language switching in quite young children. Nor is there much known about how it develops as the child gets older but it seems likely that the use of language switching increases with age and that the range of uses to which it is put will increase too.

There is considerable variation in children's success

in becoming bilingual and it is considered that attitudes towards the languages are a particularly crucial factor. With young children, the important attitudes will be those of the parents, but as children get older their own attitudes will lead them to accept or reject their parents' choice of language for them. However these attitudes are not formed in isolation but are related to the values held by the wider community towards the particular languages spoken and to bilingualism more generally. Many children and adults become and remain bilingual without the support of the community in which they live but it is probably much more difficult to do so in these cases. Such attitudes will also affect children's use of language switching.

The final section of this chapter analysed some of the work that has been carried out on the relationship between bilingualism and cognitive development, or intelligence. Much of this work has been done using IQ tests and results have been very varied, with earlier work showing bilingualism to be a disadvantage, while more recent work has suggested either that bilingualism has a positive effect on intelligence or that it has no discernible effect. In the present state of knowledge the last of these is likely to be the safest conclusion. Cummins' threshold hypothesis is probably the most useful way forward in trying to come to terms with the diverse results that have been found although there are problems in applying it to all bilingual situations.

Some work has been carried out too on the relationship between bilingualism and particular aspects of cognitive

development, such as metalinguistic development and abstract thought. Here there does seem to be some evidence that bilingualism has positive effects particularly in metalinguistic development although it is not clear what aspect of a bilingual's experience is responsible.

Much of the work on both the language and the cognitive development of bilingual children, has had a cognitive and educational focus. An approach that more clearly incorporates the wider social factors and the specific linguistic experience may be helpful in explaining some of the contradictory findings that beset this field of enquiry.

This will be attempted in chapters 6 and 7, which discusses the language switching study, and in chapter 8 which discusses the concept development study.

CHAPTER 5

LANGUAGE SWITCHING AND COGNITIVE DEVELOPMENT IN WELSH/ENGLISH BILINGUAL CHILDREN - BACKGROUND AND CHARACTERISTICS OF THE CHILDREN

5.1 INTRODUCTION

This chapter describes some of the characteristics of the children involved in both the language switching and the cognitive development studies, that will be discussed in chapters 6, 7 and 8.

Both sets of data were collected as part of a larger study on "Concept and Language Development in Children aged 3-7" carried out from 1974-1977 at the Department of Education, University College of Wales, Aberystwyth. The main aim of this larger study was to examine the linguistic ability and concept development of both English preferred language and Welsh preferred language children in a range of different types of schools.

The sample for this larger study consisted of two cohorts of children, who in the first year of study were aged three years and five years respectively. There were approximately 100 children in the younger cohort, and approximately 196 in the older cohort (exact numbers fluctuated slightly from year to year). Each child was recorded and given a series of concept tests annually during the three years of study, and some background information on

them and their families was also obtained.

This thesis includes material collected from some of the children during the first two years for the language switching study, and data from the older cohort (age 5-7) only, for the concept development study.

The aims of this thesis differ from the project from which it was drawn in several ways:

- a) there is no examination of the children's linguistic ability, one of the aims of the original project. Rather, the emphasis is on language switching - not a concern of the project.
- b) there is no particular focus on the different school types; these are of incidental interest only.
- c) a model is developed for understanding the experience of bilingual children. This is introduced in chapter 7. This was not a feature of the original project.
- d) a wide survey of the literature has been undertaken in this thesis; again, not a feature of the original project.

The point has been made in previous chapters that to study bilingual children in isolation from the social context in which they live, is to ignore much essential information. The general context in which children acquire and use their languages will be integral to the analyses taken in later chapters. Accordingly, before going on to discuss the characteristics of the children and these two studies in more detail, I will briefly describe the bilingual situation in Wales with particular reference to aspects that may have been significant for the young children in the project.

5.2 THE LANGUAGE SITUATION IN WALES

5.2a) Numbers and distribution of Welsh speakers

Over the last 80 years the percentage of Welsh speakers has declined rapidly, from 50% in 1901 to 19% in 1981 (Baker 1985). In terms of numbers of speakers the decline has been from 929,824 in 1901 to 508,207 in 1981. The percentage of monolingual Welsh speakers has also declined from 15% in 1901 to less than 1% in 1981.

The Welsh speaking areas are predominantly in the sparsely-populated North and West of the country. Gwynedd is the only county which has a majority of Welsh speakers (61%). Several geographers (Bowen 1959, Bowen and Carter 1974, Baker 1985) have identified areas which they have dubbed the Welsh heartland or 'Y Fro Gymraeg'; these are areas where more than 70% of the population speaks Welsh. An analysis of the 1981 census figures indicates that the heartland consisted then of central and south-western Anglesey, much of mainland Gwynedd, and three or four areas in south-west Wales. These areas are largely rural in character and geographically isolated from large centres of population. These are areas where Welsh is widely spoken, but Baker (1985) makes an important point when he says :

"There is also a need to be very cautious in assuming that heartland areas necessarily contain the most active communities in terms of Welsh language and cultural maintenance Towns may contain active and prospering cells of Welsh language and culture. Rural heartlands, while showing a high density of

Welsh speakers, may through less community interaction and declining institutions (e.g. chapel) be a less powerful minority language and culture generator than is customarily supposed."

In any case the number of people living in these heartlands is a very small proportion of the population of Wales.

Some of the children in the two studies to be described in this thesis lived in the Welsh heartland in towns such as Bethesda and Tregaron. Others lived in the Anglicised towns of the North and West such as Bangor and Aberystwyth where the population of Welsh speakers is between 40 and 70%, and yet others lived in large cities such as Cardiff and Swansea where the percentage of Welsh speakers is very small but where the actual numbers are quite substantial. There was therefore wide variation in the children's linguistic communities, from bilingual communities where Welsh is the predominant language to virtually monolingual English communities.

It must also be remembered that Welsh speakers are not evenly distributed across age ranges. As one would expect, the percentage of elderly people who speak Welsh is considerably higher than for the population as a whole. And conversely, the percentages for the younger age ranges are lower than the overall 19%. In 1981 the percentages of Welsh speakers in the 25-44 age-group (the likely age of the parents of most children in the sample) was lower than for any other age group at 15.5% (Baker). However the percentages for ages 5-9 (the age of the children themselves) was rather higher at 18% and showed an increase

over the 1971 figures. This is assumed to be the result of Welsh medium schools. This increase is also seen in the numbers for young people in the age range above that which includes the children on the project. Price (1984) says:

"The role of nursery and primary schools in maintaining the Welsh language is crucial. They can justly lay claim to considerable success not only in ensuring that Welsh-speaking children retain their language but in leading some English-speaking children to achieve a good command of Welsh. They may or may not be able to arrest the decline in Welsh among the younger generations, but they, more than any other factor perhaps, may at least succeed in slowing down the rate of decline."

There is also some support for this belief in figures from the Welsh Office on fluency in primary schoolchildren. In 1977 12.8% children were assessed as fluent in Welsh, but by 1982 this figure had increased to 14.6% (Price). What is less clear is how many of these children continue to use Welsh to any great extent in their lives after they have left school.

Although there was a decline in Welsh speakers from 1971 to 1981, this decline was less (only 2%) than the decline between previous decades. Statistics produced by the county of Gwynedd show that a large percentage of children from English speaking homes become fluent Welsh speakers during the course of their schooling (Bellin 1984).

As well as the influence of schools on the younger age-groups, the relatively large number of people attending Welsh classes for beginners may also have helped to counteract the decline, although the number of learners who succeed in becoming very fluent and more crucially who use

their Welsh in interacting with native speakers is probably very small (Trossett 1986).

The reasons for this general picture of decline are many. In recent years they include inward migration from England, tourism, suburbanisation and second-home ownership.

For children the effect of these factors can be quite dramatic. In a small country school the arrival of two or three English families can mean that the whole language of the school can change from being Welsh only to both Welsh and English and even English only when the whole school or a class is being addressed. During the early stages of this process the incoming children are likely to learn Welsh fairly quickly but as the numbers increase the accommodation is likely to come from Welsh speakers. Some schools and local authorities, notably in Gwynedd, are very aware of this problem and have made great efforts to counteract it but it nevertheless remains a very real difficulty in many Welsh speaking rural areas.

Marriages between Welsh-speakers and non-Welsh speakers become increasingly common as the percentage of Welsh speakers declines. According to Williams (1987) there are now as many marriages where only one partner speaks Welsh, as where both do. The children born of such marriages are not usually brought up as Welsh speakers. Some of the reasons for this are suggested by Harrison, Bellin and Piette (1981).

As well as the structural factors which are generally in the direction of increasing decline, Williams (1987) and Bellin (1984) argue that behavioural-evaluative factors are

also important. Bellin argues that over the last twenty years speaking Welsh has changed from being associated with economic failure to being associated with cultural vitality.

Similarly, Williams says:

"There has been a revitalisation of the Welsh language in certain locations, where there has also been a decline in the incidence of negative identity vis-a-vis the language. The resurgence has occurred in those locations where the prestige of the language derives from its relevance for certain public sector petit-bourgeoisie and bourgeoisie class positions."

5.2b) Education in Wales

It has long been acknowledged that education plays a crucial role in the furtherance of bilingualism, and the picture in Wales may well be considered favourable to the development and maintenance of bilingualism. The first Welsh-medium primary school was opened in 1939 and since then the number has grown enormously. There has also been tremendous growth in the number of nursery schools and playgroups where Welsh is the medium of instruction. In the last 30 years there has been an increase in the number of bilingual secondary schools, particularly in the Anglicised areas, and there is also some provision at the higher education level. Baker discusses the current provision of bilingual education in Wales and points out that the overall figures for Wales mask a wide variety in the amount of bilingual education that is available in the different counties.

Gwynedd has pursued and resourced a vigorous bilingual

policy since the mid 1970s and here Welsh is a compulsory subject for all children up to the age of 16. Approximately 70% of primary-school children in Gwynedd are in 'Welsh as first language' classes, with the remainder being taught Welsh as a second language. The vocational value of knowing Welsh, particularly for professional employment, is emphasised in an attempt to counter the widely-held belief that Welsh is a 'useless' subject. The success of this policy is evidenced in the statistics which show that the percentage of school pupils who speak Welsh is higher than it is for the population as a whole. In no other county is such a vigorous policy pursued, but in the Welsh speaking areas of Clwyd, Dyfed, Powys and West Glamorgan, children from Welsh-speaking homes can receive their primary education mainly through the medium of Welsh. This is sometimes done by the use of streaming, with a Welsh stream and an English stream running in parallel. In South Glamorgan and Mid-Glamorgan, the population of Welsh speakers is much lower, but in both these counties there are Welsh-medium primary schools and Welsh units attached to other primary schools. In these schools, and indeed throughout Wales, such schools and units attract large numbers (in several cases the vast majority) of their pupils from English-speaking homes. Gwent is the only county in Wales where there is virtually no Welsh taught at all in its schools.

5.2c) Welsh Language Television

It is generally acknowledged that the media, in

particular television, play a crucial role in the maintenance or decline of Welsh. At the time of this study there were approximately 14 hours a week of television being broadcast in Welsh, compared with some 200 hours in English.

This situation has changed since then with the advent of a Welsh language television channel (S4C); although there is still far more provision in English than in Welsh, there are now more Welsh programmes at peak viewing times (of particular importance to young children) and the quality is probably higher. However, the amount of time actually spent watching Welsh as compared to English language broadcasts is also of great importance and it has been estimated (Baker 1986) that the average bilingual child watches Welsh language broadcasts for no more than about 5% of the total time spent watching television. The influence of television is then still overwhelmingly an English one.

5.2d) Bilingualism in Wales

As has already been mentioned, the percentage of Welsh speakers in Wales has now declined to 20%, and there are virtually no Welsh monoglots. This would suggest that Welsh will in a matter of decades decline to a state of virtual extinction. However there are some indicators that the situation is not so simple; this is also suggested by the figures quoted earlier in this chapter. Price (1984) summarises the position in the past and the present thus:

" ...Welsh also stood in a diglossic relation to English, though by no means in all respects as a 'low' variety. In particular, Welsh maintained an unbroken tradition as a vehicle of 'serious' literature, in both

prose and verse, and, in all parts of Wales where it was at all widely spoken, it served more widely than English as a language of public religious worship. On the other hand, English was, until very recently, the only language recognised for any purposes to do with administration and the law, and apart from unofficial use sometimes made of it in some primary schools in strongly Welsh areas, in the field of education. The position of Welsh has however improved considerably, even dramatically, in the last twenty or thirty years, first with the marked increase in Welsh-medium teaching in nursery, primary, and secondary schools and in some departments of the University of Wales, and then, more recently, with the passing of the Welsh Language Act in 1967 and the significant, if inadequate, increase in the use of Welsh in public life that has followed from it."

As this suggests, the status of the Welsh language in contemporary Wales is somewhat ambiguous. On the one hand, the majority of the population are monolingual English speakers; the language of the mass media is predominantly English; attendance at chapel, a traditionally Welsh domain is in decline; and the language of officialdom and bureaucracy, despite the theoretical availability of Welsh language forms, is nearly entirely English. On the other hand, there is considerable educational provision in Welsh; a fairly large number of jobs, particularly in the public sector require a fluency in Welsh; and most bilinguals, whether they speak much Welsh or not, are generally favourably disposed towards the language (Harrison, Bellin and Piette 1981).

The implication of this is that the perceived status of Welsh by bilingual speakers themselves can be expected to differ considerably. This will depend on where they live, their cultural concerns and also crucially, their

occupational status. Williams (1979) points out that there will be a relationship between a bilingual's occupational status and their perception of the status of the language, in this case Welsh. He says that:

"...the minority ethnic group might well retain control over some economic sectors and thereby offer a variety of occupational opportunities to members of the ethnic group.

In this..situation occupational mobility might well be possible within the context of the minority language albeit in only a few occupational sectors."

The implication here is that the perceived status or prestige of Welsh will be greater for those (middle-class professionals) who stand to gain economically and in occupational status through their identity as Welsh-speakers than for those who do not have a high occupational status. Of the latter group, Williams says

"The tendency for those (who do not have a high occupational status to fall back on) is to try to avoid the stigma which the language is associated with and to draw off the identity of the wider society. This does not necessarily mean assuming the identity of the majority ethnic group but merely the denial of minority ethnicity and the simultaneous emphasising of one's class identity. This means that the working-class affiliation of the wider society is held to be preferable to the ethnic identity of the minority group. It can also mean that the individual can perceive his ethnic identity as hampering any potential upward social mobility."

Khleif (1980) says that it is the new Welsh-speaking middle-class that has been instrumental in demanding institutional support for the language. He also points out the similarity between the situation in Wales and that in many other countries where there is a minority language.

It will be argued in chapters 7 to 9, that the general background against which the children studied acquire and use their language, is a factor that needs to be considered alongside the demands of the immediate situation. This survey of the situation in Wales makes it clear that it is not possible to make a simple analysis of the status of Welsh. In many ways, Welsh is following a classic pattern of decline, with fewer speakers, and the language being used in a more limited range of domains. However, many high status members of the community now speak Welsh, and many high status jobs in the public sector require a knowledge of Welsh. Many schools, not only bilingual ones, but also mixed language schools in rural areas accord Welsh a high level of prestige and status.

Both the actual and perceived value of bilingualism in Wales does then seem to vary from individual to individual, from group to group and from social class to social class.

5.3 INFORMATION ABOUT CHILDREN IN ^{THE} LANGUAGE SWITCHING AND CONCEPT DEVELOPMENT STUDIES

This section contains background information on the children studied in the language switching and concept development studies. Descriptions and analyses of the results will be given in subsequent chapters.

5.3a Language Switching Study

Children from both cohorts of the main study were used but for the language switching study the sample was limited to the first two years only. The sample therefore consisted of 3 and 4 year old children in the younger cohort, and of 5 and 6 year old children in the older cohort. As the aim of the study was to collect examples of language switching only children who were likely to be bilingual were included.

Table 5.1 shows the number of children included in each cohort for this study. The children who were selected for the language switching study were all those from the main study who fulfilled the following two criteria

a) children who were either Welsh-preferred language or demonstrated during the first year of recording that they knew some Welsh (see section below on language of children for further details)

b) children who were present at school and therefore available to be recorded in both the first two years of the study.

TABLE 5:1

TOTAL NUMBER OF CHILDREN IN THE LANGUAGE SWITCHING STUDY

Cohort 1	Year 1	age 3	28
	Year 2	age 4	28
Cohort 2	Year 1	age 5	77
	Year 2	age 6	77

As table 5:1 indicates, a strictly longitudinal sample was used within each cohort. In fact larger numbers than these of bilingual children were recorded for all age-groups but it was decided for the purposes of this study to omit children who were not recorded in both years of the study. This was done in order to make direct longitudinal comparisons a feasible proposition.

The children in the younger cohort were all aged between 3 years 6 months and 3 years 9 months in the first year of recording, and aged between 4 years 3 months and 4 years 6 months in the second year of recording. The children in the older cohort were aged between 5 years 3 months and 5 years 6 months in the first year of recording and aged between 6 years and 6 years 3 months in the second year of recording.

Of the 28 children in the younger cohort, 11 were girls and 17 were boys. Of the 77 children in the older cohort 41 were girls and 36 were boys.

As has already been pointed out, only bilingual

children were included in the language switching study. However, in the larger project from which this data was derived, the children were not assessed for bilingualism - doing this is a difficult task and many questions are raised. Do the children have to be balanced bilinguals, and in any case is this a realistic expectation for children this young? If they need not be balanced bilinguals, how much of the second language need they know to qualify as bilinguals? These questions have been fully discussed in the literature (for example, Baetens-Beardsmore 1982). In practical terms assessing the children for bilingualism would have been a major undertaking and would have taken time away from other aspects of the study. Instead children in the project were categorised on the basis of their preferred language as reported by their teachers, as either 'Welsh preferred language' or 'English preferred language'. Dodson (1985) makes the case for the use of this terminology as follows:

"The term 'preferred language' is used to denote that language in which a bilingual finds it easier to make individual utterances in given areas of experience and at given times.

'Preferred' is a neutral psychological term, as used in 'preferred image' in the field of perception. It does not refer to an individual's preference for or desire to use one of his two languages. The sole criterion is 'ease of use'.

For any area of experience the bilingual has a preferred language, whilst the language in which he finds it less easy to make functionally equivalent utterances is defined as his second language. An 'area of experience' refers here to the situation in which the bilingual makes an utterance or, more often, a cluster of utterances. "

For this study, area of experience was taken to refer to the school context, although as the children were very young the preferred language in school was generally assumed to be the same as the preferred language at home. In the majority of cases this would be what Dodson refers to as their 'general preferred language.' For the majority of the children this was a straightforward categorisation, but for a very small number it was not really clear whether their preferred language was Welsh or English or indeed if it could be said that they had one. (This will be discussed further in chapter 6).

All the children who had Welsh as their preferred language, and who were recorded in both years, were included in the language switching study. The degree of bilingualism among this group was undoubtedly varied, particularly among the younger children, some of whom may have been virtually monolingual Welsh speakers. However these were all included, partly as there was no method by which they could have been identified and eliminated, and partly because it was possible to predict with confidence that by the second year they would all know at least a little English. In other words they were all incipient bilinguals and most of them were actual bilinguals.

The other children included in the language switching study, and there were only a few of these, had English as a preferred language, but demonstrated knowledge of Welsh through producing at least some Welsh while they were being taped in the first year of study. Some of the English preferred language children who did not produce any Welsh on

the tapes probably knew some Welsh but were excluded from the language switching study unless they actually demonstrated their knowledge of Welsh in the way indicated. The sample for this study is thus weighted towards dominance in Welsh, as is shown in table 5:2.

TABLE 5:2

PREFERRED LANGUAGE OF CHILDREN IN LANGUAGE SWITCHING STUDY
(AS REPORTED BY TEACHERS)

	Preferred language Welsh	Preferred language English
Age 3/4	24	4
Age 5/6	64	13

(N.B. Figures in this table differ slightly from those in chapter 6, as these are of preferred language as reported by teachers, whereas those in chapter 6 are of the actual language that the children chose to use when they were being recorded.)

Eight of the 3/4 yr. old cohort lived in parts of Wales where Welsh is spoken by more than 70% of the population (Welsh heartland). The remainder of the cohort lived in areas where Welsh is spoken by approximately 40-70% of the population.

37 of the children in the 5/6 year old cohort lived in areas in the Welsh heartland. 30 of the children lived in areas where Welsh is spoken by approximately 40-70% of the population. The remaining 10 children lived in areas where the Welsh population is less than 40%.

All the children studied were attending schools, nurseries or voluntary playgroups.

The schools attended by the children fell into five

different linguistic categories. Nearly all the children in the language switching study were in the first three of these categories. The five categories were

i) designated Bilingual Schools ('Ysgolion Gymraeg'). In these schools Welsh is the sole medium of instruction until the age of seven or eight. Many of the children who attend them are from monolingual English homes. These types of schools combine education in their mother-tongue for children from Welsh-speaking homes, with an 'immersion' experience for those from English speaking homes.

ii) Mixed-language Schools, unstreamed. These are mainly found in rural Welsh-speaking areas, and both languages are used.

iii) Mixed-language Schools, streamed. These are the same as ii) but the children are streamed according to language.

iv) English medium Schools. There is no Welsh in these schools, other than occasional Welsh lessons.

iv) Bilingual Project Schools. These are the same as iv) except that there is far more instruction in Welsh, which is also used as a medium of education for part of each day.

The numbers of children attending each type of school are given in table 5:3. Children were not selected for the language switching study on the basis of type of school attended and no attempt was made to get children in equal numbers from all 5 types of schools.

TABLE 5:3

NUMBERS OF CHILDREN IN EACH TYPE OF SCHOOL AT EACH AGE GROUP

	AGE 3	AGE 4	AGE 5/6
(see note)			
Designated biling.	12	9	27
Mixed unstreamed	13	14	39
Mixed streamed	1	1	11
Bilingual project	1	1	0
English medium	1	3	0

(NOTE: The numbers for ages 3 and 4 are quoted separately as many of the children changed schools during this time. A few of them also changed the type of school they attended- 3 of the children who were attending a Welsh-medium playgroup at age 3 went on to an English infant school by age 4, and the one child attending an English-medium playgroup at age 3 went on to a mixed unstreamed school at age 4.)

It is considered important to know the type of school attended by the children as it is possible that their use of language switching may be related to the linguistic environment of the school they attend. This is partly due to the importance of the school environment in the child's experience and also because children were recorded in school and this context might be expected to exert an influence on the immediate situation of the recording as well as on the child's general linguistic background.

5.3b) Concept Development Study

Only the data from the older cohort is included here,

but over the whole three years rather than the first two years only as in the language switching study. The younger cohort were also given concept tests but there were problems in administering the whole battery of tests to children this young. Many of the children failed to complete them and when they did, not all the responses were considered to be very reliable. This was the main reason for not analysing the concept data for the younger group. The total number of children tested in the older cohort is given in table 5.4.

TABLE 5:4

TOTAL NUMBER OF CHILDREN TESTED IN CONCEPT DEVELOPMENT STUDY

Age 5	Age 6	Age 7
195	190	200

As explained earlier in this chapter, the longitudinal nature of this study led to a fair degree of wastage between the three years, with only a percentage of the children being available for testing in all three years. When this happened, arrangements were made in the second and third year of data collection to replace 'lost' children with new children. The implication of this for the analysis of results is that it was possible to analyse the results both cross-sectionally and longitudinally.

Cross-sectional analyses involved using the results of all the children tested regardless of whether they were in the project for all three years, or for one or two years only. The important thing to bear in mind when considering

cross-sectional results is that the five year olds, the six year olds and the seven year olds are only in some cases the same children. A substantial minority were not part of the project for all three years.

Longitudinal analysis involves using the results only of the children present in all three years. The numbers will therefore be considerably smaller than in a cross-sectional analysis but will of course be more truly comparable year after year. In chapter 8 results from both the cross-sectional and longitudinal analysis will be used.

Another factor which led to data being lost was that not all children were tested on all the concept tasks. The total battery of tasks was fairly large (descriptions of tasks are given in chapter 8), and fatigue, loss of interest and lapses of attention inevitably occurred with some children. In most cases where this happened any one child might only fail to attempt one or two tasks and this did not seem to be sufficient reason for excluding from analysis the results that were available. This means that the number of children completing any particular set of tasks will vary. Table 5:5 gives the numbers of children involved in the longitudinal study for each set of tasks.

TABLE 5:5

NUMBERS OF CHILDREN IN LONGITUDINAL ANALYSIS

Piagetian tasks	Classification tasks	Wechsler sub-tests
Age 5-6-7 120	133	144

The two factors already discussed - loss of children in the second and third years, and the failure of some children to complete all the tasks - explains why the figures in Table 5:5 are lower than those in Table 5:4. The considerable difference in numbers between the two tables explains why cross-sectional as well as longitudinal analyses were included.

The children were all aged between 5 years, 3 months and 5 years, 6 months the first year that they were tested.

In the second and third year of testing they were aged between 6 years 0 months and 6 years 3 months, and 7 years 0 months and 7 years 3 months.

Roughly equal numbers of boys and girls were included in the project. The figures for the longitudinal analyses were 64 boys and 56 girls.

The child's preferred language was used for administering the concept tasks. The number of children in the two language groups is shown in Table 5:6. Numbers are given for the longitudinal study only.

Table 5:6

NUMBER OF CHILDREN WITH PREFERRED LANGUAGE WELSH OR
PREFERRED LANGUAGE ENGLISH FOR EACH CATEGORY OF TASKS

	Preferred language		Total
	Welsh (mainly bilingual)	English (mainly monolingual)	
Piagetian tasks	44	76	120
Classif. tasks	49	84	133
Wechsler tasks	55	89	144

As can be seen there were rather more English preferred language than Welsh preferred language children in the sample.

5.4 SUMMARY

This chapter aims to give some background to the empirical part of the thesis which makes up the next three chapters. It does this by giving a brief description of the language situation in Wales, with particular emphasis on aspects which might affect the experience of young children, such as education and television. The keynote of this section is the emphasis on diversity. Depending on where they live children who were studied have experiences of living in communities where the percentage of people speaking Welsh varies from over 70% to under 10%. They will also have differing perspectives as to the status of Welsh. Depending on the indicators considered Welsh can be seen in many ways to have a very low status vis-a-vis English but in other contexts, for example, designated bilingual schools and certain occupational settings, the status of the language may be quite high. There will therefore be wide variations between the children's experience of hearing Welsh in the wider community, and of their perception of its status.

The remainder of this chapter outlines the characteristics of the children who took part in the two studies, in particular the numbers of children involved, their ages, their preferred language, and the type of school attended. The description of these variables points to the range of analyses of results that will be described in chapters 7 and 8.

CHAPTER 6

LANGUAGE SWITCHING IN WELSH-ENGLISH BILINGUAL CHILDREN: DESCRIPTION OF DATA

6.1 INTRODUCTION

The aim of this chapter will be to give fairly extensive examples of language switches as produced by the young children whose background was described in the previous chapter. As well as presenting the examples themselves possible explanations will be suggested for the occurrence of these switches. These explanations are similar to those put forward by some of the authors whose work was described in chapters 2,3 and 4, and offer an initial understanding of language switching. At this stage in this thesis it seemed important to give both the flavour of the data itself and a feel of the kind of way an understanding of these switches has been attempted. In this chapter explanations are suggested for individual switches rather than for the phenomenon more generally. Later these explanations will be scrutinised critically.

This chapter is set out as a primarily descriptive chapter with a more analytical approach being left to the next chapter. Switches will be described in two main sections; switches by the three and four year old cohort and switches by the five and six year old cohort. Before this detailed discussion of switches, the recording procedure

will be outlined and some general points made concerning problems encountered in obtaining and describing language switches.

6.2 RECORDING PROCEDURE

6.2a) Selection of children

Children were recorded at play, generally in pairs, for approximately 30 minutes per pair.

The normal procedure followed was to look at the school register on arrival at the school and select children from it who came into the 3 month age band that we had already specified (see chapter 5). In some cases this meant taking all the children in the school who came within this fairly narrow age-range. At other times, when the number of children in the age band was too large for this to be feasible, a selection was made. This was generally done randomly but sometimes either boys or girls or children from a particular social background were selected in order to keep the numbers balanced in the project as a whole. The only children who were omitted on a regular basis were those who were known by the teacher to be likely to leave the area before the end of the project and a very small number of children with marked speech defects. Children who were considered by their teachers to be 'too quiet' or 'too unforthcoming' to be worth recording were not excluded and it was found that the teachers' predictions were by no means always realised. We did however take the advice of teachers in allocating children to pairs for recording, generally placing together children who were judged by their teachers to be friends.

6.2b) Setting of recording

Recordings were made from stationary microphones while children played at a sandpit. As well as sand, the sand-pit contained a large number of toys, for example, buckets, spades, sand-wheel, toy people, toy animals, cars, small buildings, and so on. Although virtually all schools have sandpits, the particular one used was transported from school to school in order to keep the play situation constant for all the children. There were several advantages to this particular play activity -

- i) it was already familiar to all the children as such sandpits are found in all nursery and reception classes.
- ii) it was considered a suitable activity for children right through the age range. Younger children enjoyed physical activities with the sand, for example, pouring and making castles, while the older ones used it as a setting for fantasy play with the toy people and animals.
- iii) the nature of the activity meant that the children stayed in the same place, within range of the microphone.
- iv) it was an unstructured activity and the language used by the children was unconstrained and wide-ranging.

All the recordings were made in the children's schools but the actual location varied from school to school. Two considerations were paramount. The first was that the children, particularly the younger ones, needed to be somewhere familiar and near to their usual classroom and teacher if they were to feel reasonably comfortable with a strange adult. The other was that as quiet a spot as possible was required in order to ensure a good quality

recording and subsequent accurate transcription. These two criteria generally dictated two completely opposite settings! In practice most schools have few quiet areas and the recordings were often made in noisy places - usually these were in corners of classrooms, corridors or cloakrooms. When these areas were too noisy or too crowded for recording to be possible, staff-rooms or head-teachers' offices were used but these were not really considered to be a very suitable environment as they were unfamiliar and rather forbidding for most children. Many of the indistinct sections of the transcripts can be attributed to the over noisy environment in which recordings were made. Despite this disadvantage it is felt that recording children in individual schools was a far better procedure than bringing children into a laboratory would have been. The setting was fairly natural and the geographical mobility involved in taking the equipment to the children rather than vice-versa was a major advantage.

6.2c) Participants

The usual procedure was for an adult researcher to take two children to the sandpit, show them the toys and encourage them to play, and then having switched on the tape-recorder sit to one side taking little part in the children's conversation unless they wished to include him or her in it. However, some children were very quiet and then, the researcher made conversation with them in an attempt to get them to relax and to begin to talk. This happened more frequently with the younger children.

Because of the small numbers of children in some playgroups, a few children, especially among the three year olds were recorded individually rather than in pairs. This means that some of the tapes analysed consist of two children only, others consist of two children and a researcher and yet others consist of one child and a researcher. This picture is further confused by the occasional inclusion of a short exchange between one of the recorded children and another child or adult who happens to be passing through the corridor or room where the recording is taking place. These are however infrequent.

It is important to note if the participants in a conversation are all children or also include adults. It has been well-documented (Shatz and Gelman 1973, Berko-Gleason 1973) that children as young as those in this study use different speech registers when talking to different people. The children who were recorded when playing with another child are probably using a less formal register than those who are recorded talking to an adult researcher. A child to another child language register almost certainly includes more of certain types of speech, for example, language play and fantasy language (Garvey 1984) than does a child to strange adult language register. This may in turn affect language switching if this is more or less likely to be used in certain types of register.

When the adult did converse with the children, the aim was only to maximise the child's output in his or her preferred language. No attempts were made to control the topic and, most relevantly here, no attempt was made to get

the child to use Welsh rather than English or vice versa. In general, the adult followed the language choice of the children, though as will be seen later on in this chapter, this proved to be quite difficult in a few of the recording sessions.

6.2d) Summary of Procedure

The main points that need to be remembered here, as far as the language switching data is concerned are

- a) children were not selected for being in any sense 'good speakers'.
- b) most of the conversation is child to child, although there is also some adult to child, and child to adult conversation.
- c) no deliberate attempt was made by the adult to either encourage or discourage the use of a particular language. However children may well have had expectations about what language they were supposed to use. They may for instance have assumed that they were supposed to use Welsh if this was the stated policy of the school.
- d) children were recorded in reasonably familiar and natural surroundings.

6.3 EXPLAINING LANGUAGE SWITCHES

6.3a) Problems of Definition

A major issue concerns the status of explanations given for language switches. A decision was made to consider each switch as an individual example. As the review of the literature in previous chapters will have indicated the status of such explanations is problematic in many ways and it is not intended that these problems should be ignored or glossed over. It has been argued that it is not possible to explain switches at this individual level but only in a more general way, that is, one can attempt an explanation about why switches might occur generally but the occurrence of a particular switch is essentially a random event (see discussion of comments by Poplak (1980) in chapter 3). This is almost certainly both true and false. To attempt to explain every switch is very difficult and one tends to find, as happens at times in this chapter, that explanations become far-fetched and improbable. However there are instances where the consideration of one switch in isolation can be very illuminating about, say, the child's conceptual framework, or their social world. An attempt is made here to offer as full an explanation as is possible for each switch produced in the data as it is only by doing this that the limitations as well as the strengths of this approach can be tested.

There are other possible problems, both conceptual and practical that need to be raised at this point.

6.3b) Definition of Language switching

Previous studies have made distinctions between switching, mixing, loan words and other types of interference in different ways (these were discussed in chapter 2). In this study the basic rules that have been used to clarify a definition of language switches are as follows

RULE ONE) Language switches can consist of Welsh switches in a basic English text, English switches in a basic Welsh text or either language can constitute a switch in a text where the basic language changes during the course of a recording.

This gives three possible categories. As far as individual children are concerned this means that they may be Welsh preferred language speakers who make occasional switches into English or English preferred language speakers who make occasional switches into Welsh, or children with no clear preferred language in the particular situation recorded. In practice most switches considered here will be of English switches in a primarily Welsh text made by Welsh preferred language children. There were few switches in the second category but there are however some interesting examples of the third category, that is of conversations where the preferred language does not remain the same during the course of the conversation. Deciding what is a switch and what is a change in preferred language can be very difficult in this category especially as the basic language of the recording may change several times during the course

of a few minutes. Detailed descriptions of such texts given later in this chapter will make this point clearer.

RULE TWO) Single words in the non-preferred language are not counted as switches unless there is clear evidence that the child knows the preferred language equivalent for that word, usually through having produced it elsewhere in the text.

It is assumed that such usage denotes the use of a loan word rather than a switch. This may mean that some switches are in fact being omitted from the description but it did not seem possible to include them on any objective criterion. The reason for this rule is that large numbers of English words are frequently used as loan words in Welsh.

Such words cannot be considered as a switch if the child probably does not know the equivalent Welsh word and may not even realise that an English word is being used. This practice differs from that of several other studies where one-word switches are included in the data as language switches. McClure (1981) in summarising different studies says that in studies of language switches one word switches are rejected by some, accepted by others, and yet others deal with them variably. Including one word switches as part of the data would obviously have increased the number of switches considerably.

The 'neutral language zone' (Appel and Muysken 1987) is a particular problem in studying Welsh/English switches. Many common words can sound the same in either language, for example; Ie/Ye(s), cap/cap, lori/lorry, car/car, siop/shop. While there are sometimes slight phonological differences between the Welsh and the English versions, these are not

always clear in young children's speech. Added to this, the common use of many loan words, for example, sand, fish, and so on, and it can be seen that some utterances, particularly short ones, can be allocated to either language.

Rule 2 is not adhered to when considering Welsh words in an English text as the point concerning loan words does not apply in this instance. This means that one-word switches are acceptable in these cases.

6.3c) Linguistic Fluency and Ability

One of the penalties of studying a large number of children as has been done here is that little time was given to recording each child. This means that in all cases there is relatively little data for individual children, but more problematically, some children were virtually silent during the recordings. This may reflect their normal behaviour but it is far more likely (Wells 1987) that the particular circumstances of data collection made some children behave in a particularly shy and withdrawn manner. This was particularly the case with the youngest group of children, several of whom produced fewer than a hundred utterances (and many of these were single word utterances) in the half hour that they were being recorded. This needs to be remembered when considering statements on the number of children who were producing language switches. Quite a few of them were producing very little language at all!

A second but related problem has to do with the differences in where the children had reached in their language development. While children of three and a half

Additional note on procedures for defining language switches

In nearly all cases these two rules make the determination of a switch relatively unambiguous. However, as already mentioned, problems arise in some cases particularly with children who switch frequently.

Some switches appear sometimes to include switches within switches as for instance, on page 193, where Rhian switches to English for utterances 313 and 315 but includes a Welsh word in this English switch (here, twll). Another example occurs in utterance 622 where Rhian includes a Welsh phrase (yn fawr, yn fach) in an English switch. These 'switches' within switches are not counted as switches here.

This aspect of the procedure does not accord completely with rules one and two, which would require the second example (yn fach, yn fawr) to be counted as an additional switch. It may be that Poplak's (1980) distinction between discourse mode and discourse strategy is relevant here. In examples such as this the child is using both, with the main switch being an example of a discourse strategy and the switch within it being an example of a discourse mode. Or, in other words, switching takes place not between Welsh and English but between Welsh and a Welsh/English mixed mode.

Rules one and two do not lay down entirely clear procedures to follow in examples of this kind, making a degree of subjectivity inevitable. It is acknowledged that this kind of problem at this stage introduces an element of uncertainty into the calculation of the actual numbers of switches produced by each child. Such examples were however relatively rare in the total corpus and confined to a few children.

are generally well advanced in their linguistic development it is possible that some of them were still only producing very short utterances. In any case this was certainly true of many of them during the time that they were being recorded. By categorising children on the basis of chronological age rather than linguistic ability (for example, mean length of utterance) we may not have been comparing like with like. This problem is probably most marked in the youngest age group where between child differences are likely to be greatest.

6.3d) Meaning of children's utterances

A final problem is concerned with problems of analysing and understanding the meaning of young children's utterances.

In order to try to offer a reason for a language switch, the meaning that the child is trying to convey needs to be clear. This is not normally a problem with adult speech but presents major difficulties when looking at the language of children. The meanings of many utterances are unclear: this is true of these transcripts as a whole (and probably of any other study of young children's language), but again it is a particular problem with the youngest children. This is partly due to recording conditions and partly due to lack of clarity in young children's speech. Utterances that can be clearly distinguished generally make sense individual utterance by individual utterance, but the overall meaning may not be particularly obvious. This is in part due to a paucity of contextual information but even when such information is available meanings are frequently obscure.

This is not just a particular problem of listening to recordings but will also be a problem for an adult who is present at the time. Adults trying to understand the meaning of what children say frequently have to ask questions such as 'What?', 'What did you say?' 'What do you mean?'. Such questions are likely to be as much about problems of meaning as about difficulties with the child's pronunciation. This problem with meaning has obvious implications for attempts to try to work out the reasons for a language switch as the meaning of a child's utterance will usually be a crucial factor in explaining the reason for it.

Difficulties in attributing meaning are not limited to language switching studies, but should be a major cause of concern in any analysis of child language.

There are several reasons why the meanings of young children's utterances are hard to understand. One reason is their use of egocentric language, first documented by Piaget (1929). The theoretical debates concerning the function and origin of egocentric language need not concern us here, but what is relevant is that young children's discourses often contain utterances or passages that are not related to comments made by others; these may be comments on the child's own activities or some kind of inner stream of consciousness being articulated. Another possible cause of difficulty is that the difference between the speed of the child's thinking and the speed with which these thoughts can be transformed into words is quite large and logical connections that may be present in thought are not apparent in speech. A good example of this is seen in the following

exchange from a three year old's transcript (no language switches here):

Adult: What's that Hugh?
Hugh: A knife?
Adult: A knife
Hugh: Cuts people
Adult: Yes
Hugh: They die.
Adult: They die?
Hugh: Yeah, and they go to jail.

Probably the child wishes to say that those who kill people with knives go to jail but has omitted one step in the chain of reasoning in his eagerness to get to the end. A third reason for problems with meaning in this particular study can be attributed to what is in other ways one of the project's strengths, namely the recordings of pairs of children with the adult often playing a minor role in the conversation. Children will frequently make comments relating to events or people or objects that are part of their shared experience but not necessarily accessible to an outsider.

These difficulties with meaning need to be borne in mind when considering explanations of language switching.

6.3e Selection of the Data

The following two principles were used in selecting the data that will be described here

1) In this chapter, all examples of language switching produced will be discussed, not just those that are particularly informative or interesting. In some studies of language switches particular examples are discussed without any indication being given of how typical they are or

whether other language switches were obtained which could not be described in these ways.

2) Rules were drawn up outlining what constituted a switch before the transcripts were examined. Thus switches were found and then an explanation was looked for. There was therefore no question of not counting something as a switch if it could not be explained satisfactorily. In fact, several switches will be discussed later in this chapter for which explanations could not easily be found. As has already been explained in the previous chapter the data was obtained as part of a larger project, where there was no particular focus on language switching. The particular data used here was selected through a process of reading through all the transcripts of all the children in each cohort who had been present in both recording sessions, that is, at ages 3 and 4, and at ages 5 and 6. Details of the children have been given in chapter 5. (In some cases this consisted of listening to the tapes rather than looking at the transcripts directly.) This involved looking at a large amount of material in order to obtain a relatively small amount of data. Such data could not have been collected other than as part of a much larger enterprise.

An alternative would have been to set up a situation which would appear to encourage language switching (not necessarily an easy thing to design) - the pitfalls of this would be in its artificiality, and also that it might not in fact have produced much language switching. Lindholm and Padilla (1978) used two experimenters, one supposedly a monolingual Spanish speaker and the other a supposedly

monolingual English speaker in an attempt to maximise language switching but still found little switching. The main advantage of the method used here is that the data obtained is as natural as possible and thus a reflection of the child's normal language use, rather than showing what may be produced in an artificial situation. The major disadvantage is that the amount of data is not very large, as relatively few of the children produced many language switches, and many produced none.

I will now go on to describe and discuss the language switches, first for the 3/4 year old cohort of children, and then for the 5/6 year old cohort.

6.4 LANGUAGE SWITCHING IN 3 YEAR OLDS

6.4a) Background to the material

There were 28 children in this group, all of whom were recorded once when they were aged between 3 years 6 months and 3 years 9 months, and once when they were aged between 4 years 3 months, and 4 years 6 months.

At the first recording 25 of the 28 children had Welsh as their preferred language, one had English as a preferred language and 2 did not have a clear preferred language. By the second year, there were 23 Welsh preferred language children, 4 English preferred language children and 1 where the preferred language was not clear. These changes are shown in table 6:1. (The figures in this table differ slightly from those in table 5:2 as figures there are for preferred language as reported by the teacher, whereas here they are for the actual language used by the children during the recordings. Figures in chapter 5 can be considered to relate to children's general preferred language, and those here to their preferred language in the particular recording situation with a specific interlocutor.)

TABLE 6.1

CHANGES IN LANGUAGE USE BETWEEN YEAR 1 (3 YEAR OLD) AND YEAR 2 (4 YEAR OLD).

Welsh in year 1 -----> Welsh in year 2

23 children

Welsh in year 1 -----> English in year 2

2 children

Mixed in year 1 -----> English in year 2

2 children

English in year 1 -----> Mixed in year 2

1 child

In the first year 9 of the 28 children produced at least one example of language switching, (21 switches in all) and in the second year 8 of them did (17 switches in all). The switches made by the three year olds will be discussed first and as there were relatively few of these all the switches will be described and discussed. For the four year olds switches will only be described that were different in type from those made by the three year olds.

6.4b) Examples of switches

Each switch will be shown along with the utterance or utterances on either side of it where this is helpful to an understanding of the meaning of the switch. This is done to enable the reader to judge the validity of the explanation that is given.

EXAMPLE 3.1

NAME: JENNY

L1: WELSH

ADULT: BLE MA' MAMI RWAN? (Where is Mummy
now?)

JENNY: YN WORK (At work)

ADULT: BE' MAE'N 'NEUD YN FANNA? (What is she
doing there?)

JENNY: GWEITHIO (working)

This is a single word switch (work) but is included because Jenny clearly knows the Welsh word for work as she uses it in the subsequent utterance (see rule 2 previously mentioned in section 6.3b). One can speculate as to the work/gweithio distinction in Jenny's language. Perhaps 'work' is used as a noun but 'gweithio' seen as a verb. More probably 'work' is seen as the place where mother goes to, with the actual meaning of the word not correctly understood by the child. This is an interesting example that can give some clues as to the child's perceived semantic field of lexical items in the two languages. An alternative explanation is that as one of the youngest children in the study, it may be that Jenny is not really language switching, but rather, is an example of a child who has not yet separated out her two languages. She may not realise that 'work' and 'gweithio' come from two different languages.

3.2

NAME: ELIN

L1: WELSH

ADULT: 'RWYT TI'N MEDRU 'NEUD CACAN? (You can make a cake?)

ELIN: IA. (Yes. <incorrect form>)

ADULT: WYT TI'N HELPU MAM ADRA' YN Y GEGIN?
(Do you help mother at home in the kitchen?)

ELIN: DIM YN Y GEGIN NI'N NEUD 'NHW (It's not in the kitchen we make them.)

ADULT: BETH? (What?)

ELIN: YN Y KITCHEN NI'N NEUD NHW (It's in the kitchen we make them.)

ADULT: O, IE. (Oh, yes.)

This example is in some ways similar to the previous one. Elin rejects the word cegin in favour of the English word kitchen, although she repeats the adult's word 'cegin' which suggests she has heard the word before. It may be that for her 'kitchen' denotes a different room from 'cegin' and the relevant room is known at home by the English word. This may be seen as an example of a switch where discussion relating to a different context or domain (in this case the home), produces switches. Interestingly, Elin comes from a home where there is a great deal of English in her linguistic background and in the second year of the project, when she had moved from a Welsh nursery school to an English infant school her Welsh had all but disappeared and she was counted as a preferred language English child. Perhaps Welsh is already a language she is beginning to lose to English, although it should be noted that in this recording her Welsh is fluent and fairly correct.

3.3

NAME: GETHIN

L1: WELSH

GETHIN: FATH O HUMPTY DUMPTY, 'TE? (A sort of
Humpty Dumpty isn't it?)
BOING, JACK IN THE BOX.

TRYSTAN: DOING! (Trystan is another child
being recorded)

GETHIN: BOING

TRYSTAN: PAID A 'NEUD 'RWAN, 'NA 'NEI? (Don't
do now will you?)

GETHIN: JACK IN THE BOX
JACK IN THE BOX

TRYSTAN: O, PAID A 'NEUD HYNNA RWAN'. (Oh,
don''t do that now)
AROS ((UNCLEAR)) (Wait)

GETHIN: O, MA' JACK IN THE BOX (Oh, there's a
Jack in the box)
FI'N NEUD JACK IN THE BOX YN NEIDIO
(I'm making Jack in the box jump)
JACK IN THE BOX WEDI BRIFO (Jack in
the box is hurt)

This is clearly a straightforward English quotation in the predominantly Welsh text. What is interesting however is that the child keeps to the English phrase as a whole rather than changing it into Welsh - Jac yn y Bocs. Doing the latter may require more skill or a previous model. Gethin is able to include the phrase 'Jack in the box' in different Welsh sentences correctly but appears to treat it as a unit rather than a phrase that can potentially be split up into its constituents. This contrasts with example 3.4.

3.4

NAMES: DYFRIG, DAVID

L1: WELSH

DAVID: OL' MACDONALD HAD A FARM
EE AYE, EE AYE, OH.
DYFLIG
FISH A CHIPS (fish and chips)
DYFRIG: FISH A CHIPS (Fish and chips)

Here the English phrase 'fish and chips' has the 'and' translated into 'a'. Here then, unlike the previous example, the phrase is being adapted to fit into Welsh rather than being kept entirely in English. Note here too, the copying by the second child - a very frequent occurrence. This is basically a Welsh text with the first two utterances quotations from English. Quoting from another language's songs and nursery rhymes is a common form of language switching.

3.5

NAME: MELERI, RHIAN

L1: WELSH

The examples to be given here are from a recording of two children who had Welsh as their preferred language. It includes a considerable number of switches into English, particularly by one of the two children. This contrasts with the one or two examples per transcript that characterises the previous examples. So that the flavour of a conversation with a relatively large number of switches can be conveyed, all the switches to English produced in

this transcript will be given. Utterance numbers will be included on the left of the transcript. Only the sections that include switches have been reproduced. Switches have been underlined, but not single loan words, in accordance with Rule 2.

29. ADULT: BE' TI'N 'NEUD, RHIAN? (What are you doing, Rhian?)
30. RHIAN: NAUGHTY GIRL
31. RUBBISH
32. LLE MA' HWNNA'? (Where's that?)
33. MELERI: BETH YW HWNNA'? (What's that?)
- .
108. RHIAN: CO FI'N NEUD SUGAR PUFFS MIWN MAN HYN. (Look I'm doing sugar puffs in here)
109. A MEAT (and meat)
110. MELERI: 'WY'N DODI 'MEAT' AR ((UNCLEAR)) (I'm putting meat on)
111. RHIAN: THEN MADE A BIRTHDAY CAKE
112. NAGE DDIM 'DA HWNNA (No, not with that)
- .
310. MELERI: FI'N NEUD 'E NAWR 'RUN PETH A TI. (I'm doing it now, same as you)
311. RHIAN: FI'N NEUD E I TI. (I'm doing it for you)
312. MELERI: OUT
313. RHIAN: AN' AGAIN, AGAIN ((UNCLEAR))
314. ADULT: ((UNCLEAR))
315. RHIAN: DO A TWLL AGAIN (Do a hole again)
316. ADULT: BE' WYT TI 'ISIE RHIAN? (What do you want Rhian?)
317. RHIAN: TWLL (Hole)
- .
351. RHIAN: FI 'DI CA'L SPADE YN AWR. (I've got a spade now.)
352. FI 'DI CA'L ((UNCLEAR)) (I've got)
353. LOOK I DONE
354. ADULT: BE' TI 'DI WEDI 'NEUD 'RWAN RHIAN? (What have you done now Rhian?)
- .
529. RHIAN: CO. (Look)
530. CO CAP AR Y BEN FI (Look at the cap on my head)
531. CAP AR Y BEN (Cap on my/the head)

532. CAP AR Y BEN
533. CAP AR Y BEN
534. SDIM CAP FI (Not my cap)
535. MA' FE OFF (It's off)
536. LET'S COUNT THIS
537. FOD I SIARO FE. (Must share it)
538. MELERI: PAID A 'NEUD E I UN FI. (Don't do it to mine)
- .
609. RHIAN: FI NEUD DOU CECS. (I'm making two cakes)
610. MELERI: DODI SANDS 'NA MIWN TU MIWN FAN 'YN. (Put that sand(s) inside.)
611. RHIAN: LOOK, TWO
612. TWO I DONE
613. LOOK
614. ADULT: O IE, DA IAWN (Oh yes, very good)
615. RHIAN: KEEP 'EM
616. RUB THE SAND
617. GO ON
618. ADULT: BE' 'NEST TI DDEUD 'RWAN, RHIAN? (What did you say now Rhian)
619. RHIAN: AND RUB IT WITH A SPADE
620. MELERI: I GOT A SPADE
621. RHIAN: A SILLY SPADE
622. PUT 'EM IN NOW YN FACH, YN FAWR. (Put them in now big, small)
623. THAT'S GIVEN ME ((UNCLEAR)) AND DO NOW
624. LOOK
625. ADULT: BE' TI'N MYND I 'NEUD RWAN, MELERI? (What are you going to do now Meleri?)
626. RHIAN: FI'N MYND I ((UNCLEAR))
- .
701. ADULT: LLEUAD YDY' HWNNA IE? (That'a moon is it?)
702. RHIAN: MM
703. CO TEETH FI 'DA (Look I've got teeth)
704. CO DANNEDD (Look teeth)
705. CO DANNEDD
706. ADULT: BETH? (What?)
707. RHIAN: DANNEDD (teeth)
- .
768. RHIAN: FI'N CAS (I'm nasty)
769. FI GYDA BOOK (I've got a book)
770. AFTER TI 'NEUD 'E ETO (after you do it again)
771. PULL HIS HAND ON IT
772. ? : ((UNCLEAR BUT SPOKEN IN WELSH))
773. RHIAN: NI I GYD (all of us)

Before considering example 3.5 in more detail, it may

be useful background material to know that both Rhian and Meleri come from mixed language backgrounds, each of them having one monolingual English parent and one bilingual parent.

Several points can be made about this transcript, in particular about Rhian who is the main switcher of the two. The first is that both children are loquacious by the standards of the other three year olds in the project; Rhian producing 415 utterances in half an hour, and Meleri producing 248 utterances.

Another immediately obvious point is that as well as the switches they use a large number of loan words from English. Rhian is far more likely to use the words 'spade' and 'sand' than 'rhaw' and 'tywod'. It is noticeable however that in utterances 704 to 707 Rhian uses the word 'dannedd' as well as 'teeth'. It cannot be automatically assumed that Rhian doesn't know the Welsh words because she uses the English one, but it seems likely that the English word comes to mind more easily for her. Rhian appears to provide an example of a language switcher as someone who is relatively incompetent in one language and may have problems in separating the two languages. That her English is stronger than her Welsh is shown by her tendency to use a large number of English lexical items. Her Welsh is less correct than that of many other children - see for example utterances 530 and 769.

A final point relates back to the observation made earlier about the problem of understanding the meaning of what young children say. Although this transcript has

relatively few unclear utterances in it, it is quite difficult to work out meanings from it. It appears to be full of non-sequiturs and sudden changes in content. Part of this is due to lack of context as we can't see exactly what the children are playing with at any one moment, but much of it is simply an accurate reflection of the language of children of this age. Those who are with them much of the time such as parents and teachers are probably adept at filling in the gaps and also tend to ignore less meaningful utterances. Approaching transcripts as an outside observer, these aspects of the speech of young children become very apparent. This particular problem with meaning clearly makes the explaining of language switches in this transcript quite problematic. However an attempt at doing this can be made along the following lines.

Rhian uses Welsh up to utterance 30 where she switches into English. Utterances 30 and 31 are not attempts to respond to the adult's question but look like the child talking to herself which for her may mean using English rather than Welsh. This can then perhaps be described as an example of switching to a preferred language, at least preferred for a particular function. It is not in fact clear what her general preferred language is. At utterance 32 she breaks out of English into Welsh to ask a direct question. It is not clear whether this direct question is addressed to Meleri or the adult.

Utterances 108, 109 and 110 all contain English words, but in basically Welsh sentences and then at 111 Rhian produces a whole utterance in English before returning to

Welsh. One possible explanation for the English utterance at 111 is that it has been triggered (see discussion of Clyne's work 1967, 1980 on triggering in chapter 3) by the English words in the previous sentences. Her return to Welsh at utterance 112 marks a change which can be seen as either a change in topic or a change for person. She switches as she changes from talking about her own activity to addressing Meleri with a direct imperative.

The next example of switching to English (utterances 312-315) cannot easily be explained. They may be comments on the activity but there are plenty of examples of similar utterances being made in Welsh as well as English so this isn't a situation where English is always seen as the appropriate language. Utterance 315 is interesting in that it's a relatively rare example of an utterance with English syntax but including a Welsh word. Again Meleri may be using English as a preferred language.

In the next example at utterance 353 Rhian switches to English to get the adult's attention and indeed is successful in this. This is slightly unexpected as he consistently uses Welsh to her but it may be that the language switch makes a particular utterance stand out and this novelty or change in the situation brings it to the adult's attention, who is then more likely to respond. Trying to gain attention is a common reason for switching in young children (Oksaar 1976, McClure 1981).

The reason for the switch at utterance 535 is not particularly clear although there seems to be a change of topic here when compared with utterances 529-535 that are

all around the same theme.

In utterance 611 Rhian switches to English, perhaps initially to get attention but then continues in English (and this change is matched by Meleri in 620) until she switches back to Welsh at utterance 626 in response to the adult. Utterance 622, like 315 above, contains Welsh lexical items in English syntax. It is not clear why the children continue in English here which is not something that they normally do.

Rhian's use of the English word 'teeth' in utterance 700 and 703 is included as a switch, although only a single word, as she clearly also uses the Welsh word 'dannedd'. (See rule 2 earlier in the chapter). She seems to switch from the use of the word 'teeth' to using the word 'dannedd' when the adult fails to respond to her initially. This can either be considered an example of self-correction or, as in a previous example, may be effective simply as a novelty device. The switch at utterance 771 may have been triggered by English words - book, after - in previous utterances. Her return to Welsh in 773 is probably a response to the unclear question in 772.

Some of the reasons for switching suggested here are questionable. The switch at utterance 611 I have suggested is there to catch another's attention - it is equally plausible to suggest it has been triggered by the English words 'cakes' and 'sand' (although both are commonly used in Welsh, particularly in South Wales where these two children live) in the previous utterance. There may be a more plausible reason than either of these of which I am not

aware.

In any case this is inevitably a matter of conjecture. Some authors, (Sankoff and Poplak 1981), would argue that to look for reasons for switches is not necessarily useful as such speech can best be characterised as a language switching 'discourse mode'. However there is perhaps not enough language switching in this example to qualify for this term although Sankoff and Poplak do not make it clear where they draw the boundary between language switching as discourse mode and occasional language switching. To show, as I have tried to do here, that finding reasons is possible and that language switching is not random, is in itself a useful exercise. But it is important to remember that explanation is very different from prediction. There are many examples in this transcript where one might expect switches to take place but where they do not. It must be considered as very much an optional strategy by bilingual speakers, and one that they can choose from among many, for example, raising voice, change of voice, but which they are not necessarily bound to opt for. As well as language switching they of course still have all the strategies used by monolinguals open to them as well.

Rhian and Meleri's transcript has been discussed in some detail and a few summarising points can be made here.

- a) Rhian's relatively frequent use of language switching in no way detracts from her communicative ability. She is a loquacious child who conveys her meanings better than many other children of her age.
- b) In considering an interaction it is important to look at

one child's language switching in relation to the other interlocutors. Meleri language switches here as well as Rhian but does so largely in response to, or in imitation of Rhian. Had she been paired with another child it is possible that Meleri would not have shown any language switching.

c) Despite the many uncertainties in explaining language switching, change or novelty in one form or another frequently occurs as a plausible explanation. This change may be of topic, or of conversational function on the child's part. The importance of change as an explanation for language switching will be discussed in more detail in chapter 7.

Rhian and Meleri's recording in the second year of the project when they were age 4 will not be discussed in detail but it was noted that they still continued to use some language switching but the reasons were clearer and their use of it was generally less.

3.6

NAME: SARAH

L1: ENGLISH

This was the only example in this cohort of a child whose preferred language was English, switching into Welsh, and she does so only once. The child in question - Sarah - comes from a mixed language background and attends a Welsh medium nursery school. She is recorded with another child from a similar linguistic background (not included in this project as absent in year 2), and they both use English only, except for the following switch by Sarah.

GERAINT: LOOK, YOU DID A SMALL ONE.

THAT'S BETTER.

SARAH: YES, THE BIG ONES ALL FELL DOWN.

SHALL I 'NEUD UN ARALL? (Shall I do
another one?)

GERAINT: YEAH (or Ie - yes)

SARAH: LIKE ((UNCLEAR))

OH, LOOK WHAT I DONE NOW

This is a very unexpected switch and it seems very unlikely that Sarah doesn't know this phrase in English. Geraint's affirmative response could be either Welsh or English; which is not clear. There is nothing in the general context surrounding this utterance that makes an explanation very easy.

NAME: ALISON

L1: ENGLISH

At first glance, the language used in the following extract does not follow any discernible pattern, but on further examination there is a certain amount of consistency. The adult present (the researcher) rather uncharacteristically switches language a great deal in an attempt, it is presumed, to accommodate to the children's constant language switching. This aspect of this particular transcript is perhaps an illustration of the disadvantage of using material in the study of language switching that was not collected with this particular aim in mind. Consistency on the part of the researcher would have made it easier to be clear that the switching was being done by the child for reasons other than accommodating to the adult. Although the language of both children on this transcript will be considered, only Alison counts as part of the language switching sample as Christopher keeps to English throughout; although he does, unusually, use Welsh loan words in the English utterances. Both children have two bilingual parents and were recorded in a Welsh nursery school but they live in a fairly Anglicised suburb and both are reported as speaking English and Welsh at home. In the second year of the project both children had moved from their Welsh medium nursery school to an English medium infant school and Alison's use of Welsh appeared to diminish considerably during the intervening year. They were both categorised as having English as their preferred language in the second

year of recording.

As with example 3.5 this transcript will be reproduced fairly extensively with emphasis on the sections where language switching takes place. The actual language switches will all be reproduced with the surrounding context although there were several parts of the tape where the children's language was indistinct, so this context is not always present.

20. CHRISTOPHER: ALI, ((UNCLEAR))
21. : ALI, ((UNCLEAR))
22. ALISON: I WANTED THAT BEFORE.
23. ADULT: BETH, ALISON? (What Alison?)
24. : YOU WANTED THAT BEFORE?
25. CHRISTOPHER: OH, YOU GOT GORMOD THERE
ALISON. (gormod = too much)
26. ADULT: BETH? (what?)
27. CHRISTOPHER: ALISON GOT GORMOD
28. ALISON: MAN
29. CHRISTOPHER: LOOK
30. ADULT: MAN
31. ALISON: MAN FANNA (man there)
32. ADULT: BE YDY HWNNA AR Y TU OL FANNA?
(What's that behind there?)
33. CHRISTOPHER: YOU GOT GORMOD THERE
34. ADULT: GORMOD, CHRISTOPHER, GORMOD.
35. CHRISTOPHER: EH?
36. ADULT: GORMOD.
37. CHRISTOPHER: DWR COME OUT THERE (Dwr
=water)
38. ALISON: LOOK.
39. ADULT: BE YDY HWNNA TE ALISON? (What's
that then Alison?)
40. ALISON: SAND
41. ADULT: SAND
42. : WYT TI'N LEICIO CHWARAE YN Y TYWOD
ALISON? (Do you like playing in
the sand?)
43. : OES GEN TI DYWOD ADRE? (Have you
got sand at home?)
44. ALISON: IE. (Yes, incorrect form)
45. ADULT: OES. (Yes, correct form)
46. : MM.
47. CHRISTOPHER: I.....I....GOT...GOT
((UNCLEAR))
48. ADULT: WHAT WAS THAT CHRISTOPHER?
49. CHRISTOPHER: LOOK.

- .
- .
85. ADULT: BE YDY HWNNA ALISON, AR YR OCHOR
YN FANNA, BETH? (What's that
Alison on the side there, what?)
86. ALISON: LORI (Lorry)
87. ADULT: LORI.
88. CHRISTOPHER: LOOK, I MAKE A CACEN, LOOK.
(Cacen = cake)
89. ADULT: BE YDY O, CHRIS? (What is it,
Chris?)
90. CHRISTOPHER: I MAKE A CACEN, LOOK.
91. ADULT: CACEN.
92. CHRISTOPHER: OH, LOOK.
93. ALISON: COMING OUT OF THE HOLES.
94. ADULT: IS IT ALISON?
95. ALISON: ((UNCLEAR)) DO NOW
96. CHRISTOPHER: ((UNCLEAR)) WATER
97. ADULT: CHRISTOPHER, BETH OEDD HWNNA?
(Christopher, what was that?)
98. CHRISTOPHER: EH?
99. ALISON: CACEN
100. ADULT: CACEN WYT TI'N MYND I NEUD
ALISON? (You're going to make a
cake Alison?)
101. : IA? (Yes?)
102. ALISON: IA, SAND SAND.
103. ADULT: BE GES TI 'DOLIG? (What did you
get for Christmas?)
104. CHRISTOPHER: I GOT RUPERT I HAVE,
RUPERT.
105. ADULT: IA, CHRISTOPHER. (Yes
Christopher)
106. ALISON: I HAD A LOT OF THINGS
107. ADULT: YES ALISON
108. ALISON: I HAD SMWDDIO (Smwddio =
ironing)
109. ADULT: BETH? (what?)
110. ALISON: SMWDDIO
111. ADULT: SMWDDIO?
112. ALISON: YES
113. ADULT: BE ARALL? (what else?)
114. ALISON: AND
115. CHRISTOPHER: I'VW GOT UHM
116. ADULT: YES CHRISTOPHER.
117. CHRISTOPHER: LEGO I'VE GOT.
118. ALISON: I GOT LEGO AS WELL.
119. ADULT: YOU TOO ALISON?
120. ALISON: BOTH OF US.
- .
- .
- .
160. CHRISTOPHER: LOOK, LOOK ALI
161. ADULT: BE CHRIS? (What Chris?)
162. ALISON: A NICE CACEN
- .
- .
225. ALISON: THERE'S FOUR IN HERE

226. : THIS IS MY ((UNCLEAR))
 227. : LOOK LOOK THERE'S IOAN
 228. : UN DAU TRI (one two three)
 .
 .
 .
 489. ADULT: TI'N BYW DRWS NESAF I ALISON,
 CHRISTOPHER? (You live next door
 to Alison, Christopher?)
 490. CHRISTOPHER: YES
 491. ADULT: WYT? (Do you?)
 492. ALISON: HE DOES, HE LIVES BY MY HOUSE,
 BY MY HOUSE DON'T YOU
 CHRISTOPHER?
 493. CHRISTOPHER: YEH.
 494. : OH
 495. ADULT: 'DECH CHI'N CHWARAE EFO'CH GILYDD
 ADRE'? (Do you play together at
 home?)
 496. : YNDECH?
 497. CHRISTOPHER: MM.
 498. ALISON: HE COMES TO MY HOUSE IN THE
 EVENING AND HE SAYS TO ME 'YOU
 COME TO MY HOUSE' AND I SAY 'YOU
 COME TO MY HOUSE'

In the first section of the transcript the adult addresses the children primarily in Welsh. They clearly understand him but seem to prefer to answer in English. Christopher does this consistently so cannot be said to be language switching. Alison sometimes responds in Welsh (utterance 31) and sometimes in English (utterance 38). Interpretation is made difficult by the ambiguity as far as language is concerned of some utterances (for example, Ie or Yeah'), and the children's use of loan words in both their English and Welsh utterances (for example, utterances 33 and 37). The adult consistently uses Welsh with Alison but isn't consistent in his use of either Welsh or English with Christopher.

In the second section at utterance 93, Alison switches to English. This may be because she is addressing this remark to Christopher, whom she hasn't directly addressed up

until now. The adult however responds in English and Alison replies to him in English in utterance 95. The adult then switches to Welsh in utterance 97 and Alison replies in Welsh in utterance 99 and perhaps in 102. (102 is however ambiguous - it could either be English or Welsh with the very common loan word 'sand'.) In utterance 104 Christopher responds to the adult's Welsh question in English (as he has done throughout) and Alison then matches Christopher's speech in English and continues to use English.

The third section is interesting for its example of a Welsh loan word in an English utterance - a relatively uncommon occurrence in these transcripts.

Generally throughout the transcript Alison matches the language of the person she is addressing, Christopher in English and the researcher in either English or Welsh depending on the language he is using. There are some exceptions to this - in utterance 228 she switches to Welsh in order to count. Towards the end of the transcript Alison's switches become less appropriate, for example, in utterance 492 and 498 she fails to match. It isn't clear why this should happen; perhaps she uses English because she is answering for Christopher to whom the question was addressed. Another possibility is that she is producing a long utterance with some direct quotations in it and this is easier for her to do in English than in Welsh.

This transcript has been considered in some detail as it exemplifies several interesting points.

a) Even a transcript as apparently confused as this can generally be analysed according to a few rules - Christopher

only uses English (but many Welsh loan words) although he clearly has a passive understanding of Welsh; Alison generally matches the language of interlocutors although there are one or two exceptions to this.

b) A large number of loan words, especially perhaps when they are in the unexpected direction of Welsh loan words in English, may make a transcript appear to have more switches than it actually does. The children's language system can be characterised as one with a large number of lexical items in common between the two languages. These include gormod (too much), cwpan (cup), cacen Nadolig (Xmas cake), sand, stuck (stwc).

One might be tempted to argue from this that these young bilinguals who have probably acquired their two languages simultaneously, have not yet passed through the stages involved in separating out the two languages. (See discussion of this in chapter 4). The stages put forward by Volterra and Taeschner (1978) are

- i) a common lexical system (no syntax yet present)
- ii) two lexical systems but only one syntactic one.
- iii) two separate systems, usually used according to the one person/one language principle.

However these children do not really fit into this pattern. They appear to have two syntaxes, but a shared lexicon.

c) The language switching does not appear to cause the children particular problems. They are quite at home using what may resemble a language switching 'discourse mode' (see Sankoff and Poplak 1981). Like Rhian and Meleri in

example 3.5 they are fluent and effective communicators.

6.6 LANGUAGE SWITCHING IN 4 YEAR OLDS

The language switches of this cohort in the second year will not be treated in detail as was done with the three year olds. Details will only be given of language switches of types that were not found with the children in the previous year. Of the 28 children, 8 produced language switches in the second year (17 switches in all). 3 of the 8 had also shown switching in the previous year and 5 had not. These 3 included Rhian, (example 3.5) the most frequent switcher by far in the Welsh L1 group at three years old. Two types of switches were found in this age cohort that were not found with the three year olds. These are given below.

Sarah switches from Welsh to say

SARAH: I GOT THAT MUCH
: I GOT TWO

as if in attempting to emphasise her point the change of language adds another dimension of strength to her claim.

A second type of switch that was not found with the younger cohort is found several times in the games of this cohort. Meleri and Rhian play a game which involves Rhian role-playing a mother talking to a baby. She does so by switching to English and saying

RHIAN: COME ON BABY
: COME ON BABY BACH

in a high squeaky voice.

These additional types of switches were found in a more elaborate form with the older cohort and will be discussed in more detail in the next section. A summary of the different types of switches found in this cohort for both three and four year olds is given in table 6.2

TABLE 6.2

TYPES OF LANGUAGE SWITCHING - 3/4 YEAR OLD COHORT

	AGE 3	AGE 4
1a) switching to preferred language	present	_____
1b) switching where meaning best conveyed for child by use of L2	present	_____
2) switching 'triggered' by other words or utterances	present	present
3) switching in imitation	present	_____
4a) switching for quotation	present	present
4b) switching for characters in game	_____	present
5a) switching for person	present	present
5b) switching to match interlocutor's language	present	present
6) switching for numbers	present	present
7) switching for emphasis	_____	present
8) no clear reason	present	present

6.6 LANGUAGE SWITCHING IN THE 5/6 YEAR OLD COHORT

6.6a) Background to the Material

Before a detailed discussion of the language switches found with this group of children, some general points need to be made about the differences in the language of this cohort from the previous one. These differences are primarily due to the increased maturity of this group.

1) The major problems of distinctness and clarity of meaning are generally less by this stage. The tapes are much easier to understand and the children's meanings are usually clearer. Many of them are much less bound by context than the younger children, so it is easier to work out what the conversation is about from the tapes alone. There are also fewer children who are very quiet in this cohort, although this was still a problem for a few of the five year olds. A specific difficulty with the first year of the cohort is that some of the children had only been in school for a short period of time, often no more than a few weeks at the time of recording. They were therefore being put in an unfamiliar situation (testing) in what was still a fairly unfamiliar situation (school). This may have been the main reason why some of the 5 year olds were very quiet when being recorded.

2) Children are by this age showing more monitoring of their language. One particular aspect of this is found among children in bilingual schools (Ysgolion Gymraeg). When those who were known to have English as their preferred

language were encouraged to use English for the recording session, a few refused to do so. The reason as far as it was possible to tell was that they were at school where Welsh was the norm and using Welsh only in school was for them a rule that they were uneasy about transgressing. This point will be discussed further in chapter 7.

3. In the 3/4 year old cohort several of the examples reproduced in this chapter (and in this respect they are representative of the group as a whole) are from conversations between a child and an adult. This was usually because the children were reluctant to talk to each other and without this sort of adult prompting would have produced no language at all. In the 5/6 year old cohort this was less of a problem and the percentage of adult utterances is consequently much lower - most of the children were happy enough to talk to the other child present with little adult prompting. One implication of this is that the language of the 3/4 year old cohort includes quite a lot of language in the register of 'child to unfamiliar adult' whereas in this cohort relatively little of the language falls into this category.

The children in the 5/6 year old cohort formed a separate cohort from the 3/4 year olds already discussed. There were 77 children in this sample and their language use in the recording sessions in each year is shown in table 6.3. As with the previous cohort there were some children whose language changed between year 1 and year 2. These were all children whose language use was characterised as mixed in year one. Of the 11 children whose language use

was mixed in year one, only 4 were mixed in year two. 5 had moved to using Welsh, and 2 had moved to using English.

TABLE 6.3

CHANGE IN LANGUAGE USE BETWEEN YEAR 1 (5 YEAR OLDS) AND YEAR 2 (6 YEAR OLDS)

Welsh in year 1-----> Welsh in year 2

66 children

mixed in year 1-----> mixed in year 2

4 children

mixed in year 1-----> Welsh in year 2

5 children

mixed in year 1-----> English in year 2

2 children.

In the first year, 42 of the children had at least one example of language switching. In the second year the number was 45. The total number of switches produced was 109 by five year olds, and 123 by six year olds. Most of the types of language switching found at ages 3 and 4 were also found in this cohort. There were in addition some new types not found previously. Further examples of the types of switches already described for the 3/4 year old cohort will be given as well as additional ones for this cohort. Examples will normally be given from the transcripts of 5

year olds.

6.6b) Examples of switches

In the previous sections switches were first presented and then described. Here the categories already found with 3/4 year olds, and outlined in table 6.2 will be used as headings. These examples will be followed by those for categories only found for this cohort.

TYPE 1A - SWITCHING TO PREFERRED LANGUAGE

5.1

NAME: HUW

L1: WELSH

Switching in this category was often at a more sophisticated level than with the younger cohort. An example of switching to the preferred language for reasons of solidarity is shown here -

ADULT: DO YOU SPEAK ENGLISH?
: WHERE
: WHERE DO YOU SPEAK ENGLISH?
HUW: YSGOL AC YN Y TY. (school and at home)

Here, Huw chooses to answer the question in Welsh, although he is from a mixed linguistic background and has already talked to the adult in English. He clearly understands the question as he responds appropriately, and in fact says he can speak English although without demonstrating it here. An explanation along the lines of linguistic solidarity seems plausible here and fits in with observations made by Hill and Hill (1980) on adult speakers

(discussed in chapter 3). Huw is attending a Welsh medium school and the child with whom he is paired has just said that he speaks Welsh with Huw. Huw may feel bound to confirm his friend's statement and show his Welsh identity. He may also have a stronger need to conform to the needs of the general situation he is in, namely school, where Welsh is the norm, than to respond as would be expected in the immediate situation - the recording situation where he has been told to use his preferred language. This example shows that switching to preferred language is not necessarily an indication of lack of ability in the non-preferred language. Other factors such as in the example here may also lead to switching of this kind.

TYPE 2 - SWITCHING TRIGGERED BY OTHER WORDS

Many bilinguals have difficulty with certain words or phrases in one of their languages, usually because they have acquired them in a context associated with the other language. This difficulty can be dealt with by switching for the particular word; but the switch may also extend to other words or phrases that are near to the problematic word. This phenomenon is referred to as triggering (discussed in chapter 3).

An interesting example is the one by Nigel and Geraint in the following extract.

5.2

NAMES: GERAINT, NIGEL

L1: WELSH

NIGEL: MA' CWPAN FAN HYN (There's a cup here)
GERAINT: CUP OF TEA SY FAN HYN (There's a cup
of tea here)
: CUP OF TEA
: CUP OF TEA
GERAINT: DYNA HOT CUP OF TEA TU FEWN I HWN (
There's a hot cup of tea inside
this)
NIGEL: NA ((UNCLEAR)) HOT CUP OF TEA FEWN I
HWNNA (No..hot cup of tea into
there)

The repeated use of the phrase 'cup of tea' here has triggered off 'hot' in the later utterances. It is likely that in another context the Welsh word 'poeth' or 'twym' rather than the English word 'hot' would be used. It should be noted too that the adjective-noun word order is that of English rather than Welsh here.

TYPE 3 - SWITCHING IN IMITATION

Occasionally when one child switches the other imitates the switch. This indicates that the children share a notion of what is appropriate language switching. It also shows that the other participants in an interaction have a strong influence on how much switching takes place. This kind of accommodation to an interlocutor's level of switching is also found in adults.

5.3

NAME: SUSAN

L1: WELSH

In the following example Yvonne switches as part of a narrative device (to be discussed later) and Susan continues retelling the story by picking up on this.

SUSAN: (Telling the story of the three pigs)
A CA'L PREN I NEUD TY I HWN (And
gets wood to make a house for him)
: A DYN ...A ...A ... (and a man
...and ... and)
YVONNE: AC--AC UN ARALL YN DEUD 'HOW DO YOU
DO' (And another one says 'How do
you do')
SUSAN: HOW DO YOU DO?

Another example occurs when one child start a game of saying 'I am a dalek' in appropriate tones and the other follows suit. There was also an example of this type of imitative switching in example 5.2 when Nigel follows Geraint's switch. This type of imitative word play is very common in the shared imaginative games of this age-group.

TYPE 4A -SWITCHING FOR QUOTATION

There was a larger number of switches for quotation than with the previous cohort, perhaps reflecting the wider experience and greater sources of quotation available for children in this older age group. Particularly popular examples came from television, for example, 'I am a dalek' and 'Remember you're a womble' and there were others related to books.

5.4

NAME: MEIRION

L1: WELSH

ADULT: TI ISIO'R LLYFR 'MA? (Do you want this book?)

MEIRION: NA, WEDI DARLLEN HWNNA (No, I've read it)

ADULT: BETH SYDD YN'O FO? (What's in it?)

MEIRION: ONCE UPON A TIME THERE WAS
(UNCLEAR)

ADULT: (pointing) BE' SY'N DIGWYDD FANNA?
(What's hapening there?)

MEIRION: MIRROR, MIRROR ON THE WALL, WHO IS
THE FAIREST OF THEM ALL?

Here, Meirion is unable or unwilling to recount in Welsh the story which he has had read to him in English. This may suggest that his bilingualism is not as flexible as in a child who is prepared to make a spontaneous translation in such cases. Saunders (1982) reports that of his two bilingual sons, one was willing to carry out such spontaneous translations while the other, Frank, had more difficulty with this task. Saunders does not explain this in terms of bilingual fluency but considers that for Frank stories are very strongly linked with the language of origin, while for his other son they seemed to be less so. Sometimes children use a quotation from another language even when it seems likely that they know the phrase in the original language, as in the following example -

5.5

NAME: TINA

L1: WELSH

TINA: 'DWI 'ISIO 'NEUD HWN, 'STI (I want to
do this, you know)
: CACEN YMA (A cake here)
: (singing) 'HAPPY BIRTHDAY TO YOU'
SHARON: MA' RHYWUN 'DI CAEL PENBLWYDD HEDDIW.
(Somebody's had a birthday today)
: MARIA

Although it is possible that Tina doesn't know how to say 'Happy Birthday to you' in Welsh, this isn't very likely as the equivalent phrase 'Penblwydd Hapus i chi' is also very common and will certainly have been sung in this particular school which is bilingual and in a strongly Welsh-speaking area. Tina may have chosen to use the English phrase because it is somehow more salient to her in English. Perhaps Maria, (whose birthday it is), is English-speaking or perhaps Tina's family are more used to singing this in English than in Welsh.

TYPE 4B - SWITCHING FOR CHARACTERS IN A GAME

Examples of this are quite extensive at this age-range. Frequently they appear at first sight to consist of quite random switching such as in the following example

5.6

NAME: BARRI

L1: WELSH

BARRI: DYMA FO'N JYMPIO AR BEN FANNA (Then he jumps on top of there)
: HEY, GET OFF
: OEDDAN 'IM ISIO LLADD HWN CHWAITH, IE? (We didn't want to kill this one either, did we?)
: OEDD 'NA UFFARN O HELYNT (There was a hell of a row)
: DYMA HWN YN MYND AR BEN HWNNA (Then he goes on top of that)
: A HWNNA'N MYND AR FANNA (and that goes on that)
: GET OFF ONE OF YOU
: AND THEN STAY OFF
: YOU GET OFF
: ((UNCLEAR)) HORSE
: AND YOU GET ON ANOTHER HORSE
: ((UNCLEAR))
: A DYMA HWN YN MYND AR BEN (And than this goes on this)

On examining this script it is possible to see a pattern emerging. Barri is playing with toy people and animals in a sand-pit where he and the child playing with him have constructed hills and hollows and so on. There seems to be a game going on in which Barri has two roles. He is role-playing the parts of various characters and also explaining the narrative of the game. When he says in Welsh 'Then he jumps on top of there' and 'We didn' want to kill him either' he is taking on the role of narrator of the game but when he says in English 'Get off one of you and then stay off' he is taking on the role of one of the characters.

This would seem to be a very effective device for separating the two roles of actor and producer in game-playing which is not available to monolingual children

_although they will frequently make the same distinction by using different kinds of voices (Garvey 1984). This latter device is of course also available to bilingual children and is indeed used by them in addition to the language switching device.

Not all children use such a language switching device for all games and it may be relevant that Barri's game in the example above revolves around cowboys, horses and shooting and has its roots, like many children's games, very much in English language television programmes.

5.7

NAME: SHARON

L1: WELSH

The following example is similar although the game is rather different.

SHARON: TI'N DEUD PA UN COT (You say which coat)
: PA UN (Which one)
: A 'DWI'N DEUD (And I say)
: IA? (Yes)
: IA (Yes)
: YDAN? (Are we?)
: SYMUD ROWND GYN'TA' (Move around first)
: WHICH COATS DO YOU LIKE?

TINA: SHARON THOMAS

SHARON: O, DIM COT FI (Oh, not my coat)
: DEUD PA LLIW COT TI'N LICIO (Say which colour coat you like)
: TI'N POINTIO ATA' FO (You point to it)

These two girls are being recorded in a cloakroom and Sharon is trying, in Welsh, to get Tina to play a game where she picks out her favourite from among the coats hanging on the pegs. Tina doesn't seem very anxious to cooperate and

Sharon prompts her in English, the language presumably in which she wants the game to be played. Again, the language switch - 'Which coats do you like?' is useful in separating off actor from narrator. This game does not seem obviously linked to English language experience such as television. More generally, in any game involving an assumed role the use of the second language may be a good way of achieving the required distance from the normal self.

TYPE 5A - SWITCHING FOR PERSON

It can be assumed that most children, particularly by this age would generally be switching appropriately for person, for example, to English for English monoglots. It would not be expected that many examples of switching for person would be present in the transcripts as attempts were made to pair children who were similar in language use and the adult present followed the language choice of the children. However, on some occasions, children were inappropriately paired and found themselves partnered with a child with a different preferred language. One such pairing is of Huw and Melanie. They were both said by their teacher to have no clear preferred language. However Huw seems to be relatively stronger in Welsh and Melanie in English so there is something of a mismatch here.

5.8

NAME: HUW (different child from Huw in example 5.1 above)

L1: MIXED

Melanie, despite knowing some Welsh, speaks English most of the time whereas Huw switches easily from using Welsh with the adult to English with Melanie, for example -

ADULT: (to Melanie) WHAT'S YOUR MUMMY'S NAME?
MELANIE: MARY
ADULT: MARY IS IT?
: WHERE DOES YOUR MOTHER COME FROM?
: BALA DOES SHE?
HUW: (to Melanie) WHO'S MARY?
: (to adult) PWY 'DY MARY? (Who's Mary?)
: PWY 'DY MARY?
ADULT: MAM (mother)
HUW: MAM ((UNCLEAR))
ADULT: MAM MELANIE YNDE? (Melanie's mother isn't it)

This situation, which requires Huw to switch frequently does not appear to cause him any particular problems.

TYPE 5B - SWITCHING TO MATCH INTERLOCUTOR'S LANGUAGE

Switching to match interlocutor's language is dealt with separately from switching for person, in order to deal with examples where the interlocutor changes language, thus making a language switch appropriate for the child. This is probably more difficult for the child to deal with than type 5a, as here the child needs to constantly monitor the interlocutor's language rather than just initially labelling them as a Welsh speaker or an English speaker.

An interesting illustration of this arose in a recording session in a Welsh-medium school with two children who were learning Welsh but whose 'preferred' language (in the sense of being the language at which they were known to

be most proficient) was English. There is a conflict here for the children between the strong norm which says that school as a place requires Welsh to be spoken, and the norm of matching the interlocutor's language. The adult interlocutor has to work quite hard to get the children to switch language from Welsh to English as is seen in this example:

5.9

NAME: DAVID

L1: MIXED

ADULT: BE' WYT TI'N LICIO SIARAD TE, CYMRAEG
NEU SAESNEG? (What do you like
speaking then, Welsh or English?)
DAVID: SIARAD CYMRAEG A SAESNEG (speak Welsh
and English)
ADULT: WYT TI ISIE SIARAD SAESNEG RWAN? (Do
you want to speak English now?)
DAVID: NA (No)
ADULT: DO YOU WANT TO SPEAK...
DAVID: DIM YN YSGOL OND YN Y TY FI YN
((UNCLEAR)) (Not at school but at
home I)
: MAM YN SIARAD CYMRAEG A SAESNEG
(Mother speaks Welsh and English)
: SAESNEG A ((UNCLEAR)) CYMRAEG A DIM YN
GWBOD BE YDY ((UNCLEAR)) CYW BACH
(English and Welsh and doesn't know
what little chick)
ADULT: DWI'N LICIO SIARAD SAESNEG TI'N GWBOD
(I like speaking English you know)
DAVID: SIARAD SAESNEG DDIM YN YR YSGOL 'COS
MAE MISS ROBERTS YN ((UNCLEAR)) SIARAD
SAESNEG YN YR YSGOL 'COS MAE MISS
ROBERTS YN 'NEUD SLAP I FI. (don't
speak English in school 'cos Miss
Roberts ... speak English in school
'cos Miss Roberts gives me a slap)

The adult switches to English shortly after this but David continues to answer in Welsh until the following exchange

ADULT: HAVE YOU GOT A TORTOISE, DAVID?
DAVID: FI GAEL (I had/have)
: I'VE ONLY GOT A DOG

From here on he uses English most of the time although Welsh surfaces occasionally during the exchange as when, for instance, he asks permission to go and wash his hands. The other child in the pair, Andrea, has much the same problem, although she accomodates to the adult's English speech rather sooner. However, both of them continue to use Welsh with each other throughout despite being English preferred language speakers.

It may be noted that David refuses to switch to English when the adult simply tells him in Welsh to do so but does eventually accommodate to his use of English. This is perhaps to be expected, as there is something rather artificial in being told in Welsh to speak English to a Welsh speaker. It is interesting that the point at which David does switch is in the middle of a sentence he is having difficulty in forming correctly (Fi cael). Finding himself in the middle of such a problem may be what finally persuades David to switch to English.

5.10

NAME: EIRIAN

L1: WELSH

It is fairly common practice among Welsh speakers to say numbers in English when speaking Welsh and this practice is also found among the children in this project. Some of them are aware that this is frowned upon by some adults and so sometimes spontaneously translate back to Welsh, as in the following example.

ADULT: LLE TI'N BYW, EIRIAN? (Where do you
live Eirian?)
EIRIAN: PENRHOS ROAD.
: THIRTY THREE
: TRI A TRI (three and three)

Counting is frequently used as a form of word-play and it seems as though using numbers in both languages adds to the variety, and perhaps therefore the amusement of the game, as in the following example -

5.11

NAME: GLENDA

L1: MIXED

GLENDA: UN, DAU, TRI (one, two three)
ANGELA: ONE, TWO, THREE
GLENDA: PEDWAR (four)
ANGELA: TWO, THREE, FOUR, FIVE, SIX, SEVEN
GLENDA: SIX, SEVEN, EIGHT, NINE, TEN, ELEVEN,
TWELVE

.
.

They continue counting in English until

•

GLEENDA: NOW AFTER YOU GO UP TO TEN,
: THEN GO BLOINK
: AND THEN WE'LL CHANGE ROUND
: UN DAU TRI PEDWAR PUMP CHWECH (one
two three four five six)

Glenda certainly knows, and probably Angela too, how to count in both languages and this seems to add variety and amusement to the game for them.

TYPE 7 - SWITCHING FOR EMPHASIS

This type of switching is a stylistic device, likely to be used when children are involved in competitive arguments.

Studies have been made of such arguments, and it has been noted that an escalation device is a common feature in them in the speech of monolingual speakers. The following example comes from American children studied by Lein and Brenneis (1978).

Joey: All right. I can lift up this school.
What can you lift up?
Ann: I can lift up our whole family. I bet
you can't lift that up with one finger.
Joey: I can lift the whole world up with just
one finger...finger.
Ann: Well, I can lift up the whole universe.
So why don't you just be quiet about
that.

There are examples of the bilingual children in this present study using both their languages in this sort of escalation technique. Frequently numbers are involved, as in the following examples.

5.12

NAME: HAYLEY

L1: WELSH

HAYLEY: GYNNO' FI 'MOND DEG O LYFRA'
(I've only got ten books)
MARK: GIN FI LOT A LOT A LOT O LYFRA'
(I've got lots and lots and lots of
books)
HAYLEY: GENNA I HUNDREDS (I've got hundreds)
: GENNA I GANT (I've got a hundred)

The use of both the Welsh and English form of hundred may sound more emphatic for Hayley than the use of one language alone would have been.

Another example (taken from the recordings of six year olds) shows children switching when attempting to achieve an impression of great emphasis.

6.1

NAMES: SIONED MAI, SIONED MAIR

L1: WELSH

SIONED MAIR: DIOLCH YN FAWR (Thank you very
much)
SIONED MAI: BE TI'N GWEUD? (What are you
saying?)
: DIOLCH YN FAWR BETH? (Thank you
very much what?)
SIONED MAIR: THANK YOU
: BETH ARALL? (What else?)
SIONED MAI: THANK YOU VERY VERY VERY VERY
VERY VERY VERY MUCH DDYLET TI
DDWEUD (You should say)
SIONED MAIR: O YFE? (Oh, is it?)
SIONED MAI: WRTHO FI HEFYD (To me too)
SIONED MAIR: YY, THANK YOU VERY VERY MUCH

There are not many examples of this kind in this data and a study that aimed directly at getting examples of this

sort, perhaps by asking the children to have an argument around a specific theme (as in Lein and Brenneis) would achieve a wider range of bilingual examples.

In addition to the above switches, which are similar in type to those found in the 3/4 cohort, there were some types of switches found for the first time with this older cohort.

TYPE 8 - SWITCHING IN SELF-CORRECTION OR TO CORRECT OTHERS

One example of this was seen in 5.10 (switching for numbers) where Eirian corrects her own choice of language when she is counting. Children who correct themselves are also sometimes eager to correct others. Eirian also produced the following example

5.13

NAME: EIRIAN

L1: WELSH

ELUNED: SAND YMA (sand here)
ADULT: BETH? (What?)
EIRIAN: TYWOD (sand)

Rhian is another child who produces both a self-correction and corrects another child.

5.14

NAME: RHIAN

L1: WELSH

ELFYN: NI'N LUCKY (We're lucky)
ADULT: BETH? (What?)
RHIAN: 'NATH ELFYN 'WEUD NI'N LWCUS (emphasis
on final word) (Elfyn said we're
lucky)

.
.
.

RHIAN: TELEVISION, TELEDU FANNA (television,
television there)

Several of the children are quite sensitive to the use of English words in Welsh and interpret an adult query as an invitation to correct, although the adult is not in fact trying to highlight the child's inappropriate choice of language but has failed to hear or understand what the child is saying. This is probably the case with the above examples and the following one, too.

5.15

NAME: ANWEN

L1: WELSH

ANWEN: CHWARE WITCHES (playing witches)
SIAN: IE, WITCHES (yes, witches)
ADULT: BETH ANWEN? (what Anwen?)
ANWEN: CHWARE GWRACH (playing witch)

The occasional child is very anxious to show up another child's error in this area even though they may not know the correct version.

5.16

NAME: HAYLEY

L1: WELSH

MARK: TEN MINUTES TO GO

HAYLEY: TI'M FOD I DDEUD 'TEN MINUTES TO GO'

MARK (You're not supposed to say 'ten minutes to go' Mark)

ADULT: BE' TI FOD I DDEUD, HAYLEY? (What are you supposed to say, Hayley?)

HAYLEY: DWI'M YN GW'BOD (I don't know)

MARK: SAESNEG (English)

Mark, the corrected child appears to know quite well the grounds for Hayley's correction - perhaps it's not the first time she's corrected him in this way!

TYPE 9 - SWITCHING FOR PLACE

Normally this type of switching occurs when there is a change of setting or domain. Probably most of the children in the sample are adept at this sort of switch, but the study situation allows no demonstration of it, as no change of setting took place. However, the effect of setting on language choice is very clear in examples where children maintain the use of the language which was not that used by the interlocutor, or their own preferred language. This happened with preferred language English children attending Welsh-medium schools, as in example 5.9 above. The interlocutor used English with them, this being their preferred language in general. However, the norms of setting were very powerful influences on these children, leading them to reject the use of English, despite assurances that they were 'allowed' to use it. This is an

interesting example of the norms of the overall setting being more significant for the children than the norms of the immediate setting, something perhaps unexpected in children this young.

TYPE 10 - SPONTANEOUS TRANSLATION

This type of switching was not found in the 3/4 year old cohort. Two different types of spontaneous translations were produced; some appeared to have an explanatory function and others were part of a game.

5.17

NAME: RHODRI

L1: WELSH

ADULT: PWY 'DY NIA? (Who's Nia?)
RHODRI: MM, WEL MAE YY CEFNDER (sic) I MI;
COUSIN (Mm, well she's my cousin,
cousin)

This is very similar to self-correction but has been included in a separate category because the language the child is switching to is not the appropriate one to use. It is worth noting that the Welsh word the child uses is the incorrect one as the Welsh word for cousin is marked for gender and Rhodri selects the wrong gender here. It may be an awareness on his part that the first use is not quite right that leads him to switch to English here.

5.18

NAME: HARRI

L1: WELSH

HARRI: DWI ISIO TAMAID O ((UNCLEAR)) (I want
a little bit of)
: DWI ISIO LITTLE BIT OF ((UNCLEAR))
: DWI ISIO LITTLE BIT OF ((UNCLEAR))

This seems to be more an aspect of word play than a switch that has a communicative function.

The examples of translation in this section show an ability on the part of children to use their bilingualism as a way of making their meanings clearer and thus an aid to communication. A similar point is made in the literature on bilingual language acquisition; if what is said in one language isn't understood, the bilingual child when speaking to another bilingual has the option of trying the other language.

TYPE 11 - SWITCHING IN ELABORATION OF WORD-PLAY

This final category is in some ways similar to the previous example but involves using two languages in word-play without necessarily translating from one to another.

5.19

NAMES: HARRI, ALAN

L1: WELSH

HARRI: REMEMBER YOU'RE A WOMBLE
: REMEMBER YOU'RE A FATTY

ALAN: NA (no)
: YOU REMEMBER YOU'RE A
HARRI: (interrupting) 'MEMBER, 'MEMBER,
'MEMBER, 'MEMBER WHO YOU PONGY-WOH
laughter
ALAN: NO, YOU 'MEMBER, 'MEMBER, 'MEMBER,
'MEMBER, YOU ARE DYN EIRA (snow-man)
: REMEMBER, 'MEMBER
HARRI: REMEMBER YOU A COAT ARE

This is an English section incorporated into a primarily Welsh text. Here we see the children are as likely to incorporate Welsh words as English ones into the borrowed rhyme. This is a rather more creative and elaborate use of quotation than that seen in the three year olds. It would be unlikely that the children would translate this as the rhythm is clearly important.

Virtually all the language switches quoted in this section were made by the children when they were 5, during the first year of study. Interestingly, despite their added maturity there were no additional types of language switches found with this cohort at age 6 only, although many further examples of the same types were found. Table 6:4 summarises the types of language switches found for this cohort in both years.

TABLE 6:4

TYPES OF LANGUAGE SWITCHING - 5/6 YEAR OLD COHORT

	AGE 5	AGE 6
1a) switching to preferred language	present	present
2) switching triggered by other words or utterances	present	present
3) switching in imitation	present	present
4a) switching for quotation	present	present
4b) switching for characters in a game	present	present
5a) switching for person	present	present
5b) switching to match interlocutor's language	present	present
6) switching for numbers	present	present
7) switching for emphasis	present	present
8) no clear reason	present	present
9) switching in self-correction	present	present
10) switching for place	present	present
11) spontaneous translation	present	present
12) switching in elaboration of word play	present	present

SUMMARY AND CONCLUSION

In this chapter I have described the data used in the language switching study. After an outline of the recording procedure there is a discussion of some of the problems involved in trying to describe and explain language switches. These include the difficulties in deciding what constitutes a language switch and in interpreting the meanings of young children's utterances. This is followed by a detailed discussion of all the switches made by the three year old children in the sample. Each switch is presented and then discussed, with an attempt being made to find an explanation for each one. It is acknowledged that this is not necessarily possible, either because of a lack of contextual information, or, more crucially, because it is not always possible to find such explanations of language switching for all individuals. However it did seem possible to find plausible explanations for the vast majority of language switches; these explanations can perhaps be considered to be subjective but no more so than those given in previous studies and discussed in earlier chapters.

Some examples of language switching at age 4 were then discussed but these were limited to those that exemplified new categories. The same categories were also used to discuss the switches made by the five and six year olds, and additional types of switches found here were also discussed.

The main aim of this chapter was to give examples of language switches and to show the way in which they can be

discussed and categorised. Carrying out this exercise does of course lead one on to consider many further questions, for instance about the differences between children in the amount of and types of language switching. If children vary in this, does it reflect certain other differences in them such as their language facility or language background or are such differences likely to be largely due to the context of the recording?

In chapter 3 it was seen that whereas many studies are content merely to describe different types of language switches (as I have done in this chapter), others, for example, Scotton (1980, 1988a, 1988b), and Hill and Hill (1979, 1980) have tried to discuss language switching patterns in a more general way.

Issues of this kind and others will be considered in the next chapter.

CHAPTER 7

LANGUAGE SWITCHING IN WELSH/ENGLISH BILINGUAL CHILDREN: ANALYSIS OF DATA

7.1 INTRODUCTION

This chapter takes the discussion of the language switches described in the last chapter rather further, and in particular compares the data of this study with that found in previous studies. The following questions will be considered:

- 1) How much language switching is there in the language of bilingual children?
- 2) Do individual children vary in how much they switch? If so, what are the factors that cause this variation?
- 3) As children get older, does language switching increase, decrease or is there no particular pattern?
- 4) What are the types of language switches produced by young children?
- 5) Can their language switching be considered an indicator of a certain level of competence, or does it reflect a lack of ability in one or other of the languages?
- 6) Do the types of language switches they produce change as they get older?

As well as attempting to answer these questions I will

look more closely at what the consideration of this particular set of data might have to say about language switching and its determinants. I will reconsider the ways of describing and categorising language switches discussed in chapter 3, and try to assess how the different approaches might fit the data of this study. I will also discuss an alternative approach to categorising language switching.

This chapter is divided as follows:

- a) a discussion of the amount of language switching produced by the children in the study
- b) a discussion of children who seem to be very frequent language switchers
- c) a discussion of the types of language switching produced by the children in the study
- d) a consideration of developmental patterns in language switching
- e) a discussion of ways of categorising language switches
- f) summary and conclusion

It will be shown in the next section that the amount of switching across the sample as a whole was not large. It could then be considered that further analyses would have little validity, in view of the small amount of data on which they are based. It is acknowledged that there is much truth in this criticism. Much of the analysis and discussion put forward in this chapter will be presented as possibilities, rather than strong findings based on large amounts of data. They are however included as illustrating analyses that can be undertaken with this type of data, as well as being of interest in their own right.

Although this chapter contains a certain amount of quantitative data, much of the discussion is qualitative and inferential. The nature of the data makes this an appropriate approach, and is generally the approach that has been taken with material of this kind.

7.2 AMOUNT OF LANGUAGE SWITCHING

7.2a) Background Material

As was mentioned at the end of chapter 3 many studies in the literature have said little about the frequency of language switching in bilinguals' speech. Those who have studied it in adults tend to think that it is 'very frequent' (Grosjean 1982), but this is obviously rather unsatisfactory. 'Frequent' could mean a language switch in every other utterance, or perhaps once or twice in half an hour's conversation. In any case the frequency is unlikely to be absolute, but to vary according to certain features of the environment. The literature discussed in chapters 2 and 3 pointed to some of the factors that may determine amount of language switching. These include setting, interlocutors, topic and so on. Gumperz (1982) and Heller (1988) suggest that switching will be most frequent in fast-changing, urban communities where traditional boundaries are breaking down. Poplak, Sankoff and Miller (1988) point towards the importance of attitudes towards language switching in different communities. It is clear that there are likely to be wide variations in amount of switching from individual to individual, and from speech community to speech community. However most studies do not give much information on actual frequency of language switching, either for groups or individuals.

Another problem arises with the different ways in which language switching is defined. This was discussed in

chapter 2. Depending on the definition, language switching (or code-switching as it is often called) may overlap with other terms. Attempts have been made by Poplak, Sankoff and Miller (1988) to make a distinction between language switches and interference or loan words by saying that the latter are phonologically adapted whereas language switching is not. However it is not always easy to make this distinction in practice. It requires a good quality recording and a close transcription. Language switching is also seen as a feature that is specific to an individual speaker. If the word or phrase used is one that most speakers in the community use in this way then it is a loan word or phrase for that particular group rather than an example of an individual's language switching. Again it is not always easy to know what are common loan words in a particular community. In the current study the children came from many different regions of Wales, and what is a common loan word in one area may not be in another. There are also differences at an individual level. If a child comes from a Welsh speaking home where a particular English word or phrase is always used then, if the child uses it, this is not a language switch even if it would be when produced by another child. It cannot be assumed that children as young as those in this study know which words belong to which language.

While these problems have been acknowledged in the literature no agreed definition of language switching has been developed to overcome them. Each study seems to use its own set of definitions. It is not then possible to

compare the results of different studies in a meaningful way when one is talking about the amount of language switching that is produced. Differences between studies are as likely to be the result of different definitions as reflections of real differences between the groups studied. All that can be done is to compare different amounts of language switching between different individuals studied according to the same criteria (and this probably means within the same study), or of the same individuals at different times and places. However, many of the studies have been of very few subjects indeed (often fewer than ten, and in some cases one or two only), and in a small number of settings. What may frequently happen is that a few subjects are selected, perhaps precisely because they have already been observed by the investigator as people who frequently switch languages. They are then recorded in situations which seem to be particularly conducive to language switching. This procedure is perfectly acceptable if the aim is to get a corpus that maximises language switches in order to study this particular phenomenon. It cannot though be used as a way of telling us anything about the amount of language switching in normal usage.

The intuitions of bilingual speakers themselves, or of monolingual overhearers, are not necessarily very useful either. As was discussed in chapter 3, language switching is something that many bilingual speakers disapprove of in themselves and others. This may be in part due to an inability to distinguish between language switching and interference. If asked to report on their own usage their

feeling of shame may lead them to be overcritical of their own language use, tending to exaggerate the amount they switch, or it may make them deny ever using language switches. Monolingual overhearers too, are likely to exaggerate the amount of switching that takes place in the speech of bilinguals. For instance Nancy Banks-Smith in a review of a play which was broadcast in Welsh with English subtitles on BBC2 (Guardian Dec. 18th 1985) says

"The English words which leapt out of the dialogue like wolves were superintendent, constable, petrol, syringe, Highway Code, poaching, propaganda, bomb, camp, bow-tie, Botany Bay, Air Ministry, technicality, trumped-up case, damn and braces."

It can be seen that this list includes many words that are genuine loan words, for example, cwnstabl (constable), propaganda and others, for example, Botany Bay that could not sensibly have been translated into Welsh. Monolinguals unaware of the loan words in their own language may frequently overestimate language switching and interference in bilinguals' speech. The point that is being made here is that we have little objective evidence on the frequency of switching in bilingual speech and subjective opinion based on intuition is often very unreliable. In any case definitions differ so much that it is not clear that people are talking about the same thing.

Some studies on language switching in young children are however rather more informative about the amount of language switching that takes place, although relatively few such studies have been carried out. Lindholm and Padilla (1978) found that only 1.7 % of the utterances produced by

their 2-6 year old subjects included switches despite the experimental condition being one that would seem to maximise their use. Garcia and Carrasco (1980) similarly found that only 2% of the utterances of the 2-3 year olds she studied included language switches.

This is described in both studies as being very little and the findings are used as evidence that the children are able to separate out the languages easily and show no sign of confusion.

However, some have observed examples of children switching rather more than this (Huerta-Marcias 1981, Bergman 1976), but most of the work on bilingual language acquisition suggests that children do not switch a great deal.

There seems to be a real discrepancy here between the findings in the adult studies and those of the child studies. This can be interpreted as a real difference between children and adults, but it may equally be attributable to differences in the way that studies have been carried out.

7.2b) Findings of language switching study

How can the amount of switching in the present study be assessed against this background?

It is important to remember at this point the definition of switching being used (set out at the beginning of chapter 6). In particular, language switches have to consist of at least two words in the other language, with two exceptions. One was that single word intrusions in Welsh in a basically English text were included as switches. (These were allowed

because they could not have been considered to be loan words other than in obvious examples such as 'eisteddfod'). The other was that single word switches of English into Welsh were included when there was evidence through its being used elsewhere in the text that the Welsh word was known by the child.

The obvious place to start this discussion is to ask whether the children in the study switch languages at all. The data to answer this apparently straightforward question are given in Table 7:1

TABLE 7:1

NUMBER OF CHILDREN LANGUAGE SWITCHING AT EACH AGE

Age at recording	Total no. of children	Total no. (%) of children lang. switching	Total no. of language switches
3	28	9 (32)	21
4	28	8 (29)	17
5	77	42 (55)	109
6	77	45 (58)	123

It is apparent from this that in the two younger age groups two-thirds of the children do not produce any language switches at all, and in the two older groups nearly half do not produce any language switches. This table is not however very meaningful unless it is made clear how much language was produced by the children. In order to estimate how frequent language switching is in the group as a whole, it is useful to know the total number of utterances produced by each child. An estimate for this was made by counting the total number of utterances produced by each child. This was estimated by counting the total number of utterances

produced by a sample of 10 of the children in each age-group. This can be seen in Table 7:2.

TABLE 7:2

ESTIMATED NUMBER OF UTTERANCES PRODUCED DURING HALF-HOUR RECORDING

	mean no. per child	total for age-group
3 yr. olds	87	2436
4 yr. olds	142	3976
5 yr. olds	185	14,245
6 yr. olds	197	15,169

Taking tables 7:1 and 7:2 together it is clear that as far as this particular group is concerned language switching is not 'very frequent'. It occurs in less than 1% of utterances in each group (0.86% for age 3, 0.43% for age 4, 0.77% for age 5, and 0.81% for age 6). However, many of the utterances, particularly those produced by the younger children, consisted of one word only; it was obviously not possible for these to include language switching given the criteria set out above. These percentages are even smaller than those found by Lindholm and Padilla, and Garcia and Carrasco, but are generally consistent with them.

Why did the children not switch very often? As has been said already, this data was not collected with switching in mind, so no attempt was made to maximise language switching. Most children were recorded with another child and adult who all shared the same preferred language. There was then no reason related to the linguistic ability of the other child for language switching (however, there were a few exceptions to this as described in chapter 6). On the other hand there were some factors in the situation that might have led one

to expect more language switching. The children were in an informal situation, or at least as informal as can be provided within the confines of school. The adult present made no attempt to control or comment on their language use. The large amount of language play that was present on the tapes does testify to the fact that the children were relaxed and at ease. They were also being recorded with another child whom they knew well and the literature on adult bilingual language switching suggests that switching is most frequently seen when bilinguals who know each other well are talking in a relaxed situation. This can then be seen as a situation that would be conducive to producing certain types of language switching. Given all these factors it is rather strange that there was so little switching.

One possible reason for the low levels of switching lies in the way in which it was defined, in particular, the condition that it had to consist of at least two consecutive words. This meant that single words in the other language were never included as examples of switching. Such single words were in fact very common. In some cases they occurred as single words within an utterance, sometimes phonologically adapted to Welsh. (Common examples here were verbs ending in 'o' or 'io', for example, tippo, buildo, shareo, spoilio.) At other times the whole utterance consisted of only one word, and that word an English one, for example

ADULT: BE' 'DY HWN? (What's this?)
CHILD: FISH
ADULT: A BE' 'DY HWN?
CHILD: SAND

There are different ways of interpreting this dialogue.

One would be to say that the child switched to English perhaps because it's his preferred language. This would certainly be the interpretation if he had said something like 'It's a fish. It's sand.' However an alternative interpretation is to say that the child is using English loan words while speaking Welsh. An examination of the whole transcript could help to clarify this and in this particular example all the sentences produced by the child were in Welsh so providing some support for the second hypothesis. It is also the case that both the words 'fish' and 'sand' do feature quite commonly as loan words in the speech of Welsh speakers, and this again supports the second hypothesis. In this case, following the rules set out in chapter 6 for determining language switches has probably led to the right decision being made here, that is, that the example above does not constitute language switching. But there may be examples where single word utterances have not been included as language switches when in fact they should have been. This would be particularly true with the younger cohort where single word utterances were very common.

This use of loan words may well hold the key to the apparent discrepancy between the finding here that language switching does not occur very often and the observation frequently made that Welsh/English bilingual children's

speech includes a great deal of English. This is very largely the result of using loan words rather than language switches. Lists were made of the loan words used by both cohorts and these are included in Appendix A.

As can be seen, these lists are very extensive and all the children in the project except for a handful used some loan words, with many children using a large number of them.

As the children's vocabulary gets larger the use of loan words seems to increase, although the longer lists for the older cohorts may be in part due to the greater amount of language produced by them. This extensive use of loan words is frequently viewed very negatively by those who would keep the language pure. It is certainly the case that for virtually all the words included in Appendix A there is a perfectly good Welsh alternative. However it is probably unrealistic to expect young children to use them in preference to the English terms. For many of these children, new experiences and interests will inevitably come to them in English through books, television and English speaking adults and children. Much of the new vocabulary they learn will then obviously be in English and the use of loan words does allow them to continue speaking Welsh while still making use of all their lexical resources. Reports on the experience of parents bringing up children bilingually (de Jong 1986) show that some children stopped using one of their languages altogether when they did not have enough vocabulary in it with which to talk about their increasingly varied and complex activities and interests. This does not seem to be the case with these bilingual Welsh/English

children; the strategy of using loan words is adopted instead. This may well offend some ears but in terms of the children's own communicative needs it is very adaptive, allowing them to continue speaking Welsh while making use of the widest possible vocabulary.

The answer to the question posed at the beginning of this chapter seems to be that children in general do not switch very much. This finding however only relates to the group as a whole and does not consider individual differences. Some children were exceptions to this pattern, and it is to a consideration of these children that I will now move.

7.2c) Differences between Children in Amount of Language Switching

Having looked at the total amount of switching in each age-group it then seemed important to ask if there was any marked pattern of individual differences between children, in the amount of switching produced. Previous studies have not addressed this question, but Poplak (1980) discusses the use by some people of a 'bilingual discourse mode', that is, a very generalised use of intra-sentential switching.

The number of switches produced by each child who language switched is given in Tables 7:3a to 7.3d.

TABLE 7:3a

NUMBER OF LANGUAGE SWITCHES PRODUCED BY LANGUAGE SWITCHING CHILDREN - 3 YEAR OLDS

No. of children	No. of switches
1	8
1	5
1	2
6	1
<hr/> 9	<hr/> 21 Total

TABLE 7:3b

NUMBER OF LANGUAGE SWITCHES PRODUCED BY LANGUAGE SWITCHING
CHILDREN - 4 YEAR OLDS

No. of children	No. of switches
1	7
1	4
6	1
<u>8</u>	<u>17</u> Total

TABLE 7:3c

NUMBER OF LANGUAGE SWITCHES PRODUCED BY LANGUAGE SWITCHING
CHILDREN - 5 YEAR OLDS

No. of children	No. of switches
1	15
1	8
1	7
3	5
2	4
3	3
16	2
15	1
<u>42</u>	<u>109</u> Total

TABLE 7:3d

NUMBER OF LANGUAGE SWITCHES PRODUCED BY LANGUAGE SWITCHING
CHILDREN - 6 YEAR OLDS

No. of children	No. of switches
1	11
2	7
2	6
1	5
6	4
7	3
10	2
16	1
<hr/> 45	<hr/> 123 Total

Tables 7:3a to 7:3d show that there were some children who switched rather more than the other children.

There is clearly a continuum here so the point at which frequent language switchers are divided off from the rest of the group is somewhat arbitrary, but for the purpose of this study 4 or more switches was selected as the cut-off point for frequent switchers for 3 and 4 year olds, and 5 or more switches in the 5 and 6 year olds. The larger number chosen for the older cohort is reasonable when one considers the greater number of utterances produced by the older group in a half-hour recording. These cut-off points give the following numbers of frequent language switchers per age level;

2 at age 3,

2 at age 4,

6 at age 5

and 6 at age 6.

As this is a longitudinal study an obvious question to ask is whether the children who are frequent switchers in

one year of the study are the same children who are frequent switchers in the other year of the study. This information plus the names of the frequent switchers is given in Table 7:4

TABLE 7:4

NUMBER OF SWITCHES MADE IN BOTH YEARS OF RECORDING BY CHILDREN WHO WERE FREQUENT SWITCHERS IN AT LEAST ONE YEAR

NAME	NO. OF SWITCHES IN YEAR ONE	NO. OF SWITCHES IN YEAR TWO
Cohort 3/4		
Rhian	8	1
Alison	5	0
Sarah	1	7
Meleri	1	4
Cohort 5/6		
Barri	15	2
David	8	0
Glenda	7	0
Angela	5	1
Rhian	5	2
Michael	5	2
Meirion	2	11
Rhodri (T.)	2	7
Sioned Mair	0	7
Matthew	2	6
Rhodri (B.)	0	6
Sioned Mai	0	5

Table 7:4 shows clearly that there is no tendency for those children who are frequent switchers in one year to be frequent switchers in the other year. In fact not one of the children in either cohort is a frequent switcher in both years recorded.

This lack of stability suggests that being a frequent language switcher is unlikely to be an inherent characteristic of particular children, or perhaps that the

reasons for switching are inherent to the child but that the time difference of a year between the two recordings is enough to alter significant characteristics. One particular characteristic that seemed worth considering further was the language background of the children, with the hypothesis being made that the more mixed the language background of the child the more likely he or she is to switch. This will be partly because the child is likely to have equal facility in both languages and partly because a child from a mixed language background will perhaps have a home environment where switching takes place fairly frequently. Information concerning the language background of the children in this project was obtained by asking parents to fill in a questionnaire. This asked them to state the language or languages used by themselves and their child with a range of different people. They were asked which languages(s) their child spoke to

- a) his/her mother
- b) his/her father
- c) his/her brothers and sisters
- d) his/her grandparents
- e) his/her friends
- f) his/her neighbours.

They were also asked to state

- g) father's first language
- h) mother's first language
- i) language parents spoke together
- j) language mother spoke to friends
- k) language mother spoke to neighbours

- l) language father spoke to friends
- m) language father spoke to neighbours.

Responses to these items were scored by allocating one point for each item where the language used was Welsh, 0 points if the language was English and half a point if both languages were used. This gave a score of 13 points if only Welsh was used throughout and a score of 0 if only English was used throughout. This is rather a crude method of scoring as not all the items are of equal importance in determining the language background of the child. For instance, the language the child speaks to mother is more important and should be more heavily weighted than, for instance, the language spoken by father to father's friends.

Another problem is that it is not possible to give each child a maximum score if, for instance they have no brothers or sisters, or live in a single parent family with no data available for the father. However this method does give considerably more information than, say, simply asking teachers or the children themselves to state their preferred language.

Having given each child a score, they were divided into 3 groups as follows:

- 1) 0-3 points - English background
- 2) 3-9 points - mixed background
- 3) 10-13 points - Welsh background

Table 7.5 shows how the children in the language switching study as a whole were distributed into these three categories. Children are classified in the unknown category when no questionnaire was returned by their parents.

TABLE 7.5

LANGUAGE BACKGROUND SCORES FOR ALL CHILDREN
IN THE LANGUAGE SWITCHING STUDY

	Language Background English (0-3 points)	Language Background Mixed (3-9 points)	Language Background Welsh (10+ points)	Unknown
3/4 yrs	1	9	16	2
5/6 yrs	6	17	41	13

This table shows that the majority of children in each cohort came from overwhelmingly Welsh backgrounds, but that sizeable minorities came from mixed language backgrounds. Few of the children came from mainly English backgrounds. This is to be expected as virtually all the children in this study had Welsh as their preferred language. (see chapter 5)

Having looked at the language background of the sample as a whole it is now important to consider whether the children who were frequent switchers were similar in language background, or were markedly more likely to come from mixed language backgrounds. The information for this is given in table 7.6

TABLE 7.6

LANGUAGE BACKGROUND OF FREQUENTLY SWITCHING CHILDREN

Name	Child's Language Background
Rhian	mixed
Alison	mixed
Sarah	mixed
Meleri	mixed
Barri	Welsh
David	English
Glenda	mixed
Angela	mixed
Rhian	mixed
Michael	Welsh
Meirion	English
Rhodri(T.)	Welsh
Sioned Mair	Welsh
Rhodri(B.)	Welsh
Matthew	Welsh
Sioned Mai	Welsh

As can be seen, Tables 7.5 and 7.6 show that there are more children from a mixed background among the frequent language switchers than among the sample as a whole. This difference does not however reach significance for the two cohorts considered as a whole (chi square=3.2, df=2, $P < 0.2$).

A study of the relevant tables suggests that the tendency appears to be most marked among the younger cohort where all 4 frequent switchers come from mixed backgrounds compared with only a third of the sample as a whole, but the numbers involved are too small to make it possible to test for significance.

As well as the possibility of there being a difference in the language background between the frequent switchers and the non-switchers, it is also possible that the difference lies not in any characteristic of the child but

in the situation of the recording. Although attempts were made to keep the situation constant and to pair children who had the same preferred language, there were occasional pairings which were inappropriate; that is, a Welsh preferred language child was paired with an English preferred language child. If a child is in a situation like this and switches more than average it is as reasonable to attribute this to the situation as to any particular characteristic of the child.

If, for instance, one of the children in a pair being recorded together had a Welsh background (scoring 10-13 points on the language background scale) and the other an English background (0-3 points) one might expect there to be quite a lot of language switching as the children strive to make themselves understood.

The information relevant to this is given in Table 7.7

TABLE 7.7

LANGUAGE BACKGROUND OF FREQUENTLY SWITCHING CHILDREN
COMPARED WITH THE LANGUAGE BACKGROUND OF THEIR INTERLOCUTORS

Name	Child's Language Background	Interlocutor's Language Background
Rhian*	mixed	mixed
Alison	mixed	mixed
Sarah	mixed	mixed
Meleri*	mixed	mixed
Barri	Welsh	Welsh
David	English	English
Glenda+	mixed	mixed
Angela+	mixed	mixed
Rhian	mixed	mixed
Michael	Welsh	unknown
Meirion0	English	Welsh
Rhodri(T.)	Welsh	mixed
Sioned Mair£	Welsh	Welsh
Rhodri(B.)	Welsh	Welsh
Matthew0	Welsh	English
Sioned Mai£	Welsh	Welsh

NOTE: **,++,00,££ - these symbols indicate that the two children were recorded together.

Among the 3/4 year old cohort there are no mismatches between children being recorded together, lending little support to this hypothesis. Among the 5/6 year old cohort 3 of the children experience a mismatch, and the situation for one child (Michael) is unknown. There is some support for the claim that a mismatch in terms of the language background is related to language switching with the older cohort only, in the second year. One would however suppose that a mismatch leading to difficulties in being understood would be a greater problem for the younger children than for the older group when it can be assumed that the children's ability in both languages has improved and the language background is less significant. The main conclusion here

must be that there is not much support for the claim that mismatches between the two children's language is a major reason for language switching.

In this section on frequent language switchers it has not been possible to pinpoint any particular characteristics of the children who switch frequently. They were not generally placed with an interlocutor who had a very different language background from theirs, which would have given them a reason for switching. Nor were they themselves particularly likely to come from mixed language backgrounds although there was some tendency for this to be the case with the younger cohort. It was clear that being a frequent language switcher was not something that was constant across both years of recording in this particular sample. This suggests that an individual tendency to language switch is not something that is a fixed characteristic of the individual at this age. However, Poplak (1980) found in her Puerto-Rican study that there were some factors that correlated with using this kind of discourse mode, in particular, being female, being a balanced bilingual, and acquiring the second language early in life. In the current study the data does not show any significant gender differences, and unfortunately there was no evidence available concerning degree of bilinguality, or age of acquisition.

The frequent language switchers produced an average number, or higher number than average, of utterances, when compared with the rest of their cohort, so it is clear that the relatively large number of language switches did not impede

their communication, but was, as described in the previous chapter, an aspect of their particular style of communication which was indeed a very efficient one.

A final question that was considered in an examination of the frequent switchers was whether the types of switches they produced were different from those of the cohort as a whole. However no significant difference was found (chi square .65, df1, not sig.) between the types of switches produced by the frequent switchers and those produced by the other children.

The question then about whether there are any particular characteristics to be found in frequent language switchers remains unanswered.

Hamers(1981) describing the bilingual child generally says

"the bilingual child is developing... a number of strategies which will allow him/her to avoid interlingual interference."

This is probably true for most of the children in this study (although the point already made about extensive use of loan words needs to be borne in mind) but does not seem to characterise the frequent language switching children. Perhaps the main conclusion to be drawn is that there are many individual differences between children in how they use their two languages; these strategies are not necessarily constant over time and it is not clear what might be causing differences. Making generalised statements about how 'the bilingual child' uses his or her language should however be avoided as there is no one universal strategy.

It is also true that the number of children isolated in this

study as being 'frequent switchers' is small, and it is perhaps unwise to try and draw too much from a sample of this size. However, the kinds of analyses outlined here indicate some approaches that could be usefully employed with a larger sample.

7.3 TYPES OF LANGUAGE SWITCHES

This chapter has so far concentrated on the amount of language switching produced by the children in the study without taking account of different types of switches. In chapter 6 the different types of language switches found are described extensively and the findings are summarised in table 6.2 for the younger cohort and table 6.4 for the older cohort.

The main aim of this section is to compare the types of switches found in this study with those that have been mentioned previously in the literature both on adults (discussed in chapter 3), and on children (discussed in chapter 4). Tables 7.8, 7.9 and 7.10 give the information needed for this comparison. The format used is the same as that used in chapters 3 and 4 where studies on both child and adult language switching studies were described, with the types of switches divided into the following four areas: content switches, interlocutor switches, style switches and emotional switches.

Table 7.8

TYPES OF LANGUAGE SWITCHING IN CHILDREN
IN CURRENT LANGUAGE SWITCHING STUDY

CONTENT

- 1) switching where meaning best conveyed for child by use of L2
 - 2) switching to preferred language
 - 3) switching triggered by other words or utterances
 - 4) switching for numbers
 - 5) switching for quotation
-

INTERLOCUTOR

- 6) switching in imitation
 - 7) switching for person
 - 8) switching to match interlocutor's language
 - 9) spontaneous translation
 - 10) switching in self-correction
-

STYLE

- 11) switching for characters in game
 - 12) switching for emphasis
 - 13) switching in elaboration of word-play
-

- 14) random switches, no clear reason
-

- 15) change of place

Table 7.9

TYPES OF LANGUAGE SWITCHING IN ADULTS
(based on literature discussed in chapter 3)

CONTENT

- 1) for quotation
 - 2) because of the topic
 - 3) for technical terms e.g. mathematical or medical
 - 4) for proper nouns
 - 5) because of lexical need
 - 6) switching triggered by other word or other phrases
-

INTERLOCUTOR

- 7) to indicate direction of question or comment when there are several interlocutors present
 - 8) to exclude someone from conversation
 - 9) to accommodate to somebody else's language switch
 - 10) to stress in-group membership
 - 11) to show a change in the social role of speakers
-

STYLE

- 12) for humorous effect, particularly the punch-line of a story or joke
 - 13) as a rhetorical device
 - 14) as a linguistic routine e.g. for introductions
 - 15) to emphasise or reinforce. Will sometimes signal end of interaction
 - 16) to amplify or add to remarks
 - 17) to make parenthetical remarks
-

EMOTION

- 18) in situations of intimacy
 - 19) to show anger
 - 20) when teasing or swearing
-

- 21) random switches, no clear reason

Table 7.10

TYPES OF LANGUAGE SWITCHING IN CHILDREN
(based on literature discussed in chapter 4)

CONTENT

- 1) for quotation
 - 2) for topic
 - 3) for lexical need
-

INTERLOCUTOR RELATED

- 4) to exclude someone from conversation
 - 5) to stress in-group membership
 - 6) to show a change in the social role of speakers
 - 7) for attention
 - 8) checking out if somebody knows a particular language
-

STYLE

- 9) for humour
 - 10) as a rhetorical device
 - 11) to emphasise
 - 12) to amplify or add to remarks
 - 13) to make parenthetical remarks
-

EMOTION

- 14) in situations of intimacy
- 15) swearing

Clearly there are many similarities between the lists in Tables 7.8, 7.9 and 7.10. Children and adults produce very similar types of switches, although the range is wider in adults. The types of switches produced by children in this study are generally very similar to those found in other studies on children.

In the content category, as might be expected, adults produce more types of switches than children. For instance, they switch in order to translate technical terms and this is not something that young children are likely to do very much. This is however a particular example of the general tendency to switch for particular topics and this is found among children as well as adults. One type of content switch found in the language switching study but not referred to in the literature is switching when using numbers. This occurred with several children. It may be that this has not been noted in the literature because it is a particular feature of Welsh/English switching and not necessarily found with other language pairs. It is my impression that it is a fairly common type of switch among adults as well as children in Wales, and may reflect the predominantly English education experience of many older bilingual adults. In children, however, as the examples in chapter 6 show, it seems to take place in both directions, that is from Welsh to English and from English to Welsh.

Both in the literature, and in this study, switches occur because of a weakness in one or other of the languages in relation to particular topics. The less balanced the

bilingual is in the two languages the more likely this is to occur. For the children in this study, however, this does not necessarily mean that the stronger language is the one that is preferred for a majority of topics. For many of these children Welsh was the stronger language in terms of their background and it was also the school language but they still preferred to use English for some topics. Possible reasons for this will be given in a later section of this chapter.

The use of loan words also led to switches because of the triggering effects of some words. This, too, was found in other studies.

A more sophisticated range of switches was produced by adults than by children in relation to the interlocutor. For instance, explanations relating to the social role of the interlocutor particularly in terms of power and intimacy did not seem as relevant to young children as they did to adults. According to Genishi (1981) children tend to use the interlocutor's perceived preferred language and to ignore other aspects of social role. It was not really possible to check on this in the current study as the interlocutors were limited to other children, generally with the same preferred language. It was observed, however, that in some of the Welsh medium schools where teachers spoke only Welsh to the pupils, the children appeared to have strong expectations that the researchers would do likewise. This must have been based on their perception of the role of researcher as being some kind of teacher, as they would have had no reason to suppose that the researchers as individuals

had a preference for either Welsh or English. This finding suggests that contrary to Genishi's claim, young children do switch for social role. This may be because the bilingual situation in Wales is one where the adult speakers of one of the languages (Welsh) are with very few exceptions also competent speakers of English. In this type of bilingual community even quite young children are likely to work out ways of deciding on appropriate language use that do not rely simply on linguistic competence.

Several of the switches in this study are explicable in terms of interlocutor variables. This is perhaps surprising in young children, who are often considered to be egocentric language users. However, in this study there were, for instance, examples of children switching in order to match the switching made by the interlocutor, a good indication of their ability to take in the perspective of the other person and to change their speech accordingly. In this study too there were also several switches that were primarily imitative, frequently taking place in a general context of word-play. This type of language generally occurs when two children play together and will rarely occur when the child is talking to an adult. This is perhaps why imitative language switching has not been mentioned in the literature previously, as most other studies on language switching in children have used adult interlocutors.

Another category found in this study is that of translations; in this study there were examples of spontaneous translations by a child. These may have occurred in an attempt to clarify something that was being

said. The literature on bilingual language development mentions that having two languages often makes the young child easier to understand (Oksaar 1976); if a word or utterance can't be understood in one language because of a fault in pronunciation or indistinctness on the part of the child, it may be more easily comprehended in the other language. The children in the current study often interpreted a query about what has been said as an invitation to translate the word.

The third general category is switching for style. This type of language switching is creative and skilful, and it is perhaps unlikely that one would find many children who had this level of skill in using the two languages. The literature here is rather contradictory, with some (Auer 1986) claiming that switches of this kind are not found to any great extent in children under the age of 11. In contrast, McClure (1981) says that stylistic switching of this kind can be found in children of all ages. Several examples were found in the current language switching study, for instance switching for emphasis, and switching for characters in a game. Examples of the latter were described in the previous chapter. It involves children playing a fantasy game where they are both setting up the action and taking part in it. The setting up of the action takes place in one language (in this study, Welsh) and the characters speak another (here, English). One reason for using English is that many of the games draw on experiences that the children see as being English related ones, for example particular television programmes. It is however a creative

and quite sophisticated use of the two languages and provides a good example of the creative aspects of the bilingual child's language use. The particular setting used here involving two children talking to each other maximises the chance of children being involved in fantasy play - a good arena for the production of style related switching in children.

In this study as in many others there were some language switches that are not easy to explain. This was in some instances because the relevant context was missing. Another plausible explanation is that there was no particular specifiable reason for an individual switch; this would be particularly likely to be the case if children were using an overall language switching discourse mode. The difficulties of finding explanations for individual switches have already been discussed in previous chapters.

The final type of switching found in the current study but not mentioned in other studies is that of switching for place. Of course adults do switch for place, but this is normally inter-sentential switching as described in chapter 2, rather than the intra-sentential switching which is the basis of table 7.9. It is an improbable switch in this study as the children did not change place during the recording. It is however the relevant explanation for examples where children's language switching is best explained in terms of the effect of the school language being stronger than the language requirements of the immediate situation, that is, children switch language because of the place in which they are being recorded. The

types of language switches found in this study were, with few exceptions, fairly similar to those already discussed in the literature, although a few additional ones were found.

Information was also collected on the frequency of each type of switch in the data as a whole and also the number of children producing each type of switch; this information is given in Tables 7.11 and 7.12.

TABLE 7.11

FREQUENCY OF DIFFERENT TYPES OF LANGUAGE SWITCHES

CONTENT	AGE				TOTAL
	3	4	5	6	
1) meaning best conveyed by use of L2	2	0	0	0	2
2) preferred language	3	0	8	3	14
3) triggering	2	1	14	12	29
4) numbers	1	1	2	9	13
5) quotation	3	3	8	20	34
TOTAL	11	5	32	44	92
INTERLOCUTOR					
6) imitation	2	0	5	3	10
7) person/role	2	1	10	9	22
8) matching interlocutor	3	0	6	2	11
9) spontaneous translation	0	0	6	8	14
10) correction	1	3	5	8	17
TOTAL	8	4	32	30	74
STYLE					
11) characters in game	0	3	18	24	45
12) emphasis	0	1	5	7	13
13) elaboration of word-play	0	0	2	2	4
TOTAL	0	4	25	33	62
14) random	2	4	13	12	31
15) place	0	0	7	4	11
TOTAL	21	17	109	123	270

TABLE 7.12

NUMBER OF CHILDREN PRODUCING EACH TYPE OF LANGUAGE SWITCH

CONTENT	AGE				TOTAL
	3	4	5	6	
1) meaning best conveyed by use of L2	2	0	0	0	2
2) preferred language	2	0	6	3	11
3) triggering	1	1	11	10	23
4) numbers	1	1	2	5	9
5) quotation	2	3	7	15	27
INTERLOCUTOR					
6) imitation	2	0	5	2	9
7) person	2	1	7	6	16
8) matching interlocutor	1	0	4	2	7
9) spontaneous translation	0	0	4	6	10
10) correction	1	3	3	6	13
STYLE					
11) characters in game	0	3	6	12	21
12) emphasis	0	1	5	6	12
13) elaboration of word-play	0	0	2	2	4
14) random	2	3	9	7	21
15) place	0	0	3	1	4

It is obvious from these tables that not all types of language switching are equally likely to occur. In this group, content type switches occur most frequently and quotations and triggering are the most common. This is the case whether one considers the frequency of switches (table 7.11), or the number of children (table 7.12). There are few interlocutor related types although switching for person and switching in correction do occur quite frequently. The relative high frequency of switching for person might seem

unexpected as the children were not placed in a situation where this was likely to be appropriate. It can in part be explained by a few of the children switching language when talking to a particular toy whom they designated as English-speaking!

In table 7.11 the most frequent type of switch is that of switching for characters in a game; this occurs 45 times.

Table 7.12 is however a better guide here. As might be expected, the number of switches of this kind is considerably higher than the number of children producing this type of switch, although this is by no means a type of switch limited to a very small number of children.

Obviously, once children have started using this device there are likely to be many examples of it within one transcript. It also explains, in part, why some of the children were frequent switchers. Barri, for instance, produced 12 out of 15 switches in this category.

Tables 7.11 and 7.12 have been presented as giving some indication of which type of switch occurs most often, but caution is needed in generalising from it to any great extent. The number of children who switch, and the number of switches is rather small. The particular situation in which the children were recorded must have had considerable effect on the frequency for the different types of switches.

A different recording setting would probably have produced quite different results here. However children in all four age groups were recorded in comparable circumstances, so it is possible to make comparisons across ages, and it is to this I now turn.

7.4 DEVELOPMENTAL PATTERN

The literature on developmental patterns in language switching was summarised thus in chapter 4

"It seems likely that the use of language switching increases with age and that the range of uses to which it is put will increase too. "

Those who have looked at developmental aspects of language switching point out that it is not common in young children as it requires a level of cognitive skill that is, for the most part, beyond them. Maclure (1981) claims that many types of language switches do not show up until late childhood with, for instance, few young children showing switching for emphasis. There are however considerable individual differences as Mclure points out

"Our data do not indicate a uniform developmental sequence in the use of code switching as a stylistic device. Some children do not code-switch at all for stylistic reasons in our data; some younger children do so frequently."

Large individual differences in amount of switching were also found in the current study and have been discussed in a previous section.

It has also been suggested that not only do children produce more types of switches as they get older but that the types of switches they produce change. Auer (1988), for instance, says that switches which occur because of the child's lack of linguistic competence decrease as children get older, and

presumably grow in linguistic competence, whereas those which show evidence of skill, increase.

This brief summary of the literature suggests the following predictions for the language switching study.

- a) the amount of language switches produced should increase as the children get older.
- b) As children get older then not only should the amount of language switching increase, but the number of types should also increase.
- c) Language switching that requires a degree of skill should increase as the child gets older; examples which are the result of a lack of skill should decrease.

Most of the data for testing these predictions has already been presented in this chapter.

Table 7.1 gave the total number of language switches and the total number of children switching at each age. The differences between the 3 and 4 year olds and the 5 and 6 year olds is very small but there are some differences between the 2 cohorts, with the older groups showing more switching overall. In terms of absolute numbers of switches, children do seem to produce more of them as they get older. However as the discussion earlier on indicated, this can largely be attributed to the greater amount of language produced overall by the older children (see table 7.2). At all ages the percentage of utterances that contain language switches is less than 1 percent. Whether there is an increase or not, depends on how the amount of switching is measured; older children do show some tendency to use more in terms of absolute numbers of switches, but not

necessarily as a proportion of their total utterances. This trend to increase language switching as the child gets older is therefore rather less than one might expect from the literature. There are some possible reasons for this. One is that the children are all quite young; maybe the tendency for language switching to increase as children get older has simply not yet started in even the oldest group of children in the language switching study. This would accord with Auer's study which found language switching increased in children over the age of eleven (5 years older than the oldest children studied in the language switching study). Another possible reason is the decision made not to count one word intrusions as switches. It may be that the increase in switches happens primarily with one word intrusions (although Maclure found the number of these decreased with age).

The second prediction made was that there should be a wider range of language switches used as children get older.

This was not found. Most types of language switches were found in all age groups, although the level of sophistication with which they were used increased. For instance, examples were given in chapter 6 of children of different ages switching for characters in a game and becoming increasingly skillful at doing so. Some types of switches did seem to be found more frequently with the older children, for example, triggering, switching for person, characters in a game, but there were occasional examples of these found even in the youngest children.

The third prediction relates to the amount of skill

involved in different types of switches. Auer found that young children's switches occurred primarily because they lacked linguistic competence in one or both of their languages whereas in older children and adults, switching was a mark of linguistic skill. Looking at the list of types of language switches in Table 7.8 it is clear that some are related to lack of skill and others require considerable skill to be produced. For instance types 2-4 (switching to preferred language, switching triggered by other words and switching for numbers) are probably related to the speaker's lack of skill. Reasons 7 to 13, however, (switching for person, switching to match interlocutor's language, spontaneous translation, switching in self-correction, switching for characters in a game, switching for emphasis, and switching in elaboration of word-play) do require some skill from the speaker. The other reasons do not seem to fall clearly into either category. Table 7.13 shows the numbers and percentages of switches for each age-group in these two categories.

TABLE 7.13

NUMBERS (PERCENTAGES) OF a) SWITCHES INDICATING LACK OF COMPETENCE AND b) SWITCHES INDICATING COMMUNICATIVE SKILL.

a) lack of linguistic competence
(types 2,3 and 4)

AGE	3	4	5	6
	6 (29)	2 (18)	24 (22)	24 (19)

b) communicative skill
(types 7,8,9,10,11,12,13)

AGE	3	4	5	6
	6 (29)	8 (47)	52 (47)	60 (49)

(N.B. Percentages do not add up to 100 for each age group as types 1,5,6,14 and 15 are not included. These have been omitted from the table because they do not clearly show either lack of linguistic competence, or communicative skill.)

These results do not show very clear developmental trends. However the three oldest groups all have more communicative skill examples than lack of linguistic competence examples. Again numbers are rather too low for this to be tested for significance.

Overall there is no clear developmental trend, as all age-groups show a low percentage of switches, and all age-groups show a wide range of types of switches. The three year olds have equal numbers of switches in the two categories considered (lack of linguistic competence and cognitive skill) but the three older groups have more switches in the cognitive skill category.

7.5 CATEGORIES OF LANGUAGE SWITCHING

7.5a) Categories Presented in the Literature

So far the analysis of language switches considered in this chapter has only looked at different types of switches.

In chapter 3, when similar lists of types of switches were discussed, it was pointed out that there are several problems with this method of analysis. These include the difficulty of allocating an explanation for each individual switch, the subjective nature of the explanations and the potentially infinite length of the list of explanations produced. Such a list with one explanation provided for each switch may also be rather simplistic. For instance, to say that a child switches to a preferred language does not explain why that language is the child's preferred language.

Or, to take another example, saying that someone has switched for a particular topic does not explain why a particular language is more appropriate for certain topics. For these, and other reasons, many authors have attempted to go beyond such lists and provide a more generalised level of explanation. There is also the possibility that explanations of this more general type, will have some predictive value, unlike the lists of types which can do no more than explain switches after they have occurred. Categories of this kind in the language switching literature were discussed in chapter 3.

The main categories discussed were

- 1) Situational and metaphorical switching (Blom and Gumperz 1972, Gumperz 1982)

2) Switching as a way of defining power and solidarity
(Hill and Hill 1979, 1980)

3) Switching as a way of redefining the social arena
(Scotton 1988, Scotton and Ury 1977, McConvell 1988)

Although these were discussed in chapter 3 they will be considered again here in relation to the data from the current study. Drawing on the aspects of these categorisations that are most useful, an alternative approach to the categorisation of language switches will be presented, with particular reference to the data of this study.

Situational and Metaphorical Switching

The difference between these two types of switches is rather elusive but situational switching seems to include switches where a particular choice of language is determined by the situation, and the metaphorical category includes switches which themselves change the tone or topic of an interaction. Implied in this distinction is the idea that language switches can both be a reflection of a situation (situational), and in part be responsible for creating a particular situation or impression (metaphorical). This distinction is helpful in explaining some of the switches in the current language switching study. In chapter 6 examples were given of children who were very aware of the school situation as demanding one particular language, and this in some cases overrode other determinants such as the language of the interlocutor; this would be an example of Blom and Gumperz' situational switching. Examples of switching for

characters in a game are examples from the language switching study that would probably fit into Blom and Gumperz' metaphorical category. This categorisation cannot however explain everything about switching. Focusing on the situational determinants does not explain why certain situations require certain languages; the explanation for this must be found in the wider political and social context. Nor, as Scotton and Ury point out, does the metaphorical/situational distinction tell us anything about what switching means to bilingual speakers. The main problem with this distinction therefore is that it is too elusive and poorly defined to be useful without further refinement.

Switching to Define Power and Solidarity

As was mentioned in chapter 3, this distinction is potentially very relevant to the situation in Wales and the bilingual children in the language switching study. The importance of the concept of power in understanding the position of Welsh and English in Wales was discussed in chapter 5. It seems likely that for many of the children in the language switching study Welsh is the language of solidarity and English the language of power. There were examples in their switches of drawing on the language of power, English, to make certain points, for example, to emphasise. It is also because English is the language of power in Wales generally, that many of the children's experiences come to them through English, and this is then reflected in their use of English, for instance as

characters in a game which they have seen on television. However, the position for these young children is slightly more complex than this analysis implies (and in this respect their position may be rather different from that of many adults around them). Many of them attend schools where Welsh is the official and prestigious language. It is particularly interesting to consider children from English-speaking homes attending Welsh medium schools in this context. Here the 'normal' pattern of Welsh as the language of the home and of intimate situations, and English as the language of outside institutions and power, is reversed. No simplistic analysis of the languages of power and solidarity can be made in this context but the concepts themselves are of vital importance.

Switching to Redefine the Social Arena

Scotton's analysis emphasises the way in which speakers' language switching defines situations, or 'the social arena' as she calls it, rather than seeing switching as simply a feature of the individual's response to it. They also explain frequent language switching within a particular social arena as a refusal by the speaker to accept a certain definition of the social arena. In this analysis language switching is very much within the speaker's control and will frequently be quite deliberate. This emphasis on the speaker as an active agent is very appealing, as is the useful emphasis on the speaker's own interpretation of the situation. Another useful aspect of Scotton's approach is her use of

the concept of 'markedness'. In some arenas, particularly where identity is shared, switching will be unmarked, and thus unsurprising, but in many arenas, especially those where power is at issue, switching will be a marked and deliberate choice.

Applying these ideas to the language switching situation of this study, it is probable that, for most children, most of the time, the arena is one based on a shared identity. However, there are situations where power becomes important, either because the child interacts with the adult (perceived by the children as a figure of authority), or, because one of the children attempts to exert power over another.

This particular categorisation system is easily the most sophisticated one discussed, but it is only partly relevant to the language switching study. It assumes for example that bilingual speakers are equally fluent in both languages, and this was not always the case in the current study. It tends also to emphasise the deliberate types of language switching, but does not include in its analysis an explanation of types of switches such as triggering, or switching to a speaker's preferred language.

All these categorising systems are valuable and ideas from them have been influential in the development of the categorisation system that follows.

7.5b) Categorisation Scheme for the Language Switching Study

The major drawback of attempts at categorising language switching discussed so far is that they tend to omit certain levels of analysis. For example, categories such as the power/solidarity one produced by Hill and Hill tend to operate at a sociological level of analysis and omit more psychological factors such as an individual's ability with a particular language. Other analyses, for example Scotton's, are mainly applicable to deliberate language switching. As far as previous work is concerned the model to be presented here probably owes most to the work of Herman (1961).

Herman was interested in switching between conversations (or language choice) and his work is discussed in chapter 2. His claim was that language choice could be determined by personal needs, demands of the immediate situation, or background factors. Herman appears to suggest that one or other of these factors operates at a particular time. In the approach to be presented here, all four levels are seen as operating simultaneously. Also, Herman does not apply his model to actual data, and where attempts have been made to do this, for example by Hunt (1968) the results have been problematic (see chapter 2).

In an attempt to get over some of these problems a model will be presented here that considers switching at four different levels. These levels have been named (from the micro to the macro)

personal

interactional

immediate context

wider context.

The claim that I am making is that all these levels need to be considered if one is to reach an adequate explanation of language switching. However, depending on the purpose of the analysis it may be appropriate to highlight particular levels of explanation. An analysis using this type of categorisation can be used to explain both individual language switches and language choice more generally. In other words, it can explain both the selection of a particular language for a conversation, and can explain language switches within a conversation.

The four levels can be described as follows:

personal- this involves focusing on the individual person's abilities and needs, and, in particular, their linguistic ability. In this study, whereas all the children were bilingual, some were clearly more fluent in one language than the other, and their language switching could be explained by this. A small number of the children, in particular some of those who were categorised as frequent switchers, may have had a particular preference for a language switching discourse mode.

This is also the level of analysis appropriate for explaining the switches of those who choose to speak the language in which they are less fluent. (There are examples of this in chapter 6.) A choice of this kind may often be the result of conformity to pressures from another level, for example, interactional or immediate context, but when these have been internalised then this can be seen as a

personal choice on the part of the speaker.

The personal level too is the main level of analysis for language switching that is related to style. Some speakers use language switching to make a particular impression whereas others will use a range of paralinguistic cues while remaining within the same language. There may well be differences between different groups of people in this, but it is also likely to be, in part, a matter of personal style and preference. There will be many factors that go to make up an individual's personal style of communication, and it could never be possible to have enough information about all of these to make predictions about the use of this kind of language switching.

interactional- this level of analysis focuses on the influence of the other speaker in a dyadic interaction, and, in particular, attempts that are made to accommodate him or her. Explanations at this level are obviously appropriate in explaining what happens when a bilingual interacts with a monolingual. Explanations at this level of analysis may also be appropriate for explaining less obvious switches. For instance, a speaker who normally uses very little language switching may use considerably more when interacting with someone who uses a great deal. This may be done consciously or unconsciously. An example of this happening consciously would be when a Welsh speaker who normally refers to a pound of carrots as 'pwys o foron' switches to say 'A ga' 'i pound of carrots?' because this is the phrase that shop assistants and other customers generally use. Not to do so might make her appear different

and rather pretentious. The reverse may happen when someone who normally uses a lot of language switching tries to eliminate these when interacting with a non-language switching bilingual speaker. The direction of the accommodation will depend on a range of complex factors such as are discussed in the work of Bourhis, Giles, Leyens and Tajfel (1979). The influence of the other speaker may then be fairly obvious or, at times, quite subtle. In some kinds of social situations these kinds of factors will be paramount. Such situations are, for example, conversations between shop assistants and their customers or other situations between somebody who is offering a service and a member of the public.

immediate context- This refers to an analysis which focuses on the situation in which the language switching takes place. The place is of particular importance but analysis at this level will also include other features of the situation such as topic and participants. It is similar to the concept of domain as developed originally by Fishman but is used here in a rather less general sense. School for instance would normally be seen as one domain but in this present analysis may include more than one 'immediate context.' For instance formal classroom discussion is not the same 'immediate context' as play between children, although both may take place within the classroom. These different immediate contexts may be characterised by the use of different languages. In some Welsh medium schools, for instance, Welsh may be the usual language of the classroom, but English that of play. The language pattern may also be

different for different age-groups, so that, for example, five year olds from English speaking homes in Welsh medium schools may commonly use English in the classroom, but this will be phased out as the children get older.

In this study, children in the same school (who were also in the same class), could be considered as being within the same immediate context, and so the same language would be appropriate. However this is made somewhat more complex by children's different perceptions of their immediate context. To continue with the illustration of English-speaking children in a Welsh-medium school, some children will pick up that using Welsh is the expected norm and stick to it, rather more quickly than others. This is a relevant point when considering this study as many of the children had only been attending the school or playgroup where they were recorded for a short time, in some cases only a few weeks. The influence of this, the 'immediate context' on their choice of language would then vary considerably from child to child. Harding and Riley (1986) in their descriptions of bilingual children point out that some children are very sensitive to what they see as the demands of the immediate context. Such a child will, for instance, refuse to use the home language with a parent in the school building, while another child will switch happily to the home language when their mother walks into the school classroom. There is then an interaction between the personal level of analysis and the immediate context level of analysis.

wider context- This is the macro level of analysis. In

analysing language switches at any of the three previous levels it is easy to take this level for granted as a non-problematic constant. This however is to ignore what is probably the most important level that really underlies all the others.

In the current language switching study the wider context can be taken as the language situation in Wales. It is not possible to fully understand language switching in children without a consideration of this. All the children in the study live within the same wider context, that is, they live in a country where Welsh is very much a minority language, and English is the language of officialdom, most of the media, and authority in general. There are of course considerable regional variations; children living on the Lleyrn peninsula do not experience the same wider context as do children living in Cardiff. It is quite possible that some of the younger children who live in strong Welsh-speaking areas do not realise that Welsh is generally a language with less status than English. Conversely, comments made by children in Cardiff who had learnt Welsh through attending Welsh medium schools, made it clear that some of them were not aware of the existence of Welsh speaking communities such as are found in areas of North-West Wales.

The direct influence of the general wider context will probably increase as children grow older. Adolescents in Welsh-medium schools are likely to be more aware of the relative status of Welsh in the community at large, than are younger children. However, even younger children who are

not directly affected are inevitably influenced indirectly by the wider context through the mediation of their parents and other significant adults in their lives.

When trying to explain language switching, all these four levels need to be taken into account. For any particular switch an explanation at one particular level may be more salient than others. It may be that a language switch is hard to explain because the investigator is not focusing on the level that is most salient to that particular situation. For each child in each language switching situation there will be an appropriate language at each level. If at all levels the appropriate language is the same then the child will probably use that language with no language switching. If however the language that is appropriate at each level is not the same then there may be some language switching. This will also be the case when the appropriate language for any particular level is not clear, for example, when the child is a balanced bilingual and has no clear preference for any particular language; such a child would be characterised as mixed at a personal level.

7.5c) Applications of Categorisation Scheme

Can this method of categorisation be useful in explaining data in this study? One question that has not been raised previously is why do any of these children ever switch languages? An explanation of this very general question should be sought by considering the level of the wider context. All Welsh speakers, whatever the immediate

situation and their own personal skills, are in a general context where English is the main language so there is always the possibility of language switching. Some children may, to a degree, be sheltered from this realisation by parents and schools who provide them with an almost entirely Welsh-speaking environment. Such children are unlikely to switch during their early years. However, most of the children studied, did not live in such an environment, and results already discussed show that only a minority of the children language switch at all frequently. It seems likely that this can be explained by consideration of the three other levels.

In Table 7.7, a list of the children who switched most frequently is given, and also their language background (personal level) and the language of their interlocutor (interactional level). This table is shown here as Table 7.14 and includes additional information about the language of the schools attended by the children (level of immediate context). There is then information here about three of the four levels- personal, interactional and immediate context.

TABLE 7.14

LANGUAGE BACKGROUND OF FREQUENTLY SWITCHING CHILDREN AT THE PERSONAL, INTERACTIONAL AND IMMEDIATE CONTEXT LEVELS

Name	Language of personal level	language of interactional level	language of immediate context level
Rhian*	mixed	mixed	Welsh
Alison	mixed	mixed	Welsh
Sarah	mixed	mixed	Welsh
Meleri*	mixed	mixed	Welsh
Barri	Welsh	Welsh	bilingual
David	English	English	Welsh
Glenda+	mixed	mixed	bilingual
Angela+	mixed	mixed	bilingual
Rhian	mixed	mixed	bilingual
Michael	Welsh	unknown	bilingual
Meirion0	English	Welsh	Welsh
Rhodri(T.)	Welsh	mixed	Welsh
Sioned Mair£	Welsh	Welsh	bilingual
Rhodri(B.)	Welsh	Welsh	Welsh
Matthew0	Welsh	English	Welsh
Sioned Mai£	Welsh	Welsh	bilingual

NOTE: **,++,00,££ - these symbols indicate that the two children were recorded together.

Examination of this table does seem to suggest that this categorisation system is useful in describing, and perhaps predicting, those children who will be frequent language switchers. All the children except one (Rhodri B.) show some degree of mismatch between the appropriate language for each level. It may be the case, of course, that other children who were not frequent switchers have similar mismatches.

In fact, a large percentage of the sample (see chapter 5) attended bilingual schools and showed a similar pattern to Barri, Sioned Mair and Sioned Mai, (Welsh at personal and interactional level and bilingual at immediate context level). Most of them were not frequent switchers, so this

cannot be a pattern which correlates particularly highly with language switching. However, a disproportionate number of frequent switchers were mixed at both personal and interactional level. Out of 16 switchers, 7 (44%) were mixed at the personal level, and 8 (50%) at the interactional level. Of the 89 non-switching or low frequency switchers, only 19 (21%) were mixed at the personal level and 23 (25%) at the interactional level.

There are particular problems with describing the language of the immediate context in this study. As explained in chapter 5, the bilingual schools varied quite considerably in the language that was commonly used, so describing the language of the school as is done here, simply in terms of the official language policy of the school, is not an adequate description. Enough information was, however, not available, to enable a more accurate categorisation to be made. Nor was it possible to take account of the point made above about the importance not only of the actual appropriate language of the immediate context but also of the language perceived by the child to be appropriate. It would in fact be very difficult to ever get at this information in a satisfactory manner in any study; it is nevertheless an important dimension.

It is unfortunate that the data available about the schools in the project does not make it easy to apply this categorisation system in a completely satisfactory manner. It is felt however that it does offer a useful tool for the explanation and possible prediction of language switching in very many situations. It could usefully be tested in a

study which included more in-depth information both about individual children and the language of schools.

7.6 SUMMARY AND CONCLUSION

This chapter started with a series of questions about the data on language switching collected in this study. The first section set out to consider the fundamental question of how much language switching there is in the language of these particular Welsh/English bilingual children. It was argued that it is very difficult to compare the results from different studies as the definition of language switching varies, as does the situation in which data is collected. Studies which claim to have found that bilingual children switch very little must be interpreted against this background. Another study, using a different definition of language switching, and studying the children in a different situation, would very likely produce quite different findings with the self-same children. In common with previous studies on language switching in children, this study found that they seemed to produce very few language switches. Indeed, they were present in fewer than 1% of all utterances. While this accords well with previous studies it does not fit in very well with many people's intuitions, which are that Welsh/English bilingual children switch rather frequently. This discrepancy can be explained when one considers the frequent use of loan words by the children in this study, particularly the older ones. What appears to be the case is that children who are clearly experiencing a lot of their world through the medium of English, are dealing with this, not by the use of language switching, but

through using loan words while retaining a Welsh syntax.

A small number of children were characterised as frequent switchers, that is, they produced considerably more language switches than the majority of children in the study. An obvious question to ask was, what was it about these children that made them produce more language switches than the others. Several hypotheses were put forward and ultimately discarded. There did not seem to be any overall explanation that could apply to all the children who were frequent switchers.

Differences in amount of switching related to the age of the children were also considered. It was found that in terms of absolute numbers the amount of language switching increased as children got older, but as the total amount of language they produced also increased, there was no clear evidence that the percentage of utterances containing language switches went up. This remained fairly constant at rather less than 1%.

Following on the discussion of the amount of switching, was a summary of the types of switches produced, compared with those found in other studies. The pattern found was, perhaps inevitably, fairly similar to that in other studies, (as in seeking to explain switches one will naturally draw on explanations previously found in the literature). Some particularly interesting types of switches found in this study but not much mentioned in previous literature, were the use of translation, and switching as a way of adding dramatic force to a fantasy game. This latter type of switch may have been found more

frequently in this study than in others, because of the decision taken to record children interacting together, rather than with adults. Co-operative fantasy play is found extensively with children of this age-range but would be found much less frequently in older children. The range of types of switches did not seem to vary much with the age of the children, although greater numbers of some types of switches were found in the older children, for example, switching for person.

A final hypothesis that was looked at concerning developmental trends was related to whether the switches produced could be attributed to a lack of linguistic competence or to growing communicative skills. Results here were not significant but there was some tendency for the youngest age group to produce more language switches through lack of linguistic competence, and the older ones to produce more, showing communicative skill.

The final section considered different ways of categorising language switches drawn from the literature and previously considered in more detail in chapter 3. It was felt that several of these were useful but that they also had some limitations especially in their tendency to focus on one level of analysis only. A different approach to the categorisation of language switches was suggested, which involved focusing on several different levels: the personal, the interactional, the immediate context and the wider context.

This categorisation system was applied to the data for frequently switching children where it was seen to have some

explanatory validity. It was felt that this was a potentially useful way forward although it was acknowledged that more information was needed about individual children and the language of the schools for its proper application.

This chapter has attempted an analysis of language switching that goes beyond the more descriptive approach of chapter 6. I believe it has been useful to attempt this although, as the summary shows, results have been somewhat inconclusive. There are several reasons for this. Firstly, the actual amount of language switching obtained was quite small. This is an interesting finding in itself but it means that there is only a small amount of data available for study. Secondly, there was not enough information available about the children or about the language practices of the schools. As has been demonstrated, language switching cannot really be understood apart from an understanding of the rest of the child's behaviour and surroundings. Obtaining this would however have been difficult for this number of children. The alternative strategy of concentrating on an in-depth study of a small number of children would have run into a different set of problems relating to the difficulties of generalising from a small sample. One of the strengths of this study is in the large number of children included, and their relative ordinariness. They are not the children of academics being brought up in unique linguistic situations but a reasonable cross-section of bilingual children in Wales. Any examination of the language switches of one group is only a study of the tip of the iceberg. They are an outward sign

of the experience of bilingualism. Submerged are the historical reasons and political realities of the bilingual situation in Wales. A child who is observed to switch from Welsh to English in order to emphasise a point s/he is making can be seen as an individual example of a struggle and conflict that is taking place between the two languages, not only at the level of the individual child but also at an interpersonal, social and political level. Trying to take account of all of these simultaneously is an acknowledgement of the complexity of the situation but makes the task of studying what may appear at first sight to be a fairly straightforward and discrete phenomenon dauntingly difficult.

CHAPTER 8

CONCEPT DEVELOPMENT IN BILINGUAL CHILDREN

8.1 INTRODUCTION

Up to now this thesis has mainly considered the ways in which bilingualism affects the child's communicative patterns, in particular, language switching. However, as outlined in the introduction, bilingualism can also be expected to influence the child's internal world. In particular, it has been suggested that bilingual children may differ from monolinguals in their intellectual abilities. This may be true of their abilities as a whole, or it may be argued that only some aspects are affected.

The literature relevant to these questions was discussed in chapter 4. The point was made there, that it is very difficult to come to clear conclusions about the effect of bilingualism on cognitive development. Depending on which studies are considered, bilingualism has been considered to cause a cognitive deficit, to give a child certain cognitive advantages or to have no effects at all. Some of this discrepancy can be explained by poor controls, particularly, although not solely, in the studies that show a cognitive deficit.

Another problem arises from the attempt to generalise

across all bilingualisms. It is important to refer to the exact social situation in which the bilingualism occurs. Although it is frequently discussed in isolation, bilingualism never exists in a social vacuum and there are large differences between one bilingual child's social and linguistic experiences and another's. One model that tries to explore the relationship between the child's linguistic ability, cognitive abilities and the particular bilingual situation is offered by Cummins (1976). This was discussed in chapter four, but will be outlined again here. Cummins argues that there are two crucial thresholds in bilingual competence. If the higher threshold is reached, that is, the child is highly competent in both languages, then cognitive functioning will be enhanced. If the child reaches this threshold in the stronger of the two languages, but not in the weaker, then bilingualism will have no particular effect on cognitive functioning. If the child fails to reach a lower threshold in both languages, then there may be negative cognitive effects from bilingualism. This has been explained diagrammatically as follows by Skuttnab-Kangas (1984).

CUMMINS 'THRESHOLD HYPOTHESIS'

Type of
bilingualism

Cognitive effect

balanced bilings.,
high levels in
both langs. positive
cognitive
effects

dominant bilings.,
native-like
level in one
of the langs. neither
positive nor
negative
effects

semilinguals,
low levels in
both langs. (may
be dominant
or balanced) negative
cognitive
effects

higher
threshold
level of
bilingual
competence

lower
threshold
level of
bilingual
competence

The model suggests that if one knows at which point on the model children can be placed it is possible to make a prediction about the effect of their bilingualism on their cognitive attainment.

Another approach has been to look at specific cognitive abilities and when these are considered a case can be made for bilingual children's superiority in particular areas. Bilingual children, for instance, do seem to be more aware than monolinguals of the arbitrary nature of the connection between a word and its referent and perform better on tasks that test this metalinguistic awareness (Ben-Zeev (1977), Ianco-Worrall (1972), Edwards and Christophesen (1988)). It has also been claimed (by for example, Kessler and Quinn (1987), and Liedtke and Nelson (1968)) that a bilingual child's particular linguistic experiences leads to a more general superiority in abstract thinking, although the evidence to support this claim seems weaker than that for

metalinguistic awareness.

A related issue has to do with the age of bilingual children. Some studies (for example those by Bialystok (1986) and Liedtke and Nelson) have shown that bilingual children are superior at the younger age levels but that monolingual children appear to 'catch up', whereas other studies (for example those by Bain and Yu (1980), and Kessler and Quinn) show bilingual superiority being particularly marked in older children.

There appear, however, to be few studies in recent years that have found any monolingual superiority either in relation to particular abilities or in particular age-groups.

8.2 THE CONCEPT DEVELOPMENT STUDY

8.2a) Background and Hypotheses

The aim of the current study was to investigate some of the issues raised above. As with the language switching study, the material to be described in this study also comes from the larger study on 'Concept and Language Development'.

For the language switching study, data from bilingual children only was used. For this study, however, it seemed appropriate to compare the performances of bilingual and monolingual children. The relevant characteristics of the sample used in this particular study were described in chapter five. The main difference between this sample and that used in the language switching study is that the sample is only based on the older cohort (aged 5-7), and includes English preferred language (monoglot) as well as Welsh preferred language (bilingual) children. A detailed description of the tests carried out, and of the results, is contained in the report (Department of Education, UCW, 1988) to the Welsh Office. The major concern of the original project was the comparison of children in different types of schools, for example, mixed language, officially designated bilingual (Ysgolion Gymraeg), and English schools. The final report also presented data on social class differences in results on concept tests.

The aim of this chapter will be to focus on some of the results only, in particular those that have a bearing on the wider issues addressed in this thesis, so, for instance,

detailed comparison of the results obtained by children in different types of schools will not be discussed here, nor will the results comparing children from different social classes.

The main question that will be discussed is the following:

1) Using a range of concept tests, are there any significant differences between English preferred language children and Welsh preferred language children?

Following on from this, two other related questions will be explored. These are:

2) If there are any differences, do these tend to occur on particular items in the concept tests and if so which?

3) Do the results show any particular developmental trends?

In attempting to reach a hypothesis as to the likely answer to question 1, Cummins' threshold model suggests that in order to make sense of any particular set of cognitive data from bilingual children, one needs to be able to locate each child in terms of thresholds of bilingualism. This is somewhat problematic in this study, because, as was explained in chapter five, no tests of bilingualism were carried out. However it is possible to make certain guesses as to where on this threshold model most of the children might be placed.

All the children were tested in their preferred language, giving two groups of children, those who had Welsh as a preferred language and those who had English as a preferred language. Additional information was also available about their language background from parental

questionnaires. The Welsh preferred group came primarily from Welsh speaking homes and were to be found almost entirely in bilingual (Ysgolion Gymraeg) or mixed language schools. We might then assume that most of the Welsh preferred language sample could be placed above the lower threshold level in Welsh (native-like competence in Welsh). We do not know what their knowledge of English was; it is likely that it was quite varied among the sample, ranging from a low level to a high level. In terms of the diagram above we can speculate that most of the Welsh preferred language group could be placed in the middle category, that is, having a good knowledge of Welsh but less knowledge of English, with a minority in the higher category, that is, balanced bilinguals with good knowledge of both languages. If the number of children who have reached a high competence in English is substantial, then this would lead to the hypothesis of superior results from the bilingual children. In any case, there are no grounds for supposing that any of the children fall into the lowest category, that is a low level of competence in both languages. This could theoretically be the case for a child from a Welsh speaking home attending an English only school, but in practice there were no such children in the Welsh preferred language sample.

The English preferred language sample consisted primarily of monolingual children. The only group in this category that would constitute an exception to this are children from English speaking homes attending Welsh medium schools. The level of competence in Welsh of this

particular group of children is highly varied. In the first year of testing, many would know very little Welsh indeed and could hardly be called bilingual at all. At later stages some of these children would be bilinguals at Cummins highest levels, while others would probably be at the middle level with English as the only native-like language. It is unlikely that any would fall into the lower category as this would assume a low level of competence in English. As previous discussion will have shown English is such a dominant language in the overall experience of these children, particularly outside school, that it is hard to see how they could not acquire a high level of competence in English, despite receiving their education through the medium of Welsh.

The hypothesis then for the first question of this study, based on Cummins' model, is that there should be no difference between the Welsh preferred language group (bilingual) and the English preferred language group (mainly monolingual). This hypothesis is however dependent on the assumptions relating to the children's actual language ability.

The second question relates to differences between the two groups on certain tests. Tests were selected that seemed typical of those commonly used to assess concept development, but with a particular emphasis on non-verbal concepts. These included tests of Piagetian concepts such as classification and conservation, and also performance subtests from the Wechsler Intelligence Scale for Children (WISC). The emphasis was on non-verbal tests as the

children's language ability was being assessed in parallel through making recordings of children's speech. By concentrating on non-verbal concepts it was hoped to sample a wide range of children's abilities and skills.

These tests were not chosen with the aim of probing for differences between bilinguals and monolinguals and we did not set out to use tests that we thought would be particularly easy for either group of children, for example, tests of linguistic awareness. Because of this, the hypothesis was that there would be no particular differences between the two main preferred language groups in their pattern of results on the different tests.

The third question looks at developmental trends. It is likely that as the children get older those in the Welsh preferred language group who are Welsh dominant at the outset will become more balanced in their bilingualism. As their social contacts grow wider and their interests more varied with increasing age, they are likely to become more proficient in English, while retaining competence and fluency in Welsh, through the continuing influence of home and school. It is probable then that in the last year of the project rather more of the Welsh preferred language group will be above the higher threshold of bilingualism according to Cummins model than in the first year of the project. This would lead to the hypothesis that the difference between the Welsh preferred language group and the English preferred language group would increase over the three years of the project with the Welsh preferred language group doing progressively better.

The remainder of this chapter will cover characteristics of the sample, a description of the tests and how they were administered, the main results as they relate to the questions posed above, and a discussion of how these results relate to the model presented in chapter seven.

8.2b) Characteristics of the Sample

Although the study was longitudinal in design, only some children were tested in all three years. Additional children were included in the second and third year to make up the numbers. This design made it possible to analyse results longitudinally (120 children), and cross-sectionally (195 at age 5, 190 at age 6 and 200 at age 7).

Approximately equal numbers of boys and girls were tested.

Children came from both working-class and middle-class backgrounds, with similar numbers from each.

Approximately one third of the longitudinal group of children - 44 - were in the Welsh preferred language group (bilingual), and two thirds - 76 - were in the English preferred language group (monolingual).

Additional information on the characteristics of the sample is given in chapter five.

8.2c) Description of the Concept Tests

The children's level of concept development was tested using a fairly wide range of tasks or tests. The tests used were all designed to look at non-verbal concepts. The reason for doing this was in order to find out if bilingualism or monolingualism was related to the development of non-linguistic concepts. If there are differences between the two groups on concepts such as these it is likely that even greater differences would show up on more linguistically based concepts. The aim then was not to maximise bilingual/monolingual differences but to see if there were differences on these particular concepts.

Many of the tests used were based on the tasks first used by Piaget, and particularly as adapted by Beard (1969).

The main reason for this choice is that Piaget's theory of cognitive development has been enormously influential and well-researched. Although both his findings and his interpretations of them have been frequently challenged, his strongest critics find his theories and empirical work fruitful and stimulating.

Boden (1979) summarises Piaget's contribution as follows _

"In sum, despite all the critics, there is a rich store of psychological insights and theoretical speculations, and a profusion of intriguing empirical observation and remarkably ingenious experiments to be found in Piaget's pioneering work. Education, developmental and cognitive psychology are all informed by his thought."

Piaget himself had nothing to say on the relationship of bilingualism to cognitive development. This is logical

in the light of his general theory concerning the nature of thought and language. For instance, in discussing the onset of concrete operations, he says:

"logical operations are thus co-ordinations among actions before they are transposed into verbal form, so that language cannot account for their formation. Language indefinitely extends the power of these operations and confers on them a mobility and a universality which they would not have otherwise, but it is by no means the source of such co-ordinations."

Piaget's general position has been that the development of language depends on the development of thought rather than vice-versa so, for instance, Piaget's co-worker Sinclair (1977) says:

"since intelligence exists phylogenetically and ontogenetically before language, and since the acquisition of language structures is a cognitive activity, cognitive structures should be used to explain language acquisition rather than vice-versa."

The implication of this for bilingual children is that one presumably cannot expect a child's concept development to be affected by bilingualism or by possession of one or other particular language. This theoretical position has not however, as has already been discussed, hindered attempts to look for relationships between bilingualism and the development of various concepts, including Piagetian ones. Doing so is clearly defensible in that one can find Piaget's tasks useful while not necessarily accepting his theoretical framework. In this current study Piagetian tasks have been used as they test concepts that seem to be of special importance for the 5-7 year old age range.

It is not appropriate to offer a summary or a critique of Piaget's theory here - it has been well-documented elsewhere, particularly in terms of the pre-operational stage, which is the one that mainly concerns us in this study, as it is generally considered to cover ages two to seven in the child's cognitive development. The two main groups of concepts that Piaget believed caused problems for children at this stage are conservation and classification, and these are the main concept areas explored in this study.

Conservation

By conservation, Piaget means the ability to understand that a change in the appearance of an object need not entail any change in identity. A non-conserving child will, for instance, believe that transferring a given amount of liquid from one container to another will change the amount of liquid that is present. The child who has passed from the pre-operational into the concrete operational stage and is able to conserve, will realise that the amount of liquid is invariant, regardless of the shape of the container into which it has been poured. The concept of conservation can be applied to many features of physical objects, for instance amount, weight, volume, length, number and area. The ability to conserve all these different features will not emerge simultaneously ('horizontal decalage' in Piagetian terms) and the conservation of volume, for instance, is consistently more difficult for most children than the conservation of weight, and conservation of weight more difficult than conservation of amount. However, some

longitudinal studies, for instance Tomlinson-Keasey, Eisert, Kahler, Hardy-Brown and Keasey (1979) found that a child's relative position tended to remain constant over three years, so an early conserver of amount was also likely to be an early conserver of volume although the whole process of acquiring conservation might well take two years or so.

Classification

What Piaget studied here was the child's ability to classify objects by putting them into groups in a consistent and logical manner. The basic ability to do this seems to be acquired in the pre-operational stage - by age five or six children are generally successful at tasks where they are required to sort objects into those 'that go together' on one particular dimension (Denney 1972). A more complex, and later developing, aspect of classification is that of class inclusion. Here the child has to understand that some classes may include others; for example, when shown a set of wooden beads that includes a large number of brown beads and a small number of white beads the child has to work out the answer to the question 'Are there more brown beads or more wooden beads?' The pre-operational child generally has difficulty with this, while the concrete operational child at around age seven or eight will probably get the answer right when the task set is a concrete one but will be unable to carry out the same logical task when expressed in abstract terms.

Another aspect of classification is seriation where the child is asked to arrange things in order, say from tallest

to shortest. Again, this appears to be an ability that develops around the early concrete operational stage (Bee 1981).

In recent years conventional methods of testing concepts, as used by Piaget (and as used in this project) have been increasingly under attack on several counts. A major criticism spear-headed by the work of Donaldson (1978) is that tests of this kind have a tendency to underestimate the abilities of young children. Many studies have shown that children can conserve at younger ages than the 7-8 years old suggested in the earlier literature. Vuyk (1981) summarises the main criticism as follows

"Failure of children under approximately 7 years of age in Piagetian experiments on concrete operational structures are not due to a lack of understanding but to unfavourable variables of the task."

McCarrigle and Donaldson (1975), for instance, found that children who did not show conservation of length under standard conditions did show it under a 'naughty teddy' condition where the transformation was made apparently accidentally by the 'naughty teddy' rather than intentionally by the experimenter. The way the test is presented to the child can then be a major influence on the child's answers.

Donaldson (1982) argues that younger children are especially sensitive to social context, and the context of a standard Piagetian test suggests that some changes have taken place. Why else, reasons the young child, would the adult take the trouble to manipulate the object and repeat

the question. Older children are more likely to focus on impersonal features such as the level of liquid in a glass. When younger children are given a reason for the manipulation of the object such as a naughty teddy they too will focus on the impersonal features. Under this new analysis the classical conservation task is now seen to be no longer solely, or even mainly, about conservation, but also about other things such as realising when the social context should or should not be attended to. Younger children's understanding of the test situation is likely to be different, too. Pratt (1988) in studying children's own perception of conservation experiments found that older children realised that their knowledge was being tested, whereas younger ones seemed to have little understanding of why the questions were being asked.

Another important issue relates to language. Although concepts such as conservation and classification are about understanding objects in the material world, children's attainment of these concepts is generally tested through the mediation of language. Questions are asked such as 'Are there more red blocks or more blue blocks?' or 'Is there less now than there was before?' Many studies (for example Donaldson and Wales 1970, Clark 1970), have shown that children have an imperfect understanding of relational terms such as more and less, big and small, and so on. Children who fail at classification tests therefore may do so because they do not understand the word rather than because they have not grasped the concepts. This may be a particularly important issue when comparing the results from children who

are tested in different languages - 'more' and 'less' may be more or less difficult than the Welsh equivalents of 'mwy' and 'llai'. One reaction to this criticism has been to present the tasks non-verbally, for instance through detecting surprise on the child's face if conservation is not seen to take place (Gelman and Gallistel 1978). When such non-verbal measures are used, conservation is demonstrated much earlier than when using the traditional methods.

Other criticisms have also been made, for instance that non-conserving children are prone to answer in terms of 'appearance' rather than what they know is 'reality' (Flavell 1986, Bijstra 1989).

Because standard procedures were used (rather than the naughty teddy variety) in the current study the level of the concept development of the children may have been underestimated but this would be constant across all children. As the interest was in differences between the two groups rather than the overall performance of children, many of these criticisms may not be particularly crucial to this study. They will however be discussed further in the context of the results.

Other Tests

Other tests were also used as a supplement to the Piagetian tests. These included the Goodenough-Harris Draw-a-Person test and two Wechsler IQ sub-tests.

Draw-a-Person Test

In this test, children are asked to draw a picture, first of a man, and then of a woman. They are evaluated in terms of the amount of detail and elaboration included. This test is considered to be particularly suitable for young children and to be reasonably culture-free. It is also quick and easy to administer. The test was included in the project as the only global measure of IQ, but was not felt to be very useful. It failed to discriminate adequately between children and mean scores were low when compared to the norms provided. Its predictive value for educational attainment is not considered to be very high (Bee 1981).

Wechsler Sub-Tests

Two Wechsler performance sub-tests were used, from the Wechsler Pre-School and Primary Scale of Intelligence (WPPSI) for children up to age 6, and the Wechsler Intelligence Scale for Children (WISC) for the 7 year olds. The sub-tests chosen were Coding (Animal House in the WPPSI) and Block Design. The abilities that these tests are assumed to measure are learning ability, memory, attention span and ability to concentrate in Coding, and perceptual and motor skills in Block Design. The correlation between these sub-tests and a full-scale IQ score is .35 for Coding and .52 for Block Design at age 7. These particular sub-tests were chosen to supplement the Piagetian tests in that rather different types of skills were tested. It is

important to note that these two sub-tests do not in any way constitute a global measure of intelligence - they merely test specific abilities in the same way as the Piagetian tests do. The abilities tested appear to be quite important ones for school achievement, but theoretically these results are not as interesting as the Piagetian ones, nor are there other studies using bilingual children which have used these tests with which to compare these results.

The complete list of tests is shown in Table 8.1.

Details of the method used and the exact concept being tested are given in Appendix B. The changes in the tests for the second and third year are also included in appendix B.

TABLE 8.1

Tests used in Concept Development Study

YEAR 1	YEAR 2	YEAR 3
<u>Piagetian conservation:</u> amount - solids and liquid weight volume length number	<u>Piagetian conservation :</u> amount - solids and liquid weight volume length number area	<u>Piagetian conservation:</u> amount - solids and liquid weight volume length number area
<u>Piagetian classification:</u> simple class composition addition subtraction seriation	<u>Piagetian classification:</u> simple class composition addition subtraction seriation	<u>Piagetian classification</u> simple class composition addition subtraction seriation
Goodenough Harris Draw-a-Man	Goodenough Harris Draw-a-Man	_____
<u>WPPSI</u> Block Design Animal House	<u>WPPSI</u> Block Design Animal House	<u>WPPSI</u> Block Design Coding

8.2d) Administration of Concept Tests

Tests were administered in a single session, lasting about half an hour. The testing session was presented to the child as an opportunity to play with the toys in the research worker's box. Most children enjoyed carrying out the tests and did not appear to find them too onerous. In some cases however children did become rather restless or tired towards the end of the session and this has led to some omissions in some cases for a few of the children. The children were always tested in their schools, but within each school the setting was varied. Testing was carried out

in corners of classrooms, school halls and head-teachers' offices; usually other children being tested or recorded were within earshot.

The actual instructions used for each test are given in appendix C.

8.3 DISCUSSION OF THE RESULTS OF THE CONCEPT DEVELOPMENT STUDY

The administration of the concept tests produced a large amount of data which has been described and discussed elsewhere (Department of Education, UCW 1988). Only the results pertaining to the three questions outlined at the beginning of this chapter will be discussed here.

Responses for all individual items on the tests were scored and then divided into the following 4 categories:

- Piaget, conservation
- Piaget, classification
- Wechsler - Coding (Animal House) and Block Design
- Draw-A-Man/Woman.

8.3a) Language Differences

1) Are there any significant differences between English preferred language children and Welsh preferred language children?

In these results, responses for all individual items were scored and an overall score for each child obtained for each of the groups of tests. t-tests were computed to test for any significant differences between English preferred language and Welsh preferred language children.

Table 8.2 gives the results for the cross-sectional data and Table 8.3 gives the results for the longitudinal data.

As already explained not all the children were

available for testing in all three years. The number of cases is smaller for the longitudinal data.

Table 8.2 (Cross-sectional data)

COMPARISON OF WELSH PREFERRED LANGUAGE AND ENGLISH PREFERRED LANGUAGE CHILDREN ON 4 CATEGORIES OF CONCEPT TESTS

	PIAGET CONSERVATION	PIAGET CLASSIFICATION	WECHSLER	DRAW-A-MAN/ WOMAN
Age 5	English sig. better at .039 level (t=2.08)	no sig. diff. (t=1.52)	no sig. diff. (t=1.8)	no sig. diff. (t=-1.29)
Age 6	English sig. better at .033 level (t=-2.15)	no sig. diff. (t=-1.17)	no sig. diff. (t=-0.87)	no sig. diff. (t=0.43)
Age 7	no sig. diff. (t=-0.49)	no sig. diff. (t=-0.13)	no sig. diff. (t=0.89)	test not administered

Table 8.3 (Longitudinal data)

COMPARISON OF WELSH PREFERRED LANGUAGE AND ENGLISH PREFERRED LANGUAGE CHILDREN ON 4 CATEGORIES OF CONCEPT TESTS

	PIAGET CONSERVATION	PIAGET CLASSIFICATION	WECHSLER	DRAW-A-MAN/ WOMAN
Age 5	no sig. diff. (t=-1.00)	no sig. diff. (t=1.58)	no sig. diff. (t=1.58)	no sig. diff. (t=-1.08)
Age 6	no sig. diff. (t=-0.87)	no sig. diff. (t=-0.47)	no sig. diff. (t=-0.36)	no sig. diff. (t=0.27)
Age 7	no sig. diff. (t=0.84)	no sig. diff. (t=-0.91)	no sig. diff. (t=0.79)	tests not administered

The main point revealed by these tables is that there is virtually no difference between the two groups of

children on any of the four groups of tests. There are two significant differences on conservation tests in the cross-sectional data, with English-preferred language children performing better than Welsh-preferred language children here. On the longitudinal data these differences do not reach significance. However, as table 8.2 and 8.3 show, the other results do not follow this pattern; most of the t-values are nowhere near significance.

A possible explanation for these findings lie in the nature of the concept; one thing that marks out this set of tests from the other three is that conservation, to a large extent, has not been attained by most of the children, so many of them are gaining quite low scores. The results suggest that possibly some of the English preferred language children attain some aspects of conservation at a slightly earlier age than the Welsh preferred language children.

Overall the main finding here is that there is no clear pattern of difference in the test results between the Welsh preferred language and the English preferred language group. This finding is in line with the hypothesis put forward in the first section.

8.3b) Sub-Test Differences

The second question posed was the following:

If there are any differences, do these tend to occur on particular items in the concept tests, and if so which?

The results in the previous section showed that the

only differences between the Welsh preferred language and the English preferred language children were found on the conservation sub-tests. In this section the results for the individual sub-tests on the conservation tests only will be given (cross-sectional results only, as only in this group were significant differences found).

Tests were carried out on the following types of conservation: amount - liquid and solids, weight, volume, number, length, area (age 6 and 7 only). For most of the tests more than one question was asked (see appendices B and C for fuller details). In testing the conservation of amount, weight and volume the child was asked

- 1) to predict what effect the change made by the tester would have
- 2) to judge whether there was a difference in conservation after the tester had made this change
- 3) to explain why there was/was not a change.

The inclusion of the three questions was considered a more stringent test of conservation than the judgement test alone would have been.

TABLE 8.4

COMPARISON OF WELSH PREFERRED LANGUAGE CHILDREN AND ENGLISH PREFERRED LANGUAGE CHILDREN ON INDIVIDUAL TESTS OF CONSERVATION (cross-sectional data, significant results only)

<u>Test</u>	<u>Age 5</u>	<u>Age 6</u>	<u>Age 7</u>
<u>Amount, liquid:</u>			
prediction			
judgement			
explanation			
<u>Amount, solids:</u>			
prediction			
judgement			
explanation	E>W @ .005		
<u>Weight:</u>			
prediction			
judgement			
explanation	E>W @ .027	E>W @ .009	
<u>Volume:</u>			
prediction	E>W @ .002		
judgement		E>W @ .013	
explanation	E>W @ .017		
<u>Number:</u>			
- (a)			
- (b)	-----		-----
- (c)	-----		-----
<u>Length:</u>			
- (a)		E>W @ .013	
- (b)		E>W @ .023	
- (c)			E>W @ .037
<u>Area:</u>	-----		

Notes

E,W = English, Welsh preferred language children respectively
 > = gained significantly higher scores at stated level
 --- = test not administered in that year

Table 8.4 summarises all the significant results on the individual sub-tests of conservation. There were 60 sub-test results in all (approximately 20 for each age-group), and of these 60, ten showed a significant difference. This is a low number and suggests a very similar performance between the two groups overall. However, what is very noticeable is that these ten differences are all in one direction, namely English preferred language children performing better than Welsh preferred language ones. It is hard to be sure what it is that differentiates between those sub-tests where there are no significant differences and those where the English preferred language children perform better. One possibility involves considering the relative difficulty of the items. Conservation of weight, volume, length and area proved to be the most difficult of the items and most of the significant differences occur with the weight, volume and length items in the two younger age-groups. Large numbers of children were non-conservers on these items.

In retrospect, and in the light of the criticisms made by McGarrigle and Donaldson, and others, these items were probably presented in an over-abstract way which would not have had a great deal of meaning for the child. For instance, when testing for the conservation of weight, the tester showed the child two plasticine balls, identical in size and shape, and asked:

'Do these two balls of plasticine weigh the same?'

When the child agreed the tester went on to ask:

'Suppose I roll one of the balls into a sausage, will the ball and the sausage weigh the same?' (Prediction question).

The tester then rolled one of the balls into a sausage and said:

'Do they both weigh the same?' (Judgement question).

Then the tester said:

'Why is that?' (Explanation question)

The conservation of area question, on the other hand, was presented in a far more concrete and comprehensible way (see appendix B) and this item did not show any significant differences between the two language groups. This of course does not explain why Welsh preferred language children should have particular difficulty with these items.

There are at least three possible explanations why these sub-tests seemed to be more difficult for the Welsh preferred language children than for the English preferred language children of the same age. The first possibility is that the degree of abstraction involved in these items makes them particularly difficult for the Welsh preferred language children as this group of children are slower in acquiring some of the skills of abstract thought. There is however no reason to suppose that this is the case; previous literature would suggest that if there is a difference between the two groups the Welsh preferred language group as the bilingual group would tend to be rather better at abstract thought than the English preferred language group.

The second possible explanation relates to the wording of the questions. As already mentioned, the abstract way in which the questions were worded may have caused difficulties for many of the children, both English and Welsh, but it may be that the Welsh versions caused more difficulty than the English ones. There has been a wealth of experimental work on the development of the understanding of qualifiers in English, for example, by Clark (1970), Donaldson and Wales (1970), and Donaldson and Balfour (1968) and it is clear that children have only a partial understanding of these terms when they first begin to use them. The difficulties in Welsh might well be as great, or even greater; for instance the Welsh words 'mwy' and 'llai' mean both 'larger' and 'smaller', and 'more' and 'less'. This is potentially quite confusing to children in, for example, a seriation task where the line of beads is made longer, but contains

the same number of beads.

Problems with the wording of instructions are problems that are internal to the task itself. Another possibility that has been discussed in the literature and earlier in this chapter, is that children may have difficulties that are external to the tasks (Donaldson 1982, Pratt 1988). In particular, children may not understand the intentions of the experimenter. For example, in a conservation of liquid task, children may ask themselves why the experimenter has gone to the trouble of pouring water from one glass to another, or of moving rods about and they may come up with the answer that something is being changed by this act. This will lead them to give an 'incorrect' response.

Both 'internal' and 'external' reasons are probably responsible for non-conserving answers on conservation tests and it may be that there are differences between children in their tendency to follow external or internal cues. In discussing this kind of difference Donaldson says

"All this suggests the possibility that some children at some points in development may tend to respond to impersonal, physical features while others - or the same children at other times - may tend to respond to interpersonal or social ones. Some may concern themselves with level of liquid and length of row, while others wonder about what the experimenter is up to. It is likely that many wonder about both and are apt to be swayed by each in turn. However it seems reasonable to suppose that enduring personal characteristics will make themselves manifest."

It is possible to take this line of argument one or two steps further and consider what factors might lead children to be the sort of child who fails for reasons external to

the task. This would be a child who wonders what the experimenter is up to, and is more interested in 'people and their purposes' than 'the physical world'. Children of this sort would probably be particularly sensitively attuned to those around them. Many factors in the child's upbringing will determine his or her sensitivity and responsiveness to others, but one of these factors might be bilingualism. As the discussion in the previous chapters has shown, bilingual children need to learn to be aware of the needs of others if they are to select the appropriate language in particular circumstances. The argument here then is that some bilingual children fail at some types of conservation tasks for the second set of reasons suggested by Donaldson; indeed, paradoxically because they are particularly sensitive to those around them they are less likely to succeed at a task which requires them to attend strictly to the matter in hand! This will happen particularly when the task is relatively difficult for the child, and so will be commoner in the younger children in the sample.

Another suggestion put forward in the UCW Education project report is that differences in the types of school attended were responsible for the differences between the two groups on the conservation tests. Nearly all the Welsh language preferred group attended bilingual or mixed language schools, whereas two thirds of the English preferred language children attended English medium schools.

It is possible that there are differences between these groups of schools that are relevant to children's performances on these tests. The analyses presented in the

project report and in Dodson and Thomas (1988) suggested that this was particularly likely to be the case in the bilingual schools (Ysgolion Gymraeg), where the commitment to developing bilingualism in all the children is particularly explicit.

They argue that in most infant schools much time is spent on structured (play) situations. They say these situations

"help children to gain insights about the world around them faster and more accurately than they would otherwise. In this process verbal interactions of an exploratory nature between the child and an adult (teacher) are crucial, because these help children to focus on pertinent factors within the situations in which they find themselves. In present-day infant schools most play activities are directed towards the development of concept groups within the categories of conservation and classification."

They go on to say, however, that the usual pattern in bilingual schools (or perhaps more accurately Welsh-medium schools) differs from this in that much of the teacher's time is spent in helping children who have arrived at the school with little or no Welsh to acquire proficiency in comprehension and production of the language. There is therefore less time available to be spent on activities specifically directed towards the fostering of skills related to the development of conservation.

This explains why the English preferred children (monolingual) in such schools lag behind in this aspect of their development but Dodson and Thomas say that those who are already proficient at Welsh (bilingual children) will also suffer, as,

"It might well be, therefore, that the Welsh-preferred language children do not participate in the types of guided activities and interactions described above as often as they would if they were the sole or vastly predominant language group in Welsh-medium schools."

This argument, while persuasive, does rest on the claim that teacher/pupil interactions are directed quite specifically towards the development of conservation, but this is perhaps not a totally accurate characterisation of the relatively spontaneous and informal communication that is the most common form of interaction found in classrooms with children of this age. It is hard to believe that the development of conservation is as significant a feature of teacher/pupil interaction as Dodson and Thomas claim. It seems more likely that the concern of teachers is to foster all kinds of concept development. One would therefore expect the differences found on conservation to be found on other tests too, if differences in schools are to be considered responsible for them.

From the data presented here it is not possible to decide between these three possibilities, and they should all be considered as potentially relevant explanations. The results that they are attempting to explain are in any case only significant in a small number of cases.

8.3c) Developmental Trends

As in chapter 7, the longitudinal nature of the data makes it possible to consider issues of change over time in children's performance.

The question here was:

Does the data show any particular developmental trend?

The original hypothesis was made that the difference between the Welsh preferred language group and the English preferred language group would increase over the three years of the project with the Welsh group doing progressively better.

It is clear from the results presented that this did not happen. There were however some developmental trends. Table 8.4 gives the results for each individual sub-test in the conservation group. Of the 9 significant differences (all of which showed a superior performance by English preferred language children) four occur at age five, four at age six and one at age seven. It is important to highlight this as it shows that the poorer performance of the Welsh preferred language group virtually disappears by age seven.

All the explanations put forward in the previous chapter can be reconsidered in the light of this developmental trend.

An explanation for why the difference between the language groups decreases with age is that any problems that arise with the wording of items in Welsh has largely disappeared by age seven. Another possible explanation is that children who are prone to focus on 'external' rather than 'internal' factors when carrying out these tasks at the younger age levels learn not to do this by a later stage. They are perhaps learning how to deal with a test situation, having by age seven encountered slightly more formal methods during their schooling. If the differences

are caused by school practices these too may modify with time, with the bilingual schools providing as much support for the developmental of these concepts as is provided in the earlier stages by the English medium schools.

8.4 GENERAL DISCUSSION AND APPLICATION OF LEVELS OF ANALYSIS MODEL

8.4a) Explaining the Results

The main finding of this chapter has been that of non-significant results. This is an important outcome which is in conflict with many previous findings showing bilingualism to be either a clear advantage or disadvantage.

There are several differences between the current study and the majority of others carried out in this area which may explain why this study produced results which do not agree with previous ones, and which might be conceived of as weaknesses in this particular study.

One reason for the negative results could be the method used for categorising the children. It seemed reasonable to suppose that the Welsh preferred language group were largely bilingual, and the English preferred language group were largely monolingual, but some children would probably differ from this overall pattern. It is possible that these children who did not fit neatly into the two categories might have confused the results.

It can be argued that it would have been better to test the children's language skills and then to have allocated them to either a bilingual or a monolingual group. But this procedure too would have had its problems, and would also have been very time consuming; there is, in any case, no universally accepted way of defining bilingualism. Using a definition which would allow only balanced bilinguals into

the bilingual group would not be a good reflection of the population of children of this age, many of whom are not balanced bilinguals. Dividing the children, as was done here, into Welsh preferred language and English preferred language is a better reflection of the linguistic ability of children of this age, for whom balanced bilingualism may not be an appropriate concept. Dodson (1985) has argued that few children in this age-group are likely to be balanced bilinguals. Calling somebody bilingual who has a very limited knowledge of one of the languages means that the bilingual category includes a very wide range of language abilities. Limiting a bilingual group to balanced bilinguals only is likely to include a disproportionate percentage of more able children in the bilingual group than in the monolingual control group. Hakuta (1986) suggests that some studies have found a bilingual superiority precisely because only balanced bilinguals were used.

Another crucial difference between the current study and most other studies is that the tests used were primarily non-verbal and not chosen with the aim of probing for differences between bilinguals and monolinguals. The question asked in many studies has been 'Are there any differences at all in cognitive functioning between bilingual and monolingual children?' The emphasis in this study was somewhat different and the question being asked was 'Are there any differences between bilingual and monolingual children on standard tests of non-verbal concepts?'. While asking this question rather than the first one makes it more likely that no differences will be

found, it is, on the positive side, a question that relates more closely to the concerns of parents and teachers. They, unlike developmental psychologists perhaps, are more likely to be concerned about the effect or otherwise of bilingualism on the development of a range of normal concepts, than to be concerned about differences on rather obscure tests that may not be clearly related to any area of academic achievement. The particular range of tests used therefore may be another reason why very few differences were found between the two preferred language groups.

Finally, in this study the social class characteristics of the two language groups were similar. Results (details of these given in Department of Education, UCW 1988) showed that in both preferred language groups social class differences were very large indeed, with middle-class children gaining significantly higher scores than working-class children. This is evidence incidentally that with the particular tests chosen, it was possible to distinguish between the children. It is likely, in previous studies where differences have been found, that social class, if not carefully controlled, may have been a confounding factor.

8.4b) Levels of Analysis Model

In chapter 7, which discussed different explanations that have been offered for language switching, it was suggested that an adequate approach was only possible when different levels of analysis were considered. The different levels put forward were (from the micro to the macro),

personal, interactional, immediate context and wider context. It was claimed that if all these levels were considered this offered a more adequate explanation of both individual language switching, and language choice more generally, than when explanations were drawn from one level only. The same claim can be made in understanding work in the area of cognitive development in bilingual children. This section will outline how this model can be applied to work on bilingual cognitive development generally, and also how it can be applied more specifically to the findings of this chapter.

The four levels of the model were described as follows in chapter 7:

personal- a focus on the individual person's abilities and needs.

interactional- a focus on the other speaker(s) in an interaction

immediate context- a focus on the immediate situation in which language switching takes place

wider context- a focus on the situation more widely

Personal

Much of the work on concept development has utilised explanations at this level only. A child's performance on a concept test is assumed to be directly related to a child's ability, so a child who 'fails' a conservation test is a child who has not yet acquired this concept. When the performance of bilingual children is considered, this involves two factors at the personal level: the child's

conceptual ability and the child's language ability. Much of the literature discussed in the section on cognitive development in chapter 4 revolved around this relationship. As the survey in that chapter showed, there are many conflicting findings in this area. One attempt that has been made to try and integrate these apparently conflicting findings is the threshold hypothesis model put forward by Cummins. This model, although useful when operating at the personal level, is limited because it does not really extend to any other levels. There is however an additional aspect of Cummins work, which potentially at least, does do this. This is his division of children's language into what he names as BICS (basic interpersonal communicative skills) and CALP (cognitive academic language proficiency). BICS Cummins (1984) defines as 'cognitively undemanding manifestations of language proficiency in interpersonal situations' and CALP as 'those aspects of language which are closely related to the development of literacy skills in L1 and L2'.

Cummins' threshold hypothesis applies particularly to CALP which is the type of language that a bilingual child is most likely to have difficulties in attaining, particularly if he or she does not receive early education through the L1.

The results in this study which show the Welsh preferred language group performing worse on some conservation tests could be used to support the claim that they were having some problems with language of the CALP type. This however only applies if one uncritically accepts the distinction made by Cummins. In fact as Martin-Jones and

Romaine (1985) point out, this distinction is quite controversial. They say

"What we see revealed in CALP is a highly prescriptive notion of what language is and what constitutes competence. We agree with Edelsky et al (1983) when they say that the BICS/CALP distinction constitutes a spurious 'language proficiency dichotomy.' Linguistic skills cannot be rigidly compartmentalised in this way"

In particular, they see the BICS/CALP distinction as being very culturally specific, and one which ignores the social and sociolinguistic dimensions of the classroom experience. This well-founded criticism can, in the terms of the analysis here, be seen to be claiming that Cummins' model is an analysis entirely at the personal level, and as such is a limited approach.

Interactional

Many of the criticisms that have been made of Piagetian experiments have been made by those who have asserted the importance of this level. A child being tested, or acting as subject in an experiment, is part of a social interaction. While the tester, or experimenter, may believe that the test is there only to get at the child's conceptual abilities, the child may see the situation in a very different way. It was suggested earlier in this chapter that bilinguals may be prone to 'failing' a conservation task, because of their particular sensitivity to interactional aspects of the test situation. Of course, other children too may be more interested in the interactional aspects of the situation than in the task

oriented ones, and, as suggested by Donaldson, this may be caused by 'enduring personal characteristics'. It was certainly noticeable, when administering the concept tests, that some children treated it very much as a social encounter. They were interested in having a conversation with the tester about their own lives and experiences, and wanted to know where the research team came from, and what our functions were. For these children the test materials and instructions seemed incidental and less interesting than a new adult who had taken them out of their normal classroom routine and was prepared to give them individual attention for half an hour. When uncertain how to attend to a particular test item this sort of child was likely to scan the tester's face for non-verbal cues or to ask for help directly. This kind of behaviour seemed to be commoner in the first year of study than in later years (that is, when the children were only five). Other children had a much more task-oriented approach. They seemed to grasp the purpose of the session and completed the tasks quickly. They were less interested in the research team, and seemed eager to return to the classroom and their friends. There are many possible explanations for these differences among children. General personal characteristics, age, and possibly gender, may all be factors. What is important however, is that different children will bring different interpretations and interactions to the testing situation.

Immediate context

This level of analysis focuses on the immediate context

of the concept test. This would include the ways in which the test is presented to the child, in particular the test materials and kinds of language used by the tester. Many concept tests, including those of the current study, are presented in an abstract, and/or potentially confusing way. Presenting the same concept using a different form of words, or with more concrete or more meaningful test materials, can drastically alter the numbers of children who are seen to possess a particular concept. The immediate context may well be different for children with different preferred languages. For instance, 'pwysu' and 'weigh' mean much the same thing, but this does not mean that they are words of equal difficulty in both languages. Different ambiguities arise in the protocols of the tests in English and Welsh. For instance, the word 'mwy' in Welsh can mean 'bigger/larger' or 'more'. Conversely 'light' in English can refer to colour as well as to weight.

The concept of preferred language is also relevant at this level of analysis. In his discussion of preferred/second language Dodson (1985) claims that children have a 'specific' preferred language as well as a 'general' one. A child's 'specific' preferred language is one in which he or she feels most at home in a given area of experience, at any given time. The child's general preferred language is a description at the personal level but the inclusion of a specific preferred language also acknowledges the importance of the level of immediate context. In the current study, children's specific preferred language was used with them. This was not

necessarily the child's general preferred language. So, for instance, some children from English-speaking homes who were being educated through the medium of Welsh opted to carry out the tests in Welsh rather than English.

Wider context

As with the language switching material, this is arguably the most important level of analysis here too, but also the one which is in most danger of being overlooked. This level is particularly likely to be ignored when work has largely been carried out by developmental and educational psychologists, rather than sociologists and sociolinguists. The most noteworthy discussion, at this level, of studies of cognitive development and bilingualism is that of Hakuta (1986). He points out the importance of considering the Zeitgeist in which studies of the relationship between bilingualism and cognition have been carried out. Many, if not most, such studies have been carried out in politically charged situations, where ideologies and beliefs about bilingualism have been very strong. These vary from strong hostility (United States or Wales in the first quarter of the twentieth century) to a total belief in its advantages and benefits (Canada in the 1960s and 1970s). It is obviously important to consider the influence of the wider context on how issues are posed and how results are evaluated by researchers and practitioners. The wider context can also be expected to have an indirect influence on the child. If bilingualism is seen as the norm, and unremarkable, by parents, schools and others it is

unlikely that the bilingual child will face any particular difficulties in cognitive development. If conversely, bilingualism is seen as unusual and problems are expected, any schooling related problems that do occur are far more likely to be attributed to bilingualism. For instance, in Britain, it is by no means uncommon for professionals to advise the parents of a child with learning difficulties against bilingualism, the implication being that at least average intelligence is needed to become bilingual. It seems unlikely that such advice would be given in a society where bilingualism is the norm. In this context Martin-Jones and Romaine's comment seems as applicable to children's cognitive development as to their language switching skill:

"Our concern is with the way in which power relations within society (and within schools in particular) regulate linguistic performance in context."

The levels of analysis model will now be applied to the explanations offered for the results obtained in the current study. The first, and initially the most self-evident, explanation, is at the personal level of analysis. This would suggest that the Welsh preferred language children, because they are bilingual, are inferior at certain non-verbal concepts. This explanation is rejected precisely because it does not take any account of other levels of explanation.

The second explanation offered was at the interaction level. Here it was suggested that bilingual children

interpret the test situation in a more person-oriented way than monolingual children. This is a more useful suggestion than the first one although it probably does not apply to all the Welsh preferred children in the sample. Two other explanations were offered at the immediate context level. The first of these was related to the wording of the tests themselves, and the suggestion was made that this might have caused more difficulties in the Welsh version than in the English version. The second explanation concerned the context of the school. Because the two language groups were distributed differently across the different types of schools it was suggested that differences in practices between types of schools could be responsible for the findings of the study. This is necessarily a somewhat speculative suggestion, but is one that can be encompassed by the levels of analysis model.

The final level is that of the wider context. It is helpful to consider here why this study was carried out at all. It is unlikely that it would have been, were there not a climate that assumed that bilingualism could, potentially at least, cause children difficulties.

As with virtually all studies of this type, bilinguals are considered to be in some respects 'worse than', in other respects 'better than', and in yet others 'not significantly different from' monolinguals. All this suggests monolingualism as a norm, which the bilingual is expected at least to achieve, and ideally to surpass. It does not look at bilingualism in its own terms. Romaine (1989) starts her book on 'Bilingualism' with the sentence

"It would certainly be odd to encounter a book with the title Monolingualism."

This is a very clear indication that monolingualism is very much what is generally taken for granted. The use of the levels of analysis model implies that explanations at all the levels need to be considered together rather than an attempt being made to select between them. This makes simple answers impossible but is more satisfactory than staying at one level only.

SUMMARY

This chapter describes and discusses results of concept tests carried out on bilingual and monolingual children aged from 5 to 7. The tests consisted of Piagetian type tests on conservation and classification and some I.Q. subtests with the emphasis on non-verbal rather than verbal concepts. The main question addressed was whether the Welsh preferred language group (largely bilinguals) performed significantly differently from the English preferred language group (largely monolingual). The results indicated that there were virtually no differences between the two groups. The only area where any differences were found were on some tests of conservation particularly in the younger age groups. In some of these, the English language preferred group (monolingual) performed better than the Welsh language preferred group (bilingual). Several possible explanations were offered for this: for instance that the way the tests were worded was more difficult in Welsh; a person-oriented rather than a task-oriented approach in bilingual children; and, differences in the types of school attended.

A final question considered was whether there was any clear developmental pattern emerging. There was a developmental pattern for the results where the English preferred language group performed better. This showed that any advantage that this group had, had largely disappeared by the time they were aged seven.

The possible reasons for both the overall lack of difference, and the small differences that were found on the

conservation tests were discussed.

These findings were also considered in the light of the levels of analysis model.

CHAPTER 9

CONCLUSION

In this thesis two contrasting aspects of the bilingual child's experience have been considered; language switching and concept development. The first has generally been considered to reflect social communicative aspects of bilingualism and the second an individual cognitive aspect, although, as has been argued here, both are socially influenced. These two areas have generally been dealt with discretely in the literature, drawing on different disciplinary backgrounds, but both have in common that they are seen as potential problem areas for bilingual children. For instance, Dodson (1981) says

"But another concern is voiced: the young bilingual child appears to mix up his languages in his speech, using elements from both in many utterances. If language is the expression of thought, and if that expression is confused linguistically, then the child's underlying concepts must also be in a confused state."

The main findings of this thesis would suggest that the concern that is expressed here is misplaced (and this too is Dodson's conclusion) - language switching need not reflect linguistic confusion and there is no evidence that bilingualism hampers children's cognitive development? What then of the opposite viewpoint, namely that language switching is an indicator of communicative skill, and that

bilingualism accelerates children's cognitive development. This argument too is generally not supported by the findings of this thesis. In fact it did not prove possible to come to the kinds of simplistic conclusions that either of these opposing viewpoints suggest.

Studies on language switching demonstrate that there are huge variations in both amounts and types of switching between individuals and between linguistic communities. Some individuals switch very frequently and others hardly at all. There are bilingual communities where switching is very common and others where it very rarely happens. There are also different types of language switching, some requiring a high level of skill, and others that are more likely to be due to an inadequate grasp of one language or the other. Much of this variation was found in the current language study; many children did not language switch at all, a few did so very frequently. The children also produced a wide range of language switches, reflecting both communicative skill and lack of knowledge.

Concept development studies show wide variation, with some finding a bilingual superiority, others a bilingual inferiority, and yet others no clear pattern of difference between bilinguals and monolinguals. In the current study, the main finding was that of no real difference. However on a small number of tests and at certain age levels there was a poorer performance by bilingual children. It did not prove easy to interpret these results unambiguously, and it was by no means clear what the reason was for the poorer performance of some of the bilingual children. On the basis

of the results of this study it did not seem possible to make general statements about the cognitive development of bilinguals.

In order to try to make some sense of the wide range of factors that need to be considered, the levels of analysis models was presented and discussed in chapters 7 and 8, in relation to both the language switching and the concept development studies. The model was found to be a useful way of analysing the wide range of relevant factors that need considering. It is in line with current concerns for utilising a wide range of factors in understanding bilingual phenomena. For instance Poplak (1988) says:

"What data are appropriate to the study and categorisation of these phenomena? (that is language switching). Clearly, if we are presented with a sentence of unknown pedigree containing elements from two codes, we cannot be sure of anything. We need to know the community patterns, both monolingual and bilingual, the bilingual abilities of the individual, and whether the context is likely to have produced speech in the code switching mode or not."

All these factors are contained in the levels of analysis model which draws from previous work on language switching. It has some similarities to Herman's (1961) approach. Herman suggests that there are three main categories of factors that can affect language switching: personal factors, the immediate context and background factors. The levels of analysis model uses these three factors as levels of analysis, naming them the personal level, the immediate context level and the wider context level, but adds to them another level - the interactional. While this level could perhaps have been subsumed under the

level of the immediate context, previous studies suggested that this was a factor of sufficient importance to be dealt with separately. Gal (1979), for instance, claims that the other participants in a situation are the most important determinants of language switching, and the work of Giles and his colleagues (Giles and Powesland 1975, Giles and Byrne 1982) focuses particularly on the relationship between interlocutors. Their work too, points out a need for considering not only static features of the different participants in a speech situation but also how they are perceived by each other and how the relationship between them may be changed and negotiated. It is necessary for a model of any aspect of bilinguals' social behaviour to incorporate this dynamic aspect, and the inclusion of an interactional level makes it less likely that the way in which individuals negotiate social relationships in an interaction will be ignored.

Several previous approaches have emphasised the importance of factors at the level of immediate context, for example Fishman (1972) in his discussion of 'domain' and Scotton and Ury (1977) in their discussion of the 'social arena'. However, unlike the studies that have utilised these concepts, the levels of analysis model does not prioritise this level above the other three.

The four levels put forward in the levels of analysis model were personal level, interactional level, the level of the immediate context and the level of the wider context. Most previous work has tended to emphasise one level or another, with studies on language switching tending to focus

on the immediate context or the interactional level and studies on concept development emphasising factors at the personal level. The levels of analysis model does not assume that factors at any one level take precedence over factors at any other level although one level or another may be more appropriate for analysing any particular situation.

These four levels will be considered here in more detail than in previous chapters, in relation to language switching, concept development and other aspects of bilingualism.

Table 9.1 outlines examples of relevant factors at the different levels. This is an illustrative rather than a complete list of factors.

TABLE 9.1

FACTORS AT THE FOUR LEVELS OF THE LEVELS OF ANALYSIS MODEL

PERSONAL LEVEL

- 1) Linguistic and other abilities, 'general preferred language'
- 2) Age, level of development.
- 3) Personality characteristics.
- 4) Current psychological state
- 5) Perception of own abilities
- 6) Attitudes towards language and language switching
- 7) Attitudes towards interlocutor

INTERACTIONAL LEVEL

- 1) Linguistic abilities and preferred language of interlocutor
- 2) Age, level of development of interlocutor
- 3) Social status and social role of interlocutor
- 4) Personality characteristics of interlocutor
- 5) Current psychological state of interlocutor
- 6) Interlocutor's attitudes towards language switching

IMMEDIATE CONTEXT LEVEL

- 1) Language of the immediate context
- 2) Topic of conversation
- 3) Other people in the immediate context

WIDER CONTEXT LEVEL

- 1) status of languages
- 2) status of speakers of different languages
- 3) range of domains or arenas where languages are used
- 4) attitudes of significant others to language and language switching

personal level

Clearly a bilingual's knowledge of the two languages will affect ability to switch. As studies examined in

chapter 3 demonstrated, a bilingual speaker needs some knowledge of linguistic rules before certain types of switches can be produced. However, other types of language switches may be due to lack of knowledge. Language switches due to triggering, for example, were found in the data in this thesis as well as in other studies. It is also important to know an individual's preferred language in order to tell if a switch is from preferred to less preferred language, or vice versa.

As this model relates particularly to children it has seemed important to include the factor of age or level of development. However the data did not suggest that this necessarily has a very strong effect on language switching, although there are some indications that as children get older their switches become more skillful. However the development of language switching skills is still something about which relatively little is known and far more data is required before this question can be answered satisfactorily. This is not the case with concept development where studies have nearly always assumed that age is the most important determinant of cognitive development. Results from the current study suggest that the factor of development is important when looking at cognitive differences between monolingual and bilingual children as these differences only occur at certain age levels.

Personality characteristics are also likely to be an important personal factor in many areas of bilingualism. A tolerance of language switching and an enjoyment of the

creative possibilities it offers may be related to a certain type of personality. Thinking of other areas of bilingualism, aspects of personality may be important in whether a child is willing to become bilingual at all in certain circumstances. The literature on bilingual language acquisition suggests that some children are more likely than others to become bilingual even within very similar situations, for example, children in the same family. This could be because of differences in linguistic ability but it is more likely to be the result of characteristics such as a willingness to be different from other children, or a willingness to use a language which is less familiar.

An individual's 'current psychological state' may also influence language switching. For instance, it may be more likely to occur in emotionally charged situations. Fatigue too, may make certain types of language switching, such as those due to triggering, more likely.

Attitudes in a number of different areas may also affect aspects of a bilingual's behaviour. It is not clear what the relationship is between attitudes towards language switching, and language switching behaviour, but negative attitudes towards a language or towards those who speak it probably make it less likely that a language will be used.

As well as attitudes towards language an individual will have a perception of how well he or she speaks a language. Those who consider themselves to be very good speakers of a language may avoid language switching, particularly if they view it negatively.

In considering data from cognitive testing too, it is

important to make this distinction between actual abilities, and abilities as they are perceived by the individual child.

For example, a child may believe that she does not know the answer to a test item and therefore refuse to attempt it, whereas another child in a similar state of ignorance may be prepared to try, and will perhaps succeed.

This discussion shows that there are many factors at the personal level of analysis that make for variation between individuals. Romaine (1989) insists too that "Bilingualism is not a unitary phenomenon."

interactional level

There is an interactional aspect to both studies discussed in this thesis. Language switching is obviously an aspect of communication and is most likely to be demonstrated in an interactive situation. (In young children however it can also appear in language to self, when alone, as documented by Dodson 1981.) Less obviously, the administration of concept tests too, is an interactive situation, involving an adult tester and a child.

Many of the factors discussed at the personal level of analysis are also relevant here in relation to the other person in a social encounter. A speaker is influenced not only by his or her own linguistic background, age, personality and so on, but also by the same aspects of the other person in the interaction. The interlocutor's social status is a particularly important factor and some approaches to language switching have considered it paramount. Social status becomes the most important factor

in the analysis when there is a difference in status between the interlocutors.

In the language switching study most of the recordings were of conversations between two children so there was no large difference in status. However there were some instances of children trying to increase their status by switching to what they perceived to be the more powerful language. There were also some examples of conversations between adult and child, and in some of these the children's awareness of their lower status was shown in their attempts to accommodate to the language they assumed was the adult's preferred one.

When discussing factors at the personal level the point was made that it was important to consider perceptions of language abilities as well as the abilities themselves. The same is true of interlocutor related factors. It is not only the actual characteristics of the other speaker that matters, but also how they are perceived by the other person in the interaction. For instance, in the studies discussed here, children had varied perceptions of the researchers' role. Some assumed they had the authority of a teacher, whereas others viewed them as less important 'students'.

An analysis at the level of interaction will include personal factors but within an interactive context. Depending on the interlocutor, different factors at the personal level will be important.

Finally, analysis at this level must take account of the ways in which factors can change during the course of a conversation. In some interactions speakers will negotiate

changes in roles and status over the course of a conversation and this may be done through linguistic means such as language switching.

immediate context

Most 'immediate contexts' will be associated with a particular language. For instance, in the language switching study the language of the immediate context was the language of the school. In the case of bilingual schools this differed from the preferred language at the personal level of many of the children who attended them. Scotton (1988a) dubs the language of the immediate context 'the unmarked language' in any interaction that takes place in that setting. Switching from it to a marked language will have a powerful effect. However, in some immediate contexts, the unmarked language may be a discourse mode that contains a large amount of language switches, (similar to that discussed by Poplak 1980, and in chapter 6 of this thesis) and in this type of immediate context, switching has less social significance.

In the language switching study the immediate context was the school situation. In some bilingual schools the association between this context and using Welsh was very strong. Switching to English in such a situation constituted a very strongly marked choice even though it might be the individual child's preferred language at the personal level. It is not surprising that some children resisted making such a switch.

Another factor at the immediate context level is the

topic of the conversation. There are many examples in the literature of how this can affect language switching and in the language switching study children often switched languages with certain types of play, for instance those derived from television.

A final aspect of the immediate situation that is worth mentioning is the effect of other people who are present in the situation but who are not part of the interaction. In the language switching study for instance, this would include teachers who were near to the children being recorded. It is likely that their presence would influence some children in the language choices they made, again particularly in the bilingual schools, where teachers play a strong role in monitoring and controlling the language used by children.

An instance of this factor operating more generally is given by Harding and Riley (1986) who report that some bilingual children are reluctant to use their home language with their parents when monolinguals who don't know the language are visiting the home. It has also been found (Harrison, Bellin and Piette 1981) that in families where the mother is the only Welsh speaking parent the majority of them do not speak Welsh to their children when the monolingual father is present.

An analysis at the level of the immediate context emphasises the way in which constraints are placed on individuals in an interaction by the context in which the interaction takes place. The same individuals in different immediate contexts may well produce different patterns of

language use, for instance siblings at home and at school. Limiting the language switching study to one immediate context means that no information was gained on language switching in other types of context. It was however possible to compare different individuals within the same, or similar, immediate contexts.

wider context

It is now widely recognised that this is a crucial level of analysis in any study of bilingualism. Heller (1988) emphasises the importance of economic, social and political processes in the study of language switching. In the wider context of Wales the relationship between these processes and language is not simple (see chapter 5).

The status of Welsh is in many ways lower than that of English. Fewer people speak it and it does not appear publicly a great deal. Some of the switches to English made by children in the language switching study seemed to reflect this in the way the children drew on English as the language of authority and power. However Welsh has a status as a language of culture and as an important indicator of Welsh identity, and children, particularly those in bilingual schools, were made aware of this.

Tied to the status of the language is the status of the speakers of the language. Again the Welsh situation is complex. For some people Welsh speakers are thought to be predominantly rural, elderly and old-fashioned and thus of low status. For others, Welsh is associated with people in certain high status occupations - media professionals,

teaching, the ministry. At the level of the wider context it is not possible to state definitely which language is the most powerful one without specifying the particular immediate context.

The range of domains in which a language is used is also important. If it only used in a limited range of areas speakers may be more likely to switch out of it than into it. As there are no Welsh speaking monolinguals few, if any, domains will be totally associated with Welsh alone. This is likely to decrease the amount of Welsh spoken.

All these factors will be reflected in attitudes towards language. It is difficult to make generalisations here, but for many people in Wales, one reaction to the complexity of the wider context may be to espouse positive attitudes towards Welsh, but to make relatively little use of the language in day-to-day living. This kind of reaction could perhaps be expected to lead to relatively frequent language switching. However, working in the opposite direction might be attitudes towards switching. These were not studied directly in the language switching study but there were some examples of children showing disapproval of switching to English.

It should be clear by this point in the discussion of the levels of analyses model, that although they have been discussed separately, the four levels are interrelated. For example, the attitudes of individual speakers are included as factors at the personal level, but these attitudes do not of course arise in a vacuum, but are influenced by factors in the wider context, and through interactions.

The immediate context will have an influence on factors that have been discussed here at the personal level. For instance how a child performs on a concept test will be influenced by the context in which it is being administered as well as by factors such as the child's ability.

The topic of a conversation was discussed as a factor at the level of the immediate context but the reason why a topic is seen as being appropriate to one language rather than to another is related to factors at the wider level. The reason why Welsh is not seen as an appropriate language for the discussion of many technical areas is because training and books in those topics have not been available in Welsh, and this is obviously caused by economic and social and political factors. These are only examples of the interrelationship of factors at the different levels. Whereas factors at one level may be most salient in a particular situation, and an analysis at that level will be most appropriate, it is likely, in most cases, that a complete picture will only be obtained by looking at factors from a range of levels and the interrelationships between all of them.

It has been suggested here that the levels of analysis model is useful as a way of organising the range of factors that need to be considered when looking at bilingualism, in particular language switching and cognitive development.

However, ideally, a model needs to do rather more than this. As well as helping to interpret data, it should also have some predictive power. Some speculative comments will be made here to indicate how, in a preliminary way, the levels of analysis model might be used to predict as well as to explain certain aspects of bilingual behaviour. Bearing in mind the particular concerns of this study, this will be done, first for language switching, and secondly for concept development.

In any study of language switching the first consideration is whether switching can be expected to occur at all in the particular speech community under study. In order to answer this, the first level of analysis that needs to be looked at, is that of the wider context. It is not yet clear which aspects of the wider context are most crucial but the factors listed here have been found to be important in previous studies. The relative importance of the different factors at this level of analysis is not an issue that has been much considered. For instance, is language switching more likely to be found in communities where both languages are used over a wide range of domains, or does it occur more frequently in communities where bilingual speakers have a particular social status?

Having confirmed that a speech community is one in

which language switching takes place predictions need to be made about individual speakers in the amount they switch. The relevant factors that will determine which individuals are likely to language switch will be found at the personal level of analysis. The list in table 7.1 makes some suggestions as to which factors are most relevant here, but again the relative importance of the different factors needs to be ascertained empirically.

Although they have sometimes considered who will language switch most studies have concentrated on when switching will take place. This is determined by factors at the interactional and the immediate context levels. Previous studies can suggest which factors at these two levels are likely to be particularly worthy of investigation. For instance, the status of speakers will be important in some types of immediate situations but not in others.

Drawing from the levels of analysis model and using data produced in previous studies it should be possible to develop hypotheses about both who will language switch and when it will take place, in addition to explaining such switches once they have been observed. It is necessary for more data to be collected in more systematic ways but there is probably enough information available, and summarised in the levels of analysis model, for some hypotheses to be made in advance of data collection in future studies.

For instance, it seems likely that, at the level of the wider context, switching will take place from the lower status language to the higher status one, or in either

direction when both languages have a high status. There is not likely to be much switching from a higher status language to a lower status one. At the personal level, it can be predicted from the literature that bilinguals at all levels of linguistic ability may language switch in certain circumstances, but the types of switches they make will vary according to linguistic ability.

Similarly, at the interactional level, the linguistic ability of the interlocutor may determine which types of switches are made, for example, if the interlocutor is relatively weak in the language being used, the speaker may switch for unusual words or phrases. Other factors have not yet been sufficiently well-researched for it to be possible to make predictions with any confidence, for instance on the relationship between a speaker's attitude to language and use of switching.

The levels of analysis model is not as appropriate for studies on concept development as for those on language switching but its use should ensure that analysis is not limited to factors at the personal level as has happened in some previous attempts at predicting results in studies of concept development in bilingual children. For instance, a consideration of factors at the level of the wider context will make it possible to predict whether individuals are likely to benefit, or be disadvantaged, cognitively by their bilingualism. Children living in communities where bilingualism is valued and where bilingual people have a high status are far more likely to derive cognitive benefits from bilingualism than those who live in primarily

monolingual societies where bilingualism is viewed as a problem, and bilinguals as inferior members of their society. In order to predict actual findings rather than general trends in studies of cognitive development in bilinguals it is necessary to consider factors at both the level of the immediate context and the interactional level - how will children be tested, what words will be used by the experimenter, and so on.

The language switching and concept development studies discussed in this thesis have fulfilled the aims outlined in the introduction of acquiring more information about bilingual children. The development of the levels of analysis model is an attempt to go beyond this. As Blanc and Hamers (1989) say

"Examples of uninterpreted data are innumerable in studies on bilingualism, from recording bilingual child biographies to amassing statistical data on speech communities; these only become useful once they can become interpreted in terms of a theoretical model."

The levels of analysis model is still in a preliminary form but is an attempt to respond to a clear need in the field of bilingualism. In future, research on bilingualism needs to develop thorough and sophisticated theories and models and such work will depend on input from a wide range of disciplines, and empirical study of many specific bilingualisms. It is to be hoped that such research will contribute not only to knowledge of the field but will also be of value to bilingual speakers themselves in the varied and complex communities they inhabit.

Appendix A

LOANWORDS

(There is some doubt concerning some of these words; it may be argued that some of them are genuine Welsh words. As tapes were not phonetically transcribed it is not usually possible to be sure if the words were pronounced with English or Welsh phonology. Some verbs, however, have been clearly adapted to Welsh phonology and are represented as such in the lists.)

List of English loan-words produced by 3/4 year old cohort

Nouns/Noun Phrases

cement	cake	things	cooker
motor-car	soldier	cardigan	toys
action men	rubbish	sweets	girl
cleaner	bales	heater	chicken
good boy	machines	sandcastles	glasses
snakes	television	apple-tart	sale
kitchen	holidays	pastry	jelly
monkey	work	fruit	steps
bullets	ice-cream	orange	cooks
wings	fish	shoes	room
spade	roller pin	sand	thumb
mess	Funny Bunny	chimney	Jack in the Box
square	bunk-bed	windmill	class

Adjectives

stuck	stupid	stiff	naughty
green	slow		

Verbs/Verb Phrases

warnio	jumpo	promiso	sboilio
watchio	teachio	fflio	knockio
climb	dig	come on	tippo
chaso	bombo	cutto	shareo
hito	splasho	flatto	rollo
scratcho	let's		

Adverbs/Adverbial Phrases

half-past-five half-past-six

List of English loan-words produced by 5/6 year old cohort

Nouns/Noun Phrases

mistake	cousin	porridge	units
tea-leaves	cubs	medicine	meeting
goggles	oven	soldiers	hotel
dressing-gown	giant	flashlight	kitchen
Yorkshire Pudding		castle	wire
cherry	jam sandwich	drink	sandcastles
rainbow	carrot	sweeties	marbles
factory	Americans	monster	Russians
ghost-train	knife	mess	sand
necklace	records	television	scarecrow
trailer	nurse-suit	bottom	globe
road	Judo suit	witches	track-suit
toast	book	bacon	puppet-show
fun	camera	cement-mixer	toy
cream	plastic	lather	cheque
lessons	star	class	spade
number	Indians	steel	camp
steam-roller	jersey	heater	reins
baker	cavern	cakes	ice-cream
nut	donkey	boot	gate
tricks	buffaloes	bushes	games
concert	wheel	sign	passes
accident	speed	crock	truck
news	blouse	fish	hospital
cardigan	jumper	skeleton	glass
carry-cot	chance	saddle	guinea-pig
sweets	crates	baths	pictures
washing-machines		tunnel	puncture
rubbish	earphones	butterfly	tape-recorder
dentist			

Adjectives

good	wrong	poisonous	lucky
funny	smacked	bumpy	Irish
squashed	creamy	hot	very
lovely	nice	magic	British
German	middle	cheeky	council
broken down	no	rotten	fall
straight	Chinese	smooth	stuck
fast	sore	grey	best
middle	sick	back	secret

Verbs/Verb Phrases

fillio	come on	tippo	slippo
spio	chase	fightio	happeno
go	bobbing	squasho	shareo
splasho	build	presso	let
beat	flyo	jumpio	ridio
buildio	dressio	mindio	bangio
pushio	watchio	spoilio	knockio
stopio	hitio	pattio	flattio
guess	collapsio		

Adverbs/Adverbial Phrases

please then

Pronouns

us their

Interjections

Thank You Dear Me Gosh

APPENDIX B

Summary of Test Methods and Purposes (Year 1)

PIAGETIAN TESTS

i) CONSERVATION OF AMOUNT - SOLIDS

Method The child is shown two identical balls of plasticine. The shape of one is changed and the child is asked if the two still contain the same amount of plasticine. In this item the child is asked first of all to predict if there will be a difference, then when the tester has completed the manipulation, whether there is a difference, and finally, to explain their answer.

Purpose To carry out this test successfully, the child needs to realise that although the shape of an object may change, the amount stays the same.

ii) CONSERVATION OF AMOUNT - LIQUID

Method The child is shown two identical containers, each holding the same amount of water. The contents of one are poured into another, different shaped, container and the child is asked if this has changed the amount of liquid. Again, as with item i), the child is asked to predict, to judge and to explain.

Purpose This is similar to i) - the concept tested is conservation of amount. Only the materials differ, liquids rather than solids.

iii) CONSERVATION OF WEIGHT

Method The same method as i) but the child is asked questions concerning the weight of the object.

Purpose Same as above but the concept discussed is that of weight. Conservation of weight is generally acquired later than conservation of amount

iv) CONSERVATION OF VOLUME

Method The same as i) and iii) but the questions asked concern the volume of the object.

Purpose Same as above but concept discussed is that of volume. This is usually acquired later than conservation of weight

v) CONSERVATION OF LENGTH

Method The child is shown two identical rods in several different positions. Each time the rods are moved the child is asked if they are still the same size.

Purpose This tests that the child realises that length is constant even when positions are changed.

vi) CONSERVATION OF NUMBER

Method a) Marbles are placed one by one in different shaped containers until one of them is full. The child is asked if both containers contain the same number of marbles.

b) Two rows of beads are placed in front of the child. In one row the beads are close together; in the other row the same number of beads is placed with about a one inch space left between each bead.

Purpose The child must realise that number remains constant under different conditions.

vii) SIMPLE CLASSIFICATION BY COLOUR, SIZE AND SHAPE

Method The child is presented with an array of blocks in different colours, sizes and shapes and is asked to classify them according to each attribute in turn - first colour, then size, then shape.

Purpose A simple test - the child's ability to concentrate on a relevant dimension and ignore others is tested. The child also has to change from one set to another.

viii) CLASS COMPOSITION

Method The child is presented with blocks of different colours and shapes and asked 3 questions: a) are there more blue ones or more triangles? b) are there more red ones or more square ones? c) are there more square ones or more blue ones?

Purpose A more complicated version of the previous test. The child must compare two dimensions at once and understand the principle of logical inclusion (e.g. the category blue includes all triangular shaped blocks)

ix) ADDITION

Method Two rows of beads are placed in front of the child - a different number of beads in each row. The child is asked to make the row with the smaller number of beads equal to that with the greater number of beads.

Purpose To succeed in this task the child must be able to add and to count.

x) SUBTRACTION

Method Similar to addition but the child is asked to make the row with the greater number of beads equal to the smaller.

Purpose To succeed in this task the child must be able to subtract and to count.

xi) SERIATION

Method The child is given a number of rods and asked to order them from shortest to longest. The child must also insert a rod into the completed series.

Purpose This tests the child's ability to seriate.

GOODENOUGH/HARRIS DRAW-A-MAN/WOMAN

Method The child is asked to make two drawings, one of a man and one of a woman.

Purpose This is considered to be a test of intellectual maturity and is often used instead of a conventional IQ test with very young children. Children's scores relate to the number of features and amount of detail included in their drawings.

WPPSI

i) BLOCK DESIGN

Method The tester forms a design with several blocks which the child must copy within a certain time limit.

Purpose This is a sorting test which also involves perceptual-motor skills.

ii) ANIMAL HOUSE

Method The tester forms designs with several blocks which the child must copy within a certain time-limit.

Purpose This is a measure of learning ability. Memory is a basic factor too and attention span, goal awareness and ability to concentrate are also involved.

Changes in Tests for Year 2

In year 2 the simple classification test was changed. 90% of the 5 year olds had been successful at this and it was considered that it would not differentiate sufficiently between children by the time they reached the age of 6. In the version for years 2 and 3 the same materials were used. The method was also similar but the child was given less explicit instructions and told simply to put the blocks in two different piles. This was repeated three times.

A conservation of area test was included. The method was as follows:

2 identical 'fields,' each containing a cow, are placed in front of the child. The houses are added, two at a time, one in one field and one in another. In one 'field' houses are scattered all over the area; in the other they are placed in a line along the side of the field. After each pair of houses is put into place the child is asked if each cow has the same amount of grass to eat (i.e. if the uncovered area is the same in each field).

Addition, subtraction and seriating - An item was added to the original one in each of these. The concept tested was the same but involved using a larger number of beads and rods.

Changes in Tests for Year 3

The Draw-a-Man test was omitted as it was failing to discriminate adequately between the children.

The WPPSI tests were replaced by WISC tests.

Block Design - This is similar to the WPPSI test but the blocks are 3 dimensional and the patterns more complex.

Coding - This is similar to the WPPSI Animal House test in that the child is required to associate signs with symbols.

APPENDIX C

INSTRUCTIONS FOR TEST ADMINISTRATION (COHORT 5-7) (Instructions to testers)

1. General instructions throughout tests:-

a) Give occasional praise whether the child is correct or incorrect.

b) If the child asks if he/she has made the right response say

"What do you think?"

or

"Try doing it yourself."

c) If the child hesitates, repeat the instructions only - give no additional help.

d) Always say the exact words written down - the order in choice items is particularly important.

2. PIAGETIAN TESTS

i) Conservation of Amount (Solids)

Put out two plasticine balls, identical in size and shape - say

"Do both balls have the same amount of plasticine?
Is there as much clay in this ball as in this one?"

When the child agrees they're equal, say

"Suppose I roll one of the balls into a sausage, will there be as much clay in the sausage as in the ball? Will they both have the same amount of clay?"
(Prediction)

Roll one of the balls into a sausage and say

"Is there as much clay in the ball as in the sausage? Do they both have the same amount of clay? (Judgement)

Then say

"Why is that?" (Explanation)

ii) Conservation of Amount (Liquids)

Have 2 similar glasses, both filled with the same amount of water. Say

"Have both glasses got the same amount of water?"

Pour water from one glass to another until the child agrees there is the same amount in each glass. Then point to a third container, lower and wider, and say

"If I poured the water from this glass into this one, would there be more water, less water or the same amount?" (Prediction question).

Then pour the water from one of the glasses into another wider, shorter glass and say

"Now is there the same amount of water in each glass or is there more in one of them?" (Judgement question).

"Why do you think that?" (Explanation question).

iii) Conservation of Weight

Ditto as for i) but

"Do they both weigh the same?" etc.

iv) Conservation of Volume

Ditto as for i) but

"Do they both take up the same amount of space?"

"Do they both take up as much room?"

v) Conservation of Length

Place 2 rods of exactly the same length exactly in alignment in front of the child, and say

"Which is the longest?"

If the child doesn't say they're the same, ask again

"Are you sure they're not the same?"

When the child agrees they're the same length, continue. Push one rod so that the front of it is approx. 1" in front of the other rod, and say

"Are they the same now, or is one longer?"

After the child replies, place the 2 rods in a T shape, and say

"Now is one longer, or are they the same?"

Repeat with the two rods at an angle.

vi) Conservation of number (a)

Give the child an empty Smarties tube and place a plastic bowl in front of the tester. Have a bag of marbles between the two. Say -

"You put a marble in your tube and I'll put one in my bowl, first you and then me, all right?"

Do this, tester and child taking a marble alternately, until the child's tube is full. Then say

"Which of us has got most marbles, you or me?"
"Why is that?"

Conservation of number b)

Put 2 rows of 6 beads in front of the child, each bead about 1" away from the next bead. Say

"Have these two rows got the same number of beads in them?"

Then squash up one row until all the beads are next to each other, and say-

"Now have both these rows got the same number of beads in them? Why?"

Prevent the child from counting the beads.

vii) Simple Classification

Put out the following blocks in a mixed array - 4 large blue squares, 4 small blue squares, 3 large blue circles, 3 small blue circles, 1 large red square, 1 small red square, 1 large red circle, 1 small red circle.

The five year olds are given the test as follows. Say-

"Do you know what colours these are?"

Pick up any block and say

"Do you know what colour this is?"

Allow the child to answer, then say

"Can you put all the blue (or red ones) together?"

Give no further instructions unless the child appears to get distracted, in which case repeat

"Can you put all the blue ones together?"

Mix all the blocks together again, and say, picking one up

"What shape is this block?"

Allow the child to answer, naming the shapes of the blocks if the child doesn't appear to know them, then say

"Can you put all the square blocks together?"

The six and seven year old are given the test as follows:

Say-

"Can you put the blocks that are the same together?

Can you put them into just two piles?"

After the child has done this, say (year two only)-

"Why have you put those blocks together?

Why are they the same?"

Then repeat twice, saying -

"Now put the blocks into two piles, in a different way, not colour (or shape, or size)."

viii) Class Composition

Put out the following blocks - 4 large blue triangles, 4 large blue squares and 3 large red squares. Ask the following questions -

i) Are there more blue ones or more triangles?
Which ones are they?

ii) Are there more red ones or more square ones?
Which ones are they?

iii) Are there more square ones or more blue ones?
Which ones are they?

ix) Addition

Place a row of 3 beads in front of the child (1" apart) and a row of 4 beads (1" apart) in front of the tester. Make sure there are spare beads in a beaker but don't take the beads from the beaker in front of the child. Say -

"Can you make your row the same number as my row?"

Then repeat with 4 beads in front of the child and 5 in front of the tester. Don't just add the extra beads to those previously used - remove them all and lay them all out again. Repeat with 6 in front of the child and 5 in front of the tester.

x) Subtraction

Repeat b) with the same number of beads but each time place the greater number in front of the child, namely 4 in front of the child, and 3 in front of the tester; 5 in front of the child and 4 in front of the tester; 8 in front of the child and 7 in front of the tester (six year olds only). This time the child is expected to subtract by removing one of his or her beads. If he/she wants to add to the tester's instead, say

"Don't do anything to mine; try and do it just with your beads."

xi) Seriation

Put out 4 rods, all different lengths and colours, scattered randomly in front of the child. Say

"Can you put these in order, the smallest one first?"

When the child has done this, give him/her another rod of a different length and colour, and say

"Where does this go in?"

Repeat this with 9 rods of different lengths, adding a tenth.

Goodenough/Harris Draw-a-Man

Give the child a sheet of paper and a pencil. Write the child's name on the paper or allow them to write it themselves. Say

"Can you make a drawing of a man on that for me please. Make the whole man, not just his head."

Give the child as much time as he requires. If any parts of the drawing appear ambiguous, ask the child.

"Can you tell me about your drawing?"

Then turn the paper over and say

"Can you make a drawing of a woman for me here?".

WPPSI

i) Animal House (timed)

Follow WPPSI manual and score sheet

ii) Block Design

Follow WPPSI manual and score sheet.

REFERENCES

- ANISFELD, E. and LAMBERT, W. 1964, Evaluative Reaction of Bilingual and Monlingual Children to Spoken Language. Journal of Abnormal and Social Psychology, vol. 59, 89-97.
- APPEL, R. and MUYSKEN, P. 1987, Language Contact and Bilingualism. London: Edward Arnold.
- ARNBERG, L. 1981, A Longitudinal Study of Language Development in Four Young Children Exposed to English and Swedish in the Home. Linkoping Studies in Education, Dissertation No. 14. Linkoping University.
- ARNBERG, L. 1987, Raising Children Bilingually: the pre-school years. Clevedon: Multilingual Matters.
- ARSENIAN, S. 1937, Bilingualism and Mental Development. New York: Teachers College Contribution to Education, Columbia University.
- AUER, J. 1979, The Development of Italian/German Alternation Among Italian Migrant Children in Germany. Paper presented at the International Conference on Language and Social Psychology. Bristol, England.
- AUER, J. 1988, A Conversation Analytic Approach to Code-switching and Transfer. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.
- BAETENS BEARDSMORE, H. 1982, Bilingualism: Basic Principles. Clevedon: Tieto.
- BAIN, B. 1976, Verbal Recognition of Cognitive Processes: a Replication of Luria's Procedure with Bilingual and Unilingual Infants. Child Development, vol. 47, 543-6.
- BAIN, B. and YU, A. 1980, Cognitive Consequences of Raising Children Bilingually: 'One parent, one language'. Canadian Journal of Psychology, vol. 34, 304-13.
- BAKER, C. 1985, Aspects of Bilingualism in Wales. Clevedon: Multilingual Matters.
- BARIK, H. and SWAIN, M. 1976, A Longitudinal Study of Bilingual and Cognitive Development. International Journal of Psychology, vol. 11, 251-63.
- BATES, E. 1976, Language and Context: the Acquisition of Pragmatics. New York: Academic Press.
- BEARD, R. 1969, An Outline of Piaget's Developmental Psychology. London: Routledge, Kagan Paul.
- BEE, H. 1981, The Developing Child. 4th edition. New York: Harper and Row.

- BELLIN, W. 1984, Welsh and English in Wales. In P. Trudgill (ed) Language in the British Isles. Cambridge: Cambridge University Press.
- BENTAHILA, A. and DAVIS, E. E. 1983, The Syntax of Arab-English Code-switching. Lingua, vol. 59, 301-30.
- BEN-ZEEV, S. 1977, Mechanisms by which Childhood Bilingualism Affects Understanding of Language and Cognitive Structures. In P. Hornby (ed) Bilingualism: Psychological, Social and Educational Implications. New York: Academic Press.
- BERGMAN, C. R. 1976, Interference v. Independent Development in Infant Development. In Keller, G. Taeschner, R. and Viera, S. (eds) Bilingualism in the Bicentennial and Beyond. New York: Bilingual Press.
- BERKO-GLEASON, J. 1973, Code-switching in Children's Language. In T. Moore (ed) Cognitive Development and the Acquisition of Language. New York: Academic press.
- BERK-SELIGSON S. 1986, Linguistic Constraints on Inter-sentential Code-Switching: a study of Spanish/Hebrew Bilingualism. Language in Society, vol. 15, 313-348.
- BETTS, C. 1976, Culture in Crisis. Wirral: Ffynnon Press.
- BIALYSTOK, E. 1986, Factors in the Growth of Linguistic Awareness. Child Development vol. 57, 419-510.
- BIALYSTOK E. 1987, Words as Things. Development of Word Concept by Bilingual Children. Studies in Second Language Acquisition, vol. 9, 133-40.
- BIJSTRA, J. VAN GEERT, P. and JACKSON, S. 1989, Conservation and the Appearance-Reality Distinction: What Do Children Really Know and What do they Answer?. Journal of Developmental Psychology, vol. 7, 43-53.
- BLOM, J. P. and GUMPERZ, J.J. 1972, Social Meaning in Linguistic Structures: Code-Switching in Norway. In J.J. Gumperz and D. Hymes (eds.), Directions in Sociolinguistics: The Ethnography of Communication. New York: Holt, Rinehart and Winston.
- BODEN, M. 1979, Piaget. London: Fontana
- BOESCHOTEN, H. and VERHOEVEN, L. 1987, Language-Mixing in Children's Speech: Dutch Language Use in Turkish Discourse. Language Learning, vol. 37, 191-213.
- BOURHIS, R. GILES, H. and TAJFEL, H. 1973, Language as a Determinant of Welsh Identity. European Journal of Social Psychology, vol. 3, 447-60.

- BOURHIS, R. GILES, H. LEYENS, J.P. and TAJFEL H. 1979, Psycholinguistic Distinctiveness: Language Divergence in Belgium. In H. Giles and R. St Clair (eds) Language and Social Psychology. Blackwell: Oxford.
- BOWEN, E. G. 1959, Le Pays de Galles. Transactions of the Institute of British Geographers, vol. 26, 1-23.
- BOWEN E. G. and CARTER, H. 1974, Preliminary Observations on the Distribution of the Welsh Language at the 1971 Census. Geographical Journal, vol. 140, 432-40.
- BROWN R. and GILMAN A. 1960, The Pronouns of Power and Solidarity. In P.P. Giglioli (ed.) Language in Social Context: Selected Readings. Harmondsworth: Penguin.
- BURGESS, A. 1980, Earthly Powers. Harmondsworth: Penguin.
- CLARK, H. H. 1970, The Primitive Nature of Children's Relational Concepts. In J. R. Hayes (ed) Cognition and the Development of Language. New York: John Lilley.
- CLAYTON, P. 1979, Domain and Register in the Use of Welsh. In G. Williams (ed.) Social and Cultural Change in Contemporary Wales, London: RKP.
- CLYNE, M. G. 1967, Transference and Triggering. The Hague: Nijhoff.
- CLYNE, M. G. 1987, Constraints on Code-Switching: How Universal are they?. Linguistics, vol. 25, 739-64.
- CORNEJO, R. 1973, The Acquisition of Lexicon in the Speech of Bilingual Children. In P. R. Turner (ed) Bilingualism in the Southwest. Arizona: University of Arizona press.
- COUPLAND, N. and GILES, H. 1988, Introduction: The Communicative Contexts of Accommodation. Language and Communication. vol. 8, 175-182.
- CUMMINS, J. 1976, The Influence of Bilingualism on Cognitive Growth: a Synthesis of Research Findings and Explanatory Hypotheses. Working Papers on Bilingualism, 9, 1-43.
- CUMMINS, J. 1977, Cognitive Factors Associated with the Attainment of Intermediate Levels of Language Skills. Modern Language Journal vol. 61, 3-12.
- CUMMINS, J. 1984, Bilingualism and Special Education: Issues in Assessment and Pedagogy. Clevedon: Multilingual Matters.
- DABINE, L. and BILLIEZ, J. 1986, Code-switching in the Speech of Adolescents Born of Immigrant Parents. In Studies in Second Language Acquisition, vol. 8, 309-325.

DE AVILA, E. and DUNCAN, S. 1981, Bilingualism and the Metaset. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.

DE JONG, E. 1986, The Bilingual Experience: a Book for Parents. Cambridge: Cambridge University Press.

DENNEY, N. 1972, Free Classification in Pre-school Children. Child Development. vol. 43, 1161-1170.

DEPARTMENT OF EDUCATION, UCW, 1988, Concept and Language Development in Children aged 5-7. Aberystwyth: UCW.

DE VRIES, J. 1979, Demography and Social Psychology of Second-language Acquisition: Towards a Symbiosis. Paper presented at the International Conference on Language and Social Psychology. Bristol, England.

DE VRIES, J. 1987, Problems of Measurement in the Study of Linguistic Minorities. Journal of Multilingual and Multicultural Development. vol.8, 23-32.

DIAZ, R. 1985, Bilingual Cognitive Development: Addressing Three Gaps in Current Research. Child Development, vol. 56, 1376-1388.

DIPIETRO, R. 1977, Code-switching as a Verbal Strategy among Bilinguals. In F. R. Eckman (ed) Current Themes in Linguistics: Bilingualism, Experimental Linguistics and Language Typologies. Washington: Hemisphere.

DODSON, C. J. 1981, A Reappraisal of Bilingual Development and Education: Some Theoretical and Practical Considerations. In H. Baetens-Beardsmore (ed) Elements of Bilingual Theory. Brussels: Vrije Universiteit te Brussel.

DODSON, C. J. 1985, Second-language Acquisition and Bilingual Development: a Theoretical Framework. Journal of Multilingual and Multicultural Development. vol. 6, 325-346.

DODSON, C. J. and THOMAS, S. 1988, The Effect of Total L2 Immersion Education on Concept Development. Journal of Multilingual and Multicultural Development. vol. 9, no. 6, 467-485.

DONALDSON, M. 1978, Children's Minds. London: Fontana.

DONALDSON, M. 1982, Conservation: What is the Question?. In P. Bryant (ed) Piaget: Issues and Experiments. Leicester: British Psychological Society.

DONALDSON, M. and WALES, R.J. 1970, On the Acquisition of Some Relational Terms. In J. R. Hayes (ed) Cognition and the Development of Language. New York: John Wiley.

- DOPKE, S. 1986, Discourse Strategies in Bilingual Families. In Journal of Multilingual and Multicultural Development. vol. 6, 493-507.
- DOYLE, A. CHAMPAGNE, M. and SEGALOWITZ, N. 1978, Some Issues on the Assessment of Linguistic Consequences of Early Bilingualism. In M. Paradis, (ed) Aspects of Bilingualism. Columbia: Hornbeam Press.
- DUNN, J. 1989, The Beginnings of Social Understanding. Oxford: Blackwell.
- EDWARDS, D. and CHRISTOPHERSEN, H. 1988, Bilingualism, Literacy and Metalinguistic Awareness in Pre-school Children. British Journal of Developmental Psychology. vol. 6, 235-244.
- EDWARDS, J. 1985, Language, Society and Identity. Oxford: Blackwell.
- ELLUL, S. 1978, A Case Study in Bilingualism: Code-Switching between Parents and their Pre-school Children in Malta. St. Albans: The Campfield Press.
- ERICKSON, F. 1978, Review of H. Giles and P. Powesland (eds) Speech Style and Social Evaluation. In Language in Society. vol. 7, 428-433.
- ERVIN-TRIPP, S. M. 1964, An Analysis of the Interaction of Language, Topic and Listener. In J.J. Gumperz and D. Hymes (eds), The Ethnography of Communication, special issue of American Anthropologist, vol. 66, 86-102.
- ERVIN-TRIPP, S. M. 1967, An Issei learns English. The Journal of Social Issues, vol. 23, 78-90.
- ERVIN-TRIPP, S. M. 1973, The Structure of Communicative Choice. In A. Dil (ed) Language Acquisition and Communicative Choice: Essays by S. M. Ervin-Tripp. Stanford: Stanford University press.
- FANTINI, A. 1985, Language Acquisition of a Bilingual Child: a Sociolinguistic Perspective. San Diego: College Hill Press.
- FISHMAN, J. A. 1964, Language Maintenance and Language Shift as a Field of Inquiry: a Definition of the Field and Suggestions for its Further Development. Linguistics vol. 9, 32-70.
- FISHMAN, J. A. 1967, Bilingualism with and without Diglossia: Diglossia with and without Bilingualism. Journal of Social Issues, vol. 23, 29-38.

FISHMAN, J. A. 1971, The Relationship between Micro- and Macro-Sociolinguistics in the Study of Who Speaks What Language to Whom and When. In J.A. Fishman, Cooper R. L. and Ma, R. (eds) Bilingualism in the Barrio. Bloomington and The Hague: Indiana University Press and Mouton.

FISHMAN, J. A. 1972, Varieties of Ethnicities and Varieties of Language Consciousness. In Dil, A. S. ed. Language in Socio-cultural Change. Stanford: Stanford University Press,

FLAVELL, J., GREEN, F. and FLAVELL, E. 1986, Development of Knowledge about the Appearance-reality Distinction. In Monographs of the Society for Research in Child Development. Chicago: University of Chicago Press.

GAL, S. 1979, Language Shift: Social Determinants of Linguistic Change in Bilingual Austria. New York: Academic Press.

GAL, S. 1980, Review of H. Giles (ed) Language, Ethnicity and Inter-group Relations. Language in Society, vol. 9, 369-405.

GAL, S. 1988, The Political Economy of Code-choice. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton de Gruyter.

GARCIA, E. and CARRASCO, R. 1980, An Analysis of Bilingual Mother-Child Discourse. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.

GARVEY, C. 1984, Children's Talk. London: Fontana Books.

GELMAN, R. and GALLISTEL, C. 1978, The Child's Understanding of Number. Cambridge, Mass.: Harvard University Press.

GENESEE, F. 1984, The Social-psychological Significance of Bilingual Code Switching for Children. Applied Psycholinguistics. vol. 5, 3-20.

GENESEE, F. 1989, Early Bilingual Development: One Language or Two?. Journal of Child Language vol. 16, 161-179.

GENESEE, F. and BOURHIS R. 1988, Evaluative Reactions to Language choice Strategies: the Role of Sociocultural Factors. Language and Communication vol. 8, 229-250.

GENISHI, C. 1981, Codeswitching in Chicano Six-Year-Olds. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.

GIBBONS, J. 1987, Code-Mixing and Code-Choice: a Hong-Kong Case Study. Clevedon: Multilingual Matters.

GILES, H. 1973, Accent Mobility: a Model and some Data. Anthropological Linguistics, vol. 15, 87-105.

GILES, H. BOURHIS R. Y. and TAYLOR D. M. 1977. Towards a Theory of Language in Ethnic Group Relations. In H. Giles (ed.), Language, Ethnicity and Intergroup Relations. London: Academic Press.

GILES, H. and BYRNE, J. 1982, An Inter-group Approach to Second Language Acquisition. Journal of Multilingual and Multicultural Development. vol. 3, 17-40.

GILES, H. and HEWSTONE, M. 1982, Cognitive Structures, Speech and Social Situations: two integrative models. Language Sciences, vol. 4, 187-219.

GILES, H. and JOHNSON, P. 1987, Ethnolinguistic Identity Theory: a Social Psychological Approach to Language Maintenance. International Journal of the Sociology of Language. vol. 68, 69-100.

GILES, H. and POWESLAND, P. 1975, Speech Style and Social Evaluation. London: Academic Press.

GINGRAS, R. 1974, Problems in the Description of Spanish-English Intrasentential Code-switching. In Bills G. (ed) South West Areal Linguistics. San Diego: University of California.

GROSJEAN, F. 1982, Life with Two Languages: an Introduction to Bilingualism. Cambridge, Mass.: Harvard University Press.

GUMPERZ, J.J. 1982, Discourse Strategies. Cambridge: Cambridge University Press.

GUMPERZ, J.J. and HERNANDEZ-CHAVEZ, E. 1971, Bilingualism, Bidialectalism, and Classroom Interaction. In J. J. GUMPERZ Language in Social Groups: essays by John J. Gumperz. Stanford: Stanford University Press.

HAKUTA, K. 1986, Mirror of Language: the Debate on Bilingualism. New York: Basic Books

HAKUTA, K. and DIAZ, R. 1985, The Relationship between Bilingualism and Cognitive Ability: a Critical Discussion and Some New Longitudinal Data. In Nelson, K.E. (ed) Children's Language, vol. 5. Hillsdale: Lawrence Erlbaum.

HAMERS, J. 1981, Psychological Approaches to the Development of Bilinguality. In H. Baetens-Beardsmore (ed) Elements of Bilingual Theory. Brussels: Vrije Universiteit te Brussel.

HAMERS, J. and BLANC, M. 1982, Towards a social-psychological model of bilingual development. Journal of Language and Social Psychology, vol.1, 29-49.

HAMERS, J. and BLANC, M. 1989, Bilinguality and Bilingualism. Cambridge: Cambridge University Press.

HARDING, E. and RILEY, P. 1986, The Bilingual Family: a Handbook for Parents. Cambridge: Cambridge University Press.

HARN, J. L. 1979, Trends in the Measurement of Intelligence. Intelligence vol. 3, 229-240.

HARRISON, G., BELLIN, W. and PIETTE, B. 1981, Bilingual Mothers in Wales and the Language of their Children. Cardiff: University of Wales Press.

HARRISON, G. and PIETTE, B. 1980, Young Bilingual Children's Language Selection. Journal of Multilingual and Multicultural Development. vol. 1. 217-230.

HASSELMO, N. 1972, Code-switching and modes of speaking. In Gilbert (ed.) Texas Studies in Bilingualism. Berlin: Walter de Gruyter.

HATCH, E. M. 1978, Second Language Acquisition. Rowley, Mass.: Newbury House.

HAUGEN, E. 1956, Bilingualism in the Americas: A Bibliography and Research Guide. Publications of the American Dialect Society 26.

HAUGEN, E. 1973, Bilingualism, Language Contact and Immigrant Languages in the United States: a Research Report 1956-70. In Sebeok, T. (ed) Current Trends in Linguistics, vol. 10. The Hague: Mouton.

HELLER, M. (ed) 1988, Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, De Gruyter.

HERMAN, S. 1961, Explorations in the Social Psychology of Language Choice. Human Relations vol. 14, 149-64.

HILL, J. and HILL, K. 1979, Metaphorical Switching in Modern Nahuatl: Change and Contradiction. Paper presented at the International Conference on Language and Social Psychology. Bristol, England.

HILL, J. and HILL, K. 1980, Mixed grammar, purist grammar and language attitudes in modern Nahuatl. Language in Society, vol. 9, 321-348.

HOFFMAN, C. 1985, Language Acquisition in Two Trilingual Children. Journal of Multilingual and Multicultural Development. vol. 5, 479-95.

HUERTA-MARCIAS, A. 1981, Codeswitching: All in the Family. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.

HUNT, C. 1968, Language Choice in a Multilingual Society. Sociological Inquiry. vol. 10, 112-125.

HUSBAND, C. and SAIFALLAH-KAHN, V. 1982, The Viability of Ethnolinguistic Vitality: some creative doubts. Journal of Multilingual and Multicultural Development, vol. 3. 193-205.

HIMES, D. H. 1972, On Communicative Competence. Social Setting. Journal of Social Issues, vol. 23, 8-28.

HYMES, D. H. 1972, On Communicative Competence. In J. Pride and J. Holmes (eds.), Sociolinguistics.

IANCO-WORRALL, A. 1972, Bilingualism and Cognitive Development. Child Development, vol. 43, 1390-1400.

ITOH H. and HATCH, E. 1978. Second-Language Acquisition: a case study. In E. Hatch (ed) Second Language Acquisition. Rowley, Mass.: Newbury House.

JENSEN, A. R. 1962, The Effects of Childhood Bilingualism. Elementary Education vol. 39, 137-143, 356-366.

JONES, B. 1981, Welsh: Linguistic Conservatism and Shifting Bilingualism. In E. Haugen, J. McClure and D. Thomson (eds) Minority Languages Today. Edinburgh: Edinburgh University Press.

KESSLER, C. and QUINN, M. 1987, Language Minority Children's Linguistic and Cognitive Creativity. Journal of Multilingual and Multicultural Development, vol. 8, 173-86.

KHLEIF, B. 1980, Language, Ethnicity and Education in Wales. The Hague: Mouton.

LAMBERT, W. 1975, Culture and Language as Factors in Learning and Education. In Wolfgang, A. (ed,) Education of Immigrant Students. Toronto: Ontario Institute for Studies in Education.

LAMBERT, W. 1980, The Two Faces of Bilingual Education. Focus, vol. 3. 1-4.

LANCE, D. 1975, Spanish/English Code-switching. In Hernandez-Chavez, E., Cohen, A., and Beltramo, A., eds. The Language of the Chicanos. Arlington: the Centre for Applied Linguistics.

LANCE, D. 1979, Spanish-English Bilingualism in the American South-West. In W. Mackey and J. Ornstein (eds), Sociolinguistic Studies in Language Contact. The Hague: Mouton.

LANDRY, R. G. 1974, A Comparison of Second-language Learners and Monolinguals on Divergent Thinking Tasks at the Elementary School Level. Modern Language Journal. vol. 58, 10-15.

LATTEY, E. 1981, Individual and Social Aspects of Bilingualism. In H. Baetens-Beardsmore (ed) Elements of Bilingual Theory. Brussels: Vrije Universiteit te Brussel.

LEIN, C. and BRENNEIS, D. 1978, Children's Disputes in Three Speech Communities. Language in Society, vol. 7, 299-323.

LEOPOLD, W. 1939-49, Speech Development of a Bilingual Child: a Linguist's Record. vols. 1 to 4. Evanston, Ill.: North-Western University Press.

- LIEDTKE, W. and NELSON, L. 1968, Concept Formation and Bilingualism. Alberta Journal of Educational Research, vol. 14, 225-232.
- LINDHOLM, J. and PADILLA, A. 1978, Language Mixing in Bilingual Children. Journal of Child Language, vol. 5, 327-35.
- McCLURE, E. 1981, Formal and Functional Aspects of the Code-switched Discourse of Bilingual Children. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.
- McCLURE, E. and McCLURE, M. 1988, Macro and Micro-sociolinguistic Dimensions of Code-switching in Vingard. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.
- MCCONVELL, P. 1988, MIX-IM-UP: Aboriginal Code-switching, Old and New. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.
- MCGARRIGLE, J. and DONALDSON, M. 1975, Conservation Accidents. Cognition. vol. 3, 341-350.
- MACKEY, W. F. 1968, The Description of Bilingualism. In Fishman, J. (ed) Readings in the Sociology of Language. The Hague: Mouton.
- MACKINNON, K. 1977, Language, Education and Social Processes in a Gaelic Community. London: Routledge, Kagan Paul.
- MCLAUGHLIN, B. 1978, Second Language Acquisition in Childhood. Hillsdale, NJ: Lawrence Erlbaum Associates.
- MCLAUGHLIN, B. 1984, Early Bilingualism: Methodological and Theoretical Issues. In Paradis, M. and Lebrun, Y., Early Bilingualism and Child Development. Swets and Zeitlinger: BV.
- MCNAB, G. 1979, Cognition and Bilingualism: a Reanalysis of Studies. Linguistics, vol. 17, 231-55.
- MCNAMARA, J. 1972, Cognitive Basis of Language Learning in Infants. Psychological Review. vol. 79, 1-14.
- MARTIN-JONES, M. and ROMAINE, S. 1985, Semilingualism: a Half-baked Theory of Communicative Competence. Applied Linguistics, vol. 6, 105-17.
- OKSAAR, E. 1976, Implications of Language Contact for Bilingual Language Acquisition. In W. C. McCormack and S. Wurm (eds.) Language and Man: Anthropological Issues. The Hague: Mouton.

PARADIS, M. (ed) 1978, Aspects of Biligualism. Columbia, South Carolina: Hornbeam Press.

PARADIS, M. 1980, Contributions of Neurolinguistics to the Theory of Bilingualism. In R. K. Herbert (ed) Applications of Linguistic Theory in the Human Sciences. Dept. of Linguistics, Michigan State University.

PEAL, E. and LAMBERT, W. 1962, Relation of Bilingualism to Intelligence. Psychological Monographs, vol. 76, 1-23.

PEDERSEN, K. 1987, German Minority Children in the Danish Border Region: Code-switching and Interference. Journal of Multilingual and Multicultural Development. vol. 8, 23-32.

PFUFF, C. W. 1979, Constraints on Language Mixing: Intrasentential Code-Switching and Borrowing in Spanish/English. Language, vol. 55, 291-318.

PIAGET, J. 1929, The Child's Conception of the World. London: RKP.

PIETTE, B. 1987, Bilingualism: a Communications Approach. In A. Cashdan and M. Jordin, (eds) Studies In Communication. Oxford: Blackwell.

PLATT, J. 1977, A Model for Polyglossia and Multilingualism (with special reference to Singapore and Malaysia). Language in Society, vol. 6, 361-79.

POPLAK, S. 1979, Syntactic Structure and Social Functions of Code switching. Working Paper 2, CUNY.

POPLAK, S. 1980, Sometimes I'll Start a Sentence in Spanish Y TERMINO EN ESPANOL: a Typology of Code-switching. Linguistics, 18, 581-618.

POPLAK, S. 1988, Contrasting Patterns of Code-switching in Two Communities. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.

POPLAK, S. SANKOFF, D. and MILLER, C. 1988, The Social Correlates and Linguistic Consequences of Lexical Borrowing and Assimilation. Linguistics vol. 26, 47-104.

PRATT, C. 1988, The Child's Conception of the Conservation Task. British Journal of Developmental Psychology, vol. 6, 157-168.

PRICE, G. 1984. The Languages of Britain. London: Edward Arnold.

PYE, C. 1986, One Lexicon or Two? An Alternative Interpretation of Early Bilingual Speech. Journal of Child Language, vol. 13, 591-3.

RAYFIELD, J. R. 1970, The Languages of a Bilingual Community. The Hague: Mouton.

REDLINGER, W. 1978, Mothers' Speech to Children in Bilingual Mexican/American Homes. International Journal of the Sociology of Language vol. 17, 73-82.

ROMAINE, S. 1989, Bilingualism. Oxford: Blackwell.

SAER, D. 1924, The Effect of Bilingualism on Intelligence. British Journal of Psychology, vol. 14, 25-38.

SANKOFF, D. and POPLAK, S. 1981, A Formal Grammar for Code-switching. Papers in Linguistics, vol. 14, 3-46.

SAUNDERS, G. 1982, Bilingual Children: Guidance for the Family. Clevedon: Multilingual Matters.

SCHMIDT-MACKEY, I. 1977, Language Strategies of the Bilingual Family. In W. Mackey and T. Andersson (eds) Bilingualism in Early Childhood. Rowley, Mass.: Newbury House.

SCOTTON, C. M. 1979, Explaining Linguistic Choices as Identity Negotiations. In H. Giles, P. Robinson, and P. Smith, (eds), Language: Social Psychological Perspectives. Oxford: Pergamon Press.

SCOTTON, C. M. 1988(a) Self-enhancing Code-switching as Interactional Power. Language and Communication, vol. 8, 199-211.

SCOTTON, C. M. 1988(b) Code-switching as Indexical of Social Negotiation. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.

SCOTTON, C. M. and URY, W. 1977, Bilingual Strategies: the social functions of code-switching. International Journal of the Sociology of Language, vol. 13, 5-20.

SHATZ, M. and GELMAN, R. 1973, The Development of Communication Skills: Modifications in the Speech of Young Children as a Function of Listener. Monograph of the Society for Research in Child Development, vol. 38, no. 5.

SINCLAIR, H. 1977, Representation, communication et debuts du langage, in 'La Psychologie' Encyclopedie de la Pleiade.

SINGH, R. 1985, Grammatical Constraints on Code-switching: Evidence from Hindi-English. Canadian Journal of Linguistics, vol. 30, 33-45.

SKUTTNAB-KANGAS, T. 1984: Bilingualism or Not: the Education of Minorities. Clevedon: Multilingual Matters.

SOBIN, N. 1984, On Code-switching inside NP. Applied Psycholinguistics, vol. 5, 293-303.

SONDERGAARD, B. 1981, Decline and Fall of an Individual Biligualism. Journal of Multilingual and Multicultural Development, vol. 2, 297-302.

SRIDHAR, S. and SRIDHAR, K. 1980, The Syntax and Psycholinguistics of Bilingual Code-switching. Canadian Journal of Psychology, vol. 34, 407-16.

SWAIN, M. 1972, Bilingualism as First Language. Ph.D. dissertation: University of California, Irvine.

TAESCHNER, T. 1983, The Sun is Feminine: a Study on Language Acquisition in Bilingual Children. Berlin: Springer.

TENEZAKIS, M. 1975, Linguistic Sub-systems and Concrete Operations. Child Development. vol. 46, 430-436.

THAKERAR, J., GILES, H. and CHESHIRE J. 1982, Psychological and Linguistic Parameters of Speech Accommodation Theory. In C. Fraser and K. Scherer (eds) Advances in the Social Psychology of Language. Cambridge: Cambridge University Press.

TIMM, L. A. 1975, Spanish-English Code-Switching: El Porque y How-Not-To. Romance Philology, vol. 28, 473-82.

TOMLINSON-KEASEY, C., EISERT, D., KAHLE, L., HARDY-BROWN, K. and KEASEY, B. 1979, The Structure of Concrete Operational Thought. Child Development, vol. 46. 430-436.

TRITES, R. 1984, Early Immersion in French at School for Anglophone Children: Learning Disabilities and Prediction of Success. In M. Paradis and Y. Lebrun (eds) Early Bilingualism and Child Development. Swets and Zeitlinger: B. V. Lisse.

TROSSETT, C. 1986, The Social Identity of Welsh Learners. Language in Society. vol. 15, 165-193.

VALDES-FALLIS, G. 1976, Social Interaction and Code Switching Patterns: a case-study of Spanish/English Alternation. In G. Keller, R. Teichner and S. Viera (eds.) Biligualism in the Bicentennial and Beyond. New York: Biligualism press.

VALDES-FALLIS, G. 1977, Code-switching among Bilingual Mexican-American Women: Towards an Understanding of Sex-related Language Alternation. International Journal of the Sociology of Language, vol. 7, 65-72.

VIHMAN, M. 1985, Language Differentiation by the Bilingual Infant. Journal of Child Language. vol. 12, 297-324.

- VIHMAN, M. and MCLAUGHLIN, B. 1982, Bilingualism and Second-language Acquisition in Preschool Children. In C.J. Brainerd and M. Pressley (eds) Progress in Cognitive Development: Verbal Process in Children. New York: Springer Verlag.
- VOLTERRA, V. and TAESCHNER, R. 1978 The Acquisition and Development of Language by Bilingual Children. Journal of Child Language, vol. 5, 311-26.
- VUYK, R. 1981, A Critique of Piaget's Genetic Epistemology 1965-1980. London: Academic Press.
- WALLWORK, J. 1978, Language and People. London: Heinemann.
- WECHSLER, D. 1949, Wechsler Intelligence Scale for Children Manual. New York: The Psychological Corporation.
- WECHSLER, D. 1967, Wechsler Pre-school and Primary Scale of Intelligence. New York: The Psychological Corporation.
- WEINREICH, U. 1953, Languages in Contact: Findings and Problems. New York: Linguistic Circle of New York.
- WELLS, G. 1987, The Meaning Makers: Children Learning Language and Using Language to Learn. London: Hodder and Stoughton.
- WILLIAMS, G. 1979 (ed) Social and Cultural Change in Contemporary Wales. London: Routledge, Kegan Paul.
- WILLIAMS, G. 1987, Bilingualism, Class Dialect, and Social Reproduction. International Journal of the Sociology of Language, 66, 85-98.
- WONG-FILLMORE, L. 1976, The Second Time Around: Cognitive and Social Strategies in Second Language Acquisition. PhD. thesis, Stanford University.
- WOOLARD, K. 1988, Codeswitching and Comedy in Catalonia. In M. Heller (ed). Code-switching: Anthropological and Sociolinguistic Perspectives. The Hague: Mouton, de Gruyter.
- ZENTELLA, A. 1985, Ta bien, You Could Answer Me en cualquier idioma: Puerto Rican Codeswitching in Bilingual Classrooms. In R. Duran (ed) Latino Language and Communicative Behaviour. Norwood NJ: Ablex Publishing Group.
- ZENTELLA, A. 1985, The Fate of Spanish in the United States: The Puerto Rican Experience. In N. Wolfson and J. Manes (eds) Language of Inequality. The Hague: Mouton.