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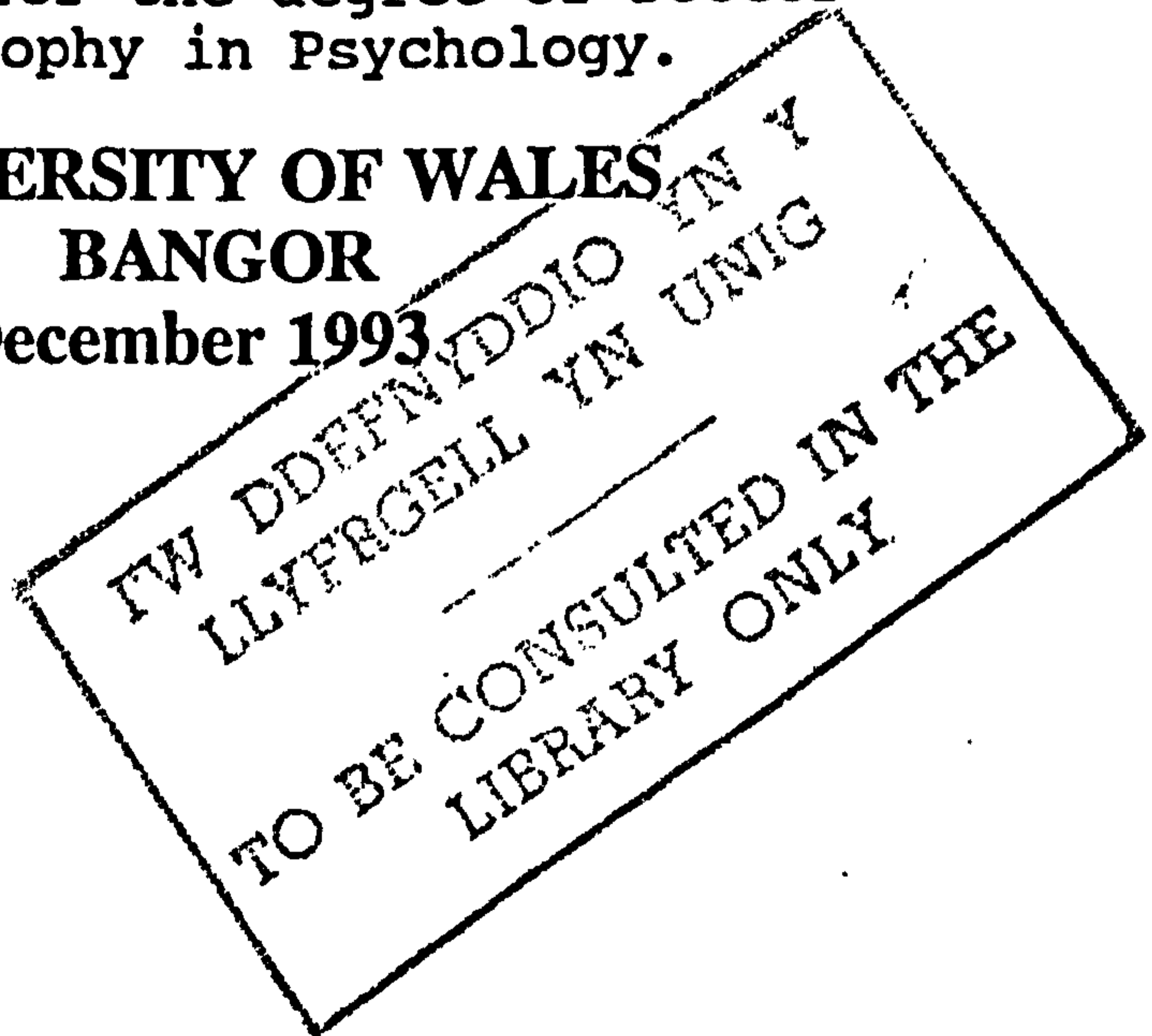
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THE DEVELOPMENT OF CHILDREN'S LANGUAGE IN A BILINGUAL CULTURE

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Thesis submitted in part fulfilment of the
requirements for the degree of Doctor of
Philosophy in Psychology.

UNIVERSITY OF WALES
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Jean Lyon,
November, 1993.

SUMMARY; The Development of Children's Language in a Bilingual Culture.

This research asks how young children become bilingual, and what best predicts bilingual language development.

All mothers of new babies on Anglesey in North Wales were contacted and asked to complete a questionnaire for the family concerning their past and present use of Welsh and English, and their attitudes towards these languages. Use was taken as more important than knowledge and respondents (N= 413), were allocated to five language background types on the basis of language use.

Ten firstborn children with both parents resident were chosen to represent these groups, and recordings were made of their language development at three monthly intervals from age 16 to 36 months. Nine sessions took place at home, most during free play between mother and child, the last between fathers and children at three. This small sample allowed close scrutiny of the process of language acquisition.

Families who replied to the first questionnaire were sent a second three years later. This asked about current parental language use and attitudes, and about the development of their child's Welsh and/or English.

More than two thirds of families on Anglesey use Welsh and the large majority of families want their children to learn Welsh at school, English-speaking families giving mainly instrumental reasons and Welsh-speaking families mainly integrative reasons. Development in this large group paralleled that of the small sample.

It is suggested that children who are becoming bilingual learn their languages sequentially, and an extension to the Threshold Model is proposed.

Men are shown to influence the language spoken at home more than women, but the English language has the greatest effect. Children from Welsh-speaking homes are more likely to become bilingual.

Although fathers influence their children's language, by far the greatest predictor of future language use is the mother's language when the child is born.

Jean Lyon

November 1993

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Chapter One; INTRODUCTION

1. BACKGROUND

Language is one of humanity's greatest achievements, and yet one which virtually all children achieve remarkably quickly. How much more remarkable then when children learn to use not one but two languages?

This is not a clinical thesis, but the research grew out of a clinical question. A boy of about 30 months old, John, was slow to develop language, although his general development seemed fine. It is usual to recommend that such children obtain as much experience of playing with and talking to a peer group as possible. However, John's parents were English speaking and they lived in a mainly Welsh speaking part of Anglesey in North Wales. Should John be sent to a Welsh speaking playgroup, or would it only confuse him to be confronted with a second language before his first was established? An initial search of the literature did not prove helpful. Nothing was directly relevant to John's situation, and there was little to indicate how small children cope with a bilingual environment.

John was helped by the Welsh speaking playgroup, and could use both languages in primary school. His predicament set this research in motion. It became an investigation of the process whereby children born into a bilingual culture, (North Wales), learn to use one or two languages. Furthermore, although it might be predicted that children from Welsh speaking families will speak Welsh and children from English speaking families will speak English there are no certainties about who will be bilingual. Parents who really want their children to acquire two languages can adopt strategies to maximize the chances

that their children will become bilingual, but for ordinary families, with parents speaking a mixture of Welsh and English, there is no way of telling which children will become bilingual before school entry. Therefore, the aims of this research project are two-fold;

1. To discover how very young children become bilingual.
2. To discover what features in the infant's background predict early childhood bilingualism.

2. GENERAL QUESTIONS

Curiosity about the experience of learning to communicate in a bilingual environment, and the difficulty knowing which children would become bilingual led to a large number of questions, such as;

- what language is a bilingual child learning?
- is the early language acquisition sequence the same for all children, bilingual as well as monolingual?
- how do mother/child dyads differ linguistically?
- do mothers play similar communication games?
- what are the possibilities and problems in learning two languages?
- what beliefs do mothers hold about the language of children?
- is it possible for a child to learn only Welsh before three years old on Ynys Mon (Anglesey, North Wales)?
- what do children learn to do with language before three?
- are these similar for bilingual children?

What follows is an attempt to narrow them down and to channel this curiosity through a few clearly articulated questions.

The first broad questions were normative ones. Given the knowledge base available concerning monolingual children, were there notable differences in the language acquisition process of these bilingual children? It was expected that the stages of development would be similarly invariable, and that acquisition of, for instance, Brown's (1973) first 14 morphemes would be reflected in the growing language of these children. But would the acquisition of these stages be slower?

This led to the second kind of broad question which was of a more theoretical nature. How can one account for the bilingual acquisition of language? Are the two languages processed simultaneously, in which case one might expect a slow but smooth progress through the sequence? Or are the two languages processed sequentially, possibly resulting in a more erratic pace. In either case, as more work is needed to acquire two systems, do the stages each take longer to achieve? Or can two or more languages be acquired as one, and separated only much later?

The third type of question was comparative. If children grow up in different language backgrounds, does their language development differ in ways that can be ascribed to their language background? If differences can be so ascribed, what are those differences? A wide net of investigation would be needed to find all possible differences, but perhaps the more obvious differences could be investigated.

The last set of broad questions were descriptive. These concerned the ways in which individual children make use of their emerging skills with language, whether monolingual or bilingual. This set of questions is fraught with danger as the richness and variety of early communicative strategies merit study on their own. Questions here related to the development of pragmatic understanding and of metalinguistic

awareness, and to the possibility of differing dyadic styles.

3. RESEARCH AREAS

Over the last few decades there has been a great deal of interest in children's acquisition of language and communication skills (Bullowa, 1979; Anisfeld, 1984; Slobin, 1985; Wanner & Gleitman, 1986). Particular attention has focused on the very early days, the beginning of dialogue and the development of a competent language user. By three years of age, virtually all children learn to communicate, usually through whatever language they have heard. There is good agreement on the importance of the communicative environment of the infant and on the speech addressed to her or him for the acquisition of language and communicative competence. Many setting features in the environment have been described and analyzed. In the bulk of this work the assumption is that the child is being exposed to one language, and that language can therefore be a stable factor in the investigation.

In the field of bilingualism, it cannot be assumed that language is a stable factor. In a culture where more than one language is common currency, children grow up listening to more than just language variations. They need to accommodate two or more language systems, even if they eventually ignore one of them. It is not a simple matter to describe how much exposure any one child has to each language. Monolingual families using the dominant language may use no more than occasional borrowed words, whereas families who would prefer to use only the non-dominant language may have to use the second language for practical reasons and there will be a range of differences between. It is therefore necessary to find a way of describing relevant features in the language background.

To simplify matters, it was decided to focus this research on pre-school children, children before they are routinely exposed to language influences in school. But this still includes children who are exposed to a range of monolingual and bilingual experiences both within the home and, as they get more independent, with peers and adults outside of the home. Some will be bilingual and some will become bilingual and some will remain monolingual. Thus it has been necessary to look at what is known about monolingual language acquisition, at the general field of bilingualism and at what is known about childhood bilingualism.

Language Development

As a basis for this investigation, children's monolingual language acquisition will be discussed first, from the earliest attempts to communicate to the richness of language used by three year olds. The early attempt at communication with another person is the beginning of language, and so it is arguable that an understanding of language development is best approached through the early interactions between infant and caregiver, usually but not necessarily the mother. Although this is generally accepted, there is still room for dispute about the role played by the child's social environment in his or her acquisition of language. As in all research, underlying theories of language acquisition, and of the nature of language itself, direct investigation of the phenomena and colour interpretation of the results. The significance of 'motherese' and the role of maternal-child dialogue are examined prior to following the child's communication skills through the one word stage to the production of simple and then more complex utterances. This project explores the language of children up to the age of three, by which time most children are competent communicators, able to hold their own in dialogue with

strangers as well as within the family.

To assist description of the emerging language of the child, there follows a brief explanation of key linguistic terms and of the key terms used by psychologists. The stages often used to mark a child's language development are also described. The next issue to be explored is the relationship between language and thinking; is language necessary for thought, or is thought a prerequisite for language? And what is happening when the child becomes aware of language? Is that a cognitive process? The argument remains unresolved. It does seem, however, that the social context of both thought and language plays an important part in the development of both. Lastly the way children learn to use language pragmatically, the constraints a society places on language use and the effects of paternal language on the child are all discussed.

Bilingualism

The next review section looks at the broad field of bilingualism. Definitions and Measurement play an important part in the study of bilingualism, for example, the difference between language performance and language competence. This is a version of the traditional distinction between what people do and what they say they can do. Bilingual communities are then described, with the issues of language maintenance, language shift, assimilation and language loss which they entail. National policies towards bilingualism differ and these and their effect upon cultural identities are the topics which follow. Finally, the attitudes of linguistic groups towards their own and other languages are explored, ending with a discussion of the situation in Wales and the attitudes of parents towards the bilingual education of their children.

Childhood Bilingualism

The last review section brings the focus of attention back to children, starting with the case studies by linguists of their children's bilingual language acquisition (Ronjat, 1913 and Leopold, 1945, 1954). To bring the discussion up to date, there follows a critique of a recent case study (DeHouwer, 1990), which raises many of the issues that recur throughout the literature. There is then an examination of different kinds of bilingual language acquisition (and acquisition is the term preferred for preschool bilingualism), and the bilingual child's environment. After a discussion of code switching, attention is turned next to second language learning. This is a separate but overlapping field of study. It usually refers to formal second language learning, but that body of research can provide insight into informal two language learning. It also leads on to a discussion of kinds of bilingual education.

Theories of bilingual language acquisition are at an early stage of development. Pertinent theories which explain language acquisition or development per se, second language learning, and bilingualism in general are explored for what they might have to contribute, to such a theory. Three theories of bilingual language acquisition are then described, the Gradual Differentiation Theory, the Separate Development Theory, and finally, the Threshold Theory. This last theory became of special interest and it is suggested that it might lend itself to extension.

Explanations of the process of bilingual language acquisition have been made on the basis of the exploration of concepts such as language switching, language mixing and borrowing, but there remains a lack of clarity about what these concepts mean. There is a suggestion that language differentiation is associated with language awareness. This is another concept that has proved fruitful in stimulating research in order to

clarify the questions it has raised. Language awareness and metalingual awareness have been subsumed under the general heading of cognitive abilities, or higher mental functioning. This links in with the seminal work of Vygotsky (1986 {1962}) who suggested that cognitively, bilinguals had an advantage over monolinguals. This claim is explored.

Lastly, there is a review of studies of the language of children in Wales. Not many studies exist, but research in the fields of linguistics and education are mentioned, and the single home-based study of a group of children is discussed. Statistics from the latest national census show that the percentage of children in Gwynedd who can speak Welsh has increased, (as has that in all of Wales), despite a marginal drop in the percentage of Welsh speakers overall. This sets the scene for the exploration of the development of children's language in a bilingual culture.

4. THE PRESENT RESEARCH

The review of the literature identifies gaps in the research into childhood bilingualism. This leads to the formulation of nine questions to guide the research project, aimed at clarifying the factors associated with the development of bilingualism, and the mechanisms through which that development occurs. This will necessitate the use of a large sample of parents of potentially bilingual children (contacted by questionnaire), and a small group of ten children to represent the kinds of bilingual family found in the larger community. The nine questions will be used as a framework for discussing the results drawn from both the large and the small groups.

The first two questions ask about the language use and the attitudes of the parents. They will make it possible to

describe the background against which children acquire language/s. The next two focus mainly on the ten individual children, and ask what languages they are learning. There will also be an exploration of the process of language acquisition, and in particular of the mechanisms that lead to bilingualism. Questions 5 and 6 will look at the ways in which children use language, and become aware of language as a tool. Differences in maternal/paternal language use will be examined next, both when conversing with one another and with others in the family. Particular attention will be paid to parents in cross language partnerships. A second questionnaire will allow some observations on changes over time, and the last question is an attempt to identify those factors that predict a child's language.

The results of the research will be organised to provide answers to these questions. The questions will be explored separately, the findings will be discussed in detail, and their importance assessed. Subsequently, issues raised by the research will be explored, and attempts will be made to draw the evidence together and give an overall view of the research findings. Finally, general conclusions will be reached that could have been of practical assistance to John and his family.

Chapter Two; REVIEW

A) LANGUAGE ACQUISITION

1. INTRODUCTION

This chapter begins by broadly describing when children learn language, and continues with a discussion of theories of language acquisition. People have speculated on the origins of language since biblical times, but the discussion will begin with the ideas of this century, starting with those of Piaget, Vygotsky, Skinner, Chomsky and Bruner.

These ideas were influential and lead to an examination of early language users and their carers. Adult-child dyads begin to communicate before language can be said to exist in the infant. These interactions, usually between mother and child, teach sharing before infants have words to exchange, and turn-taking before they have questions to ask. It is clear that the language used with small children differs from its adult form. This language code, called Motherese or Baby Talk, has been observed widely, but its significance is disputed.

The development of words follows, and many interpretations have been made of the meaning of these first single words, including the suggestion that they can stand for a sentence. Eventually children learn to join words together, and to take part in conversations with many different people.

The chapter then provides a description of how language is described. Commonly occurring linguistic terms are explained, although to provide definitive descriptions would go beyond the scope of the present work. Brown's (1973) and Crystal's

(1976) Stages of language acquisition are then described. Brown recorded the language progress of three small children, and, in order to make sense of his data, he counted the average length of the children's comments. This concept he called the Mean Length of Utterance, (MLU), and he used MLU and analysis of language function to define Stages (Brown, 1973). Others have described pragmatic and semantic scales, and the functions of early dialogue. In any examination of the communication and language development mention of cognition is unavoidable. Thus theories of cognitive development and the relationship between language and cognition are discussed.

Finally, the wider context of language acquisition is highlighted. Cultural differences are examined, there is a brief description of pragmatics, language use in context, and differences are examined in how parents use language with young children. Children need to learn to use language in context if they are to become competent language users.

2. THEORIES of LANGUAGE DEVELOPMENT

Learning to Talk

Children can only make sounds when they are born, and yet by the time they are about a year old, they can usually produce a small number of intelligible single words, and by about two years old they can put two words together to make a range of simple utterances. By age three years they can hold conversations, changing the form of words to suit the context, asking questions, referring to the past, and stringing together a comprehensible narrative. A three year old child is a competent language user and the years that follow see a broadening and a refinement of that basic skill. The complexity of this commonplace achievement is rarely considered unless something goes wrong, but it is an

extraordinary achievement nonetheless, and one that has caught the imagination of psychologists, linguists and educationalists alike, especially in the last thirty years.

Theories

Researchers from these disciplines have added a wealth of detail to the rudimentary description above, but have done so from their own standpoint. Linguistic accounts have been able to elucidate the growth of phonology, morphology and syntax, (eg, Leopold, 1949a; 1949b; Crystal, 1976; Menn, 1982; Bowerman, 1985). Educationalists have looked back to early childhood and developed assessment techniques to identify the difficulties experienced by some nursery and school children (eg, Crystal, Fletcher & Garmon, 1976). They have clarified many of the features in the home and school environment that encourage language (Stubbs, 1981; Wells, 1981). Finally, psychologists have tried to understand and explain the development of language, partly for its own sake, but partly as a way of understanding cognition, cognitive processes and social relationships.

Piaget (1926; 1936) explored the development of children's language primarily for the insights it could give on how children learn to think. For him, language was a reflection of thought and not a shaper of thoughts. He saw children as learning by interacting with the world and using classification (and language) to understand their experience (Piaget, 1926). Research with deaf children had indicated that the social transmission of spoken language was not essential for classification, (and thus for cognition). His investigations of children's early verbalisations led him to believe that, *"although language is an important factor in building logical structures, it is not the essential factor, even for children with normal hearing."* (Inhelder & Piaget, 1964 p4). Language is a series of assimilations which

accelerates the process of cognitive development.

Piaget's (1936) theory of stages of development has also been important in the field of language acquisition, and particularly in relation to Brown (1973), whose work is important to the present investigation. Piaget postulated the existence of stages of intellectual development, rather than a steady developmental progression, with children as active participants in their own development. They act, assimilate their actions and the effects of their actions within the framework of their current world view, their current 'theory' of how things work. When new experience can no longer be accommodated within that theory, they extend and adapt the theory to fit their increased understanding. They move on to the next stage.

A number of key features identify Piagetian stages. Firstly, stages of development are universal and invariable. Secondly, each stage is necessarily assimilated before the next is attained, and therefore stage achievement is not automatic. Thirdly, stages are not age governed, although they are age related. Finally, only one stage ahead of the child's present stage is at all comprehensible, and as such it is attractive to the child, providing the spur to further development.

Piaget (1936) saw his stage theory as having wider application than to intellectual development alone, and other stages theories have been developed following his seminal work. Examples include Kohlberg's (1969) theory of moral development and Selman's (1980) theory of the development of social perspective-taking. Brown (1973) uses a stage model of language development which has some of the features of Piagetian stageness, (such as their age relatedness rather than age governedness), but does not follow his ideas of accommodation and assimilation so closely. This contrast will

be re-examined following the description of Brown's 'mean length of utterance' measure.

Vygotsky is usually contrasted with Piaget, the one from a socialist the other from a capitalist country, and it is widely suggested that the ideological debate can be traced through their work (eg Elliot, 1981). Whereas Piaget saw the child as an egocentric explorer, Vygotsky (1962) saw children as social explorers. For him language makes thought possible. To begin with, the child learns names, then how to name, and finally speech turns inwards. It should be noted that both Vygotsky and Piaget saw speech and thought as developing separately, but as becoming intimately related as the child progressed. Vygotsky emphasized the importance of the environment, the socializing context, and Piaget emphasized the natural egocentrism of the child.

With the advent of powerful behavioural techniques for examining human learning, it was initially assumed that acquiring language could also be explained by conditioning theories. Early language was seen as a learned process, with children improving their grasp of language through imitation, encouraged by parental praise, and rewarded by the results they achieved, (Skinner, 1959). Skinner maintained that even complex language learning could be explained within the stimulus-response paradigm. His book, 'Verbal Behavior', provoked a strongly critical review from Chomsky (1959), who subsequently developed his own theory, of 'Generative Transformational Grammar', to explain how language is acquired, (1965; 1968). He suggested that children had an innate Language Acquisition Device, (LAD), which pre-programmed them to acquire language. They did not learn sentences by rote but, after exposure to language, could create new sentences as needed. "In short, the language is 'reinvented every time it is learned" (Chomsky, 1968, p75).

Chomsky's ideas were almost entirely theoretical. He was not interested in the details of children's language, but in describing the syntactic structure that underpinned all language. He called this a 'Generative Grammar', and suggested that the surface form of language is built upon deep structures which native speakers know but never need to learn. Thus, you may never have read, for example, the sentence; "*multi-coloured apples hummed silently falling behind the toe house*" but not only can you make some sense of it, but you can probably make up the next sentence and continue it as a story to a child. The sentence, though unusual, has a surface structure which conforms to rules of grammar at a deep structure level, unlike, for instance *red apples silently fall the house*.

Chomsky made no attempt to explain HOW children went about using their LAD, or how, given the rich and inaccurate plethora of language they were exposed to, they managed to sort out where to begin. Bruner (1978a; 1978b) addressed the question to some extent when he highlighted the role of dialogue in language acquisition. He described three possible models: an Input Model, much like Skinner's (1959) idea of the environment shaping the child's language, an Output Model, with the child actively generating language, and a Transactional Model wherein the child and the social environment interact. The emergence of language he described as an interactive process, recognizing the vital role played by social factors in enabling children to make use of their latent abilities. Partners, and usually parents, are essential for the normal emergence of language in a child. They highlight salient features of the world, encourage and model language, and create play routines. Later Bruner called this a Language Acquisition Support System (LASS), a language framework involving familiar, routine transactional formats, with feedback to make communicative intentions plain,

play 'events' that could be recreated by language, and could enable generalisation of linguistic and psychological processes to take place, (Bruner, 1983). This model has been described by other workers (such as Halliday, 1975; Bever, 1982) and it is that adopted by this present work. ¹

3. COMMUNICATION

Pre-verbal Communication

Long before there is language there is communication. Babies respond to sound and touch from a few days old, start to imitate and learn to smile within a few weeks of birth and look at faces in preference to anything else (Fantz, 1961; Kaye, 1977; Higgins, 1988). This is no one-sided relationship, as caregivers spend a lot of their time talking to babies, looking at them and touching them. It was Trevarthen's pioneering work in the 1970s that showed that babies can do more than had been imagined. By videotaping mothers and babies in parallel when at play, he was able to show that babies from as young as three weeks old can respond to their mothers in a reliable fashion. From six weeks old, a baby can respond to the facial expression of the mother, who in turn has generated her expression from that of her baby, (Trevarthen, 1979). Later he and Murray were able to show how important the baby was in this partnership by manipulating the videoed feedback to the mother, (Murray & Trevarthen, 1986).

The features of this early exchange have been studied extensively in recent years, (for example Snow, 1977a; 1977b; Schaffer, 1977; Bullowa, 1979). Bateson (1979) lists features

¹Slobin, has adopted a more atheoretical position, and investigated what he termed the child's "LMC" -the Language-Making Capacity of the child, (1985b).

of this interaction as alternating, overlapping vocalisations, of regular pattern, with pauses, and involving sustained attention and mutual gaze. One of the basic characteristics of interactional behaviour, according to Condon (1979), is synchrony in speech and body movements. He has shown that babies and mothers mirror one another's head, hand & arm movements and vocalisations. It is important for both partners to get this rhythm right from early on. Many researchers have linked this to an innate mechanism, namely sucking. This synchronised interpersonal exchange sets the pattern for later interactive games (Kaye, 1977).

Newson (1974; 1977), also describes this relationship in terms of shared context, shared history and shared game-like rituals. Each is continually aware of the other, and, as with all rituals, each knows what to expect of the other. The baby thus learns one of the basic features of dialogue, turn-taking, within the first few months of life. As Schaffer has stated *"mother and infant come to share a code of conduct long before they share a linguistic code"* (Schaffer, 1977, p15). The importance of this can best be seen on the rare occasions when it does not occur. Autistic children do not recognise the mother's bid for a response, and even when they do attend to faces, they do not imitate expressions (Christie & Wimpory 1986). There are other external factors which can interfere with the development of this smooth, rich interaction. An impoverished environment can limit the social intercourse available to a baby, there may be no mother figure consistently to hand (see Clarke & Clarke, 1976).

Alternatively, the baby may have difficulty responding to / initiating interactions. Deaf children have been found to develop language in stages similar to hearing children, but more slowly (Mogford & Gregory, 1980) and Down's Syndrome children who also go through a similar but slower

developmental process tend to have problems with articulation (Mittler, 1974). Many children with a mental handicap have difficulty acquiring language, and research has highlighted a number of ways in which this can be facilitated. Of most interest to the present discussion is evidence that adults try too hard with these children, and so spoil the natural dialogue (McConkey & O'Connor, 1981).

Dialogue

It is difficult to decide what constitutes the social/behavioural interaction between mother and infant and what constitutes the beginnings of dialogue. Is the early rhythm of sucking, pausing, jiggling, smiling and sucking the social context of language or the earliest dialogue? Are later cooing games that mothers and babies play the beginning of communication, or of socialisation? To some extent the answer to this lies in the theoretical stance of the researcher. However, the two aspects are not easily separable. Therefore an endeavour will be made to look only at those aspects of early interaction which seem to echo the way that later dialogue works, what Brown has called, the management of shared attention (Brown, 1973).

A seminal work in the field of discourse analysis was that of Sacks, Schegloff and Jefferson in 1974 suggesting that turn-taking was fundamental to conversation. They identified the occurrence of turn-taking in many social encounters, and discussed its functions in controlling human interactions. Although they did not apply their findings to early relationships, developmentalists were not slow to do so, (see Schaffer, 1977; Bullowa, 1979). Snow (1977a) describes early conversation as the result of the mother's intuitive belief that babies are capable of reciprocating. They talk to babies and take the response they get as a speech turn, whether it is a movement, an expression or a vocalization. Maternal

speech changes in response to the infant's growing ability to respond, rather than in response to their comprehension. Most of these changes begin to occur at about seven months.

On the other hand, Trevarthen (1979), rejected the idea that it is the mother who fabricates the structure of dialogue. He talks of the growth of a mutual understanding in 2-3 month old babies. This he calls 'primary intersubjectivity' wherein there is innovation of meaning by the infant and by the mother. Murray and Trevarthen (1986) went on to show that when they manipulated the responsiveness of the baby, (using delayed replay), the mother's behaviour differed consistently, indicating the importance of the child's active role in dialogue. He suggests that the baby "*invites her to share a dance of expressions and excitements. The infant needs a partner but knows the principle of the dance well enough, and is not just a puppet to be animated by a miming mother who 'pretends' her baby knows better,*" (Trevarthen, 1979, p347). Support for this viewpoint comes from Golinkoff (1986). She looked at how pre-verbal children communicate with their mothers and found that they often failed to get their messages across. However, they showed a high degree of persistence and creativity, in trying to do so.

Bruner (1977; 1978b) believes that children learn about communication before they learn about language, and that this enables them to learn about language; "*mother and child develop a variety of procedures for operating jointly and in support of each other.*" (Bruner, 1977, p274). In particular he looked at three topics which elucidate early communication and the transition from communication to language. Firstly, Bruner (1977) discussed the nature of reference. This is seen as a procedure for constructing and using a limited taxonomy, rather than linking signs to objects. It is not that a

Stimulus-Response bond is learned, but that the child learns which of the available alternatives is the relevant focus of attention. Initially it is the mother who indicates, who marks various properties of the object or action (deixis) and who names, but at the early age of four months or so, the child too can indicate (by touching, vocalising) making it a mutual system by which joint selective attention is assured. Bruner next looked at prediction. By establishing shared formats and rituals, mothers and children can refer to them without mentioning them. They can indicate to one another that they are sharing 'their game', by eye to eye contact, by smiling and pointing. This presence or absence of shared information is crucial in later conversations. Lastly, he discusses "*the pragmatics of language in the regulation of joint action.*" (Bruner, 1977, p274). He describes first the 'demand mode', (early crying that elicits help from adults), which is followed by the 'request mode' (when expectancies have been established) and then, by about six months, the 'exchange mode' of communication. At this time, the infant not only asks for things but also offers them back, and not only are objects exchanged, but also looks and vocalisations. This is then developed into a 'reciprocal mode' where the two partners are co-operating in a task. Vocalisations are slotted into these action formats, and eventually take the place of action. In learning how to get things done together, the child and the mother are learning how to communicate.

Focusing on vocalisations, Berko-Gleason (1977) has described how children learn to make conversations. They are assisted by predictable features of their mother's speech, and by their mother, the more competent partner, keeping the conversation going. This she does by adopting a slower rate of speech, using simple well formed sentences, many repetitions and concentrating on topics in the here and now. Eye contact, and nods as well as vocalisations from the baby provide feedback

to keep the 'conversation' alive (Berko-Gleason, 1977). Others have confirmed these findings, and have described these dialogues as developing as a result of expectations and feedback (Snow, 1977a; 1977b; Ervin-Tripp, 1977b).

Newson (1977, 1979) and the Nottingham group make a clear distinction between studying infant behaviour and studying the emergence of cognitive and linguistic understanding in children. They lay greater emphasis on the mother's role and view this early dialogue as;

" an attempt by the mother to enter into a meaningful set of exchanges with her infant, despite the fact that she herself will often be aware that the semantic element in any resulting communication lies more in her own imagination than in the mental experience of her baby." (Newson, 1977 p47).

However, they too emphasise the interactive nature of this process, seeing both partners as able to generate activity directed towards the other. They describe this as a chain of communication gestures, where most links serve a dual function; they answer the preceding signal and they invite the next signal. Clearly, the two partners are operating at differing levels of competence, but the mother's role decreases as the baby develops. Primarily, they see mothers as providing an elaborate framework for keeping the dialogue going.

Motherese

In the work described above, the primary caretaker, usually the mother, is universally recognised as playing an important role. However, researchers have been divided into those who thought her role was facilitative, that she provided the LASS (Language Acquisition Support System) for her child, and those who thought her role was essential, the necessary model and teacher for the young language learner. This last is clearly

a more behavioural position.

"Motherese" is the description given to the special way in which most caregivers talk to babies, and the terms Motherese and Baby Talk (BT) tend to be used interchangeably. Ferguson (1977, 1982) has called BT a simplified register of language, and in BT he found processes that tended to clarify and simplify meaning, but also processes that were more expressive than in normal adult speech. Such speech is clearly enunciated, frequently repeated and refers to concrete objects in the immediate environment (eg Snow, 1977a; 1977b).

There is general agreement that motherese or BT is a valuable concept. What is disputed is the influence that motherese has on the child's acquisition of language. Furrow and colleagues, (Furrow, Nelson & Benedict, 1979), suggested that in some ways Motherese is responsible for the acquisition of language. They describe it as a teaching language, using language in a context that makes it highly interpretable. Newport, Gleitman and Gleitman (1977) also studied the characteristics of Motherese and agreed that it comprised short, highly intelligible utterances that were well formed and frequently repeated. At first it looked as if Motherese was simpler than adult speech, and might well act as a syntax teaching language. However, on closer examination, they found that almost all of Motherese comprised action directives, instructions for the child to do something, functions not imitated and used by the child. They found few significant correlations between features of Motherese and growth rates in children's language; "many properties of Motherese have no effect on language growth at all" (Newport, Gleitman & Gleitman, 1977, p136). The children learn language almost despite Motherese. According to Gleitman and colleagues, the range of adult speech heard is too limited to account for the language children actually use, (Gleitman, Newport & Gleitman,

1984).

As with many disputes, the extreme positions are no longer held. Furrow and Nelson (1986), showed that although mothers structure situations to encourage learning, and re-phrase to facilitate understanding, "*the child brings certain... biases... to the learning process,*" (1986, p176). Gleitman and colleagues (1984), have acknowledged that the effects of maternal characteristics vary with the language stage of younger children. Neither innate abilities nor environmental influences alone can account for the acquisition of language.

The First Words and Beyond

Children spend a long time at the single word stage. At one time it was suggested that these single words stood for complete utterances, holophrases, as the memory or the physiology of the child was too immature to make full expression possible, (Menyuk, 1969 for example). The variations in stress, intonation, and gesturing which accompanies much early word use, were cited as evidence for this position.

Bloom (1973) was opposed to this notion, seeing single word usage as a simple, single phenomenon. She felt that most investigators had credited children with more knowledge about syntax than could legitimately be imputed; children were naming. However Dore, (1974; 1979), felt that there was more to single words than merely labelling. He suggested that the single word represents an intention and involves a relation to a concept or participant or other aspect of the conversation. He gives the example of a child pointing to an empty space and saying "pot" to a nurse who replies "Yes, I'm gonna bring the pot out", (Dore, 1979, p349). Asking about an absent coffee pot does not seem like a single simple phenomenon. A wider understanding than simple naming is

needed.

This was Kamhi's (1986) position. He published an account of the development of single words in his daughter in which he argues strongly for the necessity of understanding. Once his daughter seemed to understand the meaning of a childish naming game she had played rather passively with him, she took the lead and pestered her parents for the names of things. Naming insight is the important factor in the development of referential speech.

A model for the development of word use was suggested by Barrett (1985; 1987). Initially words are extremely context or event bound. He gives the example of his son, Adam, who said "duck" only when knocking the toy duck off the side of the bath, not even when playing with the toy ducks elsewhere or differently. He suggests that to call this naming is to overinterpret what is happening. The child is engaged in a ritualised response in a particular context. Later the use of the word becomes decontextualised. Adam began to name his ducks when not knocking them off the side of the bath. It is postulated that at this stage, words are mental representations or prototypes. Next the principal features of the prototype are identified. Adam began to use 'duck' to refer to real ducks, and pictures of ducks and duck-like birds. Lastly the word is assigned to a semantic field, (Adam knew that a duck went with a swan and geese) and contrastive features are identified (Adam stopped using the word 'duck' to name swans). Adam's understanding of the concept had increased, and by this time, he was putting two words together (Barrett. 1985).

Bloom (1973), used her observations of her daughter's language acquisition to suggest how children might progress from single word to multi-word utterances. She suggested that there are

four logically possible explanations for the move from single word speech to sentences. Firstly, it is possible that children simply remember all the sentences they hear and reproduce them. Few apart from Skinner would endorse that. Next, it is possible that the child remembers contextual features of the word, and so knows where to place each word in sentences. That would seem to require a prodigious memory, not to say cognitive capacity in the child. Thirdly, Chomsky's LAD would suggest that the child knows about underlying semantic structure and so sentences can be formed naturally. Holistic sentences would fit neatly into this explanation. Lastly, and the explanation she favours, children can only put words together when they have the prior concept, some understanding of what they say. Thus cognition is a pre-requisite for sentences.

The growth of language and the growth of cognition are intimately related, and their relationship warrants consideration in its own right. However, it is important to examine the attempts that have been made to describe language and communication in ways that are useful and communicable.

4. DESCRIBING LANGUAGE

Linguistic Terms

The terminology of linguists is often precise, but quite difficult to follow in its pursuit of nice and accurate descriptions of parts of language. This section includes simple straight-forward definitions for some areas of enquiry within linguistics which facilitate discussion of the communication process.

SYNTAX: deals with the rules by which words combine to form sentences (loosely referred to as 'grammar').

PHONOLOGY; describes the sounds of a given language, and

their function, (phonetics refers to how a word is pronounced).

MORPHOLOGY; deals with the internal structure of words, (a morpheme is the smallest unit of meaning).

SEMANTICS; is the study of the meaning or content of words and of the units they comprise.

The above definitions come from John Lyons standard work, 'Introduction to Theoretical Linguistics' (1968), (with some additions in brackets).

Surprisingly, the following are not included (except that prosody is defined as an aspect of phonology). All of these words, while retaining traditional meanings, have been used in a new way of late. Consequently, the definitions given are somewhat hesitant.

PRAGMATICS; the study of what can be said in which situations, the features of an event which predict the type of communicative transaction.

PROSODY ; the study of the melody of spoken language. More than just intonation, it includes the alteration in meaning that can be understood from differing pronunciations and emphasis.

DISCOURSE ANALYSIS; analysis of the set of shared assumptions that underlie a communication and the features which indicate the relationship between the speakers.

Over the past two decades interest has shifted from the syntactic, phonological and morphological aspects of language acquisition, to semantics, and pragmatics, and, more recently, to discourse analysis. Some of this interest has been sparked by the artificial intelligence field. Computers can be taught to simulate syntactically accurate speech, (which is rule bound), but that highlights the subtler features of language which they cannot copy. This alerted people to the multi-level nature of even the simplest discourse between

human speakers who, for instance, know what shared knowledge can be taken for granted in any conversation.

This leads into the field of pragmatics, the use of language in context. People know what can be said to whom and how. They adopt roles and styles of speech appropriate to the circumstances, (codeswitching) and much comedy is based on the breaking of these unwritten rules. Children learn this language use early. At as young as 24 months old they have been recorded varying the intonation of their voices when talking to a puppet or a doll (Andersen, 1990). Words and speech (or silence and omissions) can be used to achieve a whole variety of ends and to communicate a vast range of messages, frequently apart from their surface meanings, (Halliday, 1975).

Mean Length of Utterance

Roger Brown (1973) was one of the first to define clearly the most commonly used measure of the complexity of children's speech, the Mean Length of Utterance (MLU). He transcribed many hours of children's speech and so was able not only to refine this measure on the basis of close examination of the speech of three children, but later to validate it using the language development of other children.

Using the second page of a transcription of a child's speech, he counted the number of utterances in a speech sample, and then computed the mean number of morphemes per utterance. A morpheme is a unit of meaning, similar to but not co-terminus with a word. An utterance is a speech event, similar to but not the same as a sentence, and usually marked by a pause in the conversation or a change of speaker.

This has served well as a simple way of making data from different children comparable and comprehensible. Brown

(1973), realised, as had others before him, that to match children chronologically led to problems, whereas matching for MLU was comparing the same level of constructional complexity. He then separated the continuum of MLUs into stages of development, which were not stages in a Piagetian sense, but forced onto stages by the data. He commented;

"I decided to divide the total shared developmental stretch at five points as nearly as possible equidistant from one another in terms both of MLU and upper bound (UB) and draw 713 consecutive complete utterances from each child at each point for detailed linguistic analysis. The odd number, 713, was the accidental consequence of the size of the transcriptions from which the first samples were drawn." (Brown, 1973, p56).

Thus, in Stage I the MLU is 1.75 words with an upper bound of 5 words, and stage V is 4.00 words with an UB of 13 words.

Brown (1973), found that when describing the process of language acquisition there was great commonality across children and a remarkably invariant order of acquisition. He was able to list the first fourteen morphemes acquired, starting with the present progressive, (eg. going) through past irregulars (gone) and third person regulars (he eats) to contractible auxiliaries (won't). These processes go on beyond Stage V, but the order of development is primarily determined by the relative semantic and grammatical complexity of constructions. Despite the universality of early words, in terms of their sounds and soundability, Brown had some reservations about using his scheme with foreign languages. However, he did conclude that the developmental order of 14 morphemes is amazingly constant, that developmental rate varies widely, and that chronological age is a poor indicator, compared with MLU. This measure, MLU and the stages that are defined by it has been used widely ever since publication of his work in 1973.

MLU was used on maternal speech in the Motherese debate. Snow (1977b) used MLU to show that in early conversations with babies of three to 18 months, the speech of mothers remained simple throughout that period. Furrow and colleagues (Furrow, Nelson & Benedict, 1979; Furrow & Nelson 1986) demonstrated that maternal MLU is correlated positively with the child's language growth, although Gleitman, Newport and Gleitman (1984) suggested that this relationship only holds for the beginning of children's language development.

Stages

As mentioned earlier, Brown's (1973) stages differ from traditional Piagetian stages, but are derived from them. He describes his stages as independent of the age of the child, and the features of each stage form a common, relatively invariate, developmental progression. However, whereas Piaget's stages required an act of adaptation or re-evaluation before the next stage could be achieved, Brown's stages are markers in a continuing process. In describing his own stages, Brown says they are "not known to be true stages in Piaget's sense; that is they may not be qualitative changes of organisation forced on the investigator by the data themselves." (Brown, 1973, p58). Rather they are intervals dividing MLU distribution. Furthermore, although he names his stages according to major new developments or elaborations of processes that occur in each stage, "the whole development of any one of the major constructional processes is not contained within a given stage interval." (Brown, 1973, p59). Brown's stages are convenient descriptions of sections of a continuous, complex process.

Later Crystal and his colleagues (Crystal, 1976; Crystal, Fletcher & Garman, 1976), looked at children's language acquisition, and described the stages of that development independently. The stages he describes are similar to those

of Brown, but not defined by MLU. Instead, moving further away from Piaget, he suggests an approximate age level for each stage. Thus, by about 18 months when children are using single words they are at Stage I, between 24 and 30 months when they are using three element utterances, they are at Stage III, and by four years old when they are using clauses, pronouns and different tenses, they are at Stage VI.

Crystal (1976) is critical of Piaget's stage theory, arguing that " *So far... there have been few experimental studies of the way in which linguistic features can be shown to relate to these stages and as yet, the detailed relevance of Piaget's principles remains uncertain.*" (1976, p37). Instead of postulated internal processes, his stages are based on observed evidence of grammatical forms in the child's language.

Table R.1; Simplified Description of Stages of Language Development

STAGE	FEATURES	MLU	APPROX. AGE
I	Naming/Mostly one word utterances	1.75	by 18m
II	Using 2 words together	2.25	18m - 24m
III	Three element utterances	2.75	24m - 30m
IV	Simple sentences/ four elements	3.50	by 36m
V	Joining phrases with 'and', 'but'. Embedding.	4.00	about 42m
VI	More complex utterances. Pronouns. Auxiliary verbs.	not useful	about 48m onwards

For both Brown (1973) and Crystal (1976), stage development is a continuous process, whereas for Piaget stages are discrete. Piaget (1936) suggested that children develop internal cognitive structures which enable them to move from

stage to stage. Brown (1973) describes apparently coherent sections of language development and leaves open the possibility of corresponding cognitive substrata. Crystal (1976) confines himself to description of observable behaviour alone. Putting aside speculation about underlying cognitive structures, the stage models outlined by Brown and Crystal provide a framework within which observable phenomena can be organised.

Following Brown (1973) and Crystal (1976), Table R.1 presents a simplified description of the stages of language development. Both stage models are described in more detail in the Chapter Three (Methodology) of this work.

Other Scales

In 1972 the Bristol Language Development Research Project was started (Wells, 1985). This sought to *"chart the sequence of development and to investigate possible causes of differences between children in the rate at which development proceeds."* (Wells, 1985, p vii). The researchers collected samples of naturalistic speech at three monthly intervals from a representative sample of 128 children from 15 to 60 months old. This massive corpus of data was analyzed and used as the basis for BLADES the Bristol Language Development Scales (Gutfreund, Harrison & Wells, 1989), which include pragmatic, semantic and syntactic scales. It is recommended that they are used with children whose MLU has reached about 4 (probably Stage III in Crystal's scale), and they have a strong therapeutic bias. Although these scales were designed to be understood by non linguistics, they require more understanding of linguistics than has been acknowledged. They have the great advantage that they look at mother-child conversations, and not just child speech, and thus are able to assess pragmatic and semantic language.

Halliday and Leslie (1986) developed a list of communicative behaviours, following a longitudinal study of a group of children from 9-24 months old. Initially, they were interested in Bruner's study of the development of 'reference' and of 'request' in two boys, (Bruner, 1983). They were critical of his use of pre-determined categories and designed their study to catch a wider range of behaviours. Mother-child dyads were videoed in a studio during fortnightly half hour play sessions. Using pilot work to guide them, they devised a 42 item list of behaviours by which to code the interactions. They divided these communicative behaviours into three types, verbal, vocal non-verbal, and non-vocal non-verbal. Although a complex system, it does allow the authors to examine the data in detail and to make cogent comments on the roles of imitation, modelling and reciprocity in the development of children's language.

Functional Descriptions

The importance of the context in which language is acquired has been acknowledged in attempts to describe, not just the language of the child (or of the caregiver), but early dialogue and the functions it serves. Conti-Ramsden and Friel-Patti (1986) looked at the complexity of the communication of children aged 12-24 months old. They adapted the Blank and Franklin (1980) cognitively based dialogue coding system (which had been designed for 2-3yr olds) by recording the use of actions as well as language. They videotaped ten mother-child dyads in a studio, and transcribed 15 minutes of the session. They were able to describe levels at which communication was initiated (by either partner), its function and the functions of each response. It is interesting to note that children and mothers initiated new topics with equal frequency.

As mentioned earlier, Bruner (1977) described the function of early communication as the regulation of joint action. From the early 'demand mode' the child moves to first the 'request' and then the 'exchange mode' and finally to the 'reciprocal mode', typified by dialogue. At that stage, verbalisation has begun to take over from gesture and vocalisation, and conversation is beginning.

Halliday (1979) also looked at the functions of pre-linguistic and early dialogue. He focused on the pragmatics of the interactions, suggesting that initially the child's intention was instrumental, (to get something). Next the child's intentions became regulatory, (to get mother to get something) and then interactional, (to be with mother). Lastly, children begin to use interactions to express themselves in a personal way, (Halliday, 1979). Children know what they are trying to accomplish before they can use language to do so.

It would seem therefore, that understanding precedes language.

5. COGNITION

Language and Thought

It is commonly assumed that children learn about the world before they learn to use language. "*A child starts to learn his mother-culture even before he starts to learn his mother-tongue.*" (Bullowa, 1979, p9). What is not agreed is the extent to which this learning is the beginning of communication and hence of language, and to what extent this learning is the beginning of cognition and hence of thinking. The relationship between language and thinking has long been in dispute. Do cognitive and communicative abilities develop independently and if not, is the one a necessary precursor of the other? Can children think without language, and can they

use language without some cognitive structuring of reality?

Thought first?

Piaget (1926) describes the growth of language as the extension of sensori-motor schemata onto speech patterns. Early sentences express a construction of reality which has been gained from active interaction with the world. The child thus represents those bits of the world that are most available such as actions, schemata involving actors, locations etc. Not everyone agrees. Sugarman-Bell (1978) believes that sensori-motor abilities are not sufficient for the onset of verbal communication. From her study of infants in home and institutional settings, she found no differences between the groups in their ability to perform simple motor tasks at the pre-verbal stage. Despite this early communication patterns were found in home but not institutional settings. She also found that institutionalised children had more difficulties with language acquisition.

A strong claim for the pre-eminence of thinking is that word order is the natural reflection of the order of thought. Bruner (1975), for example, suggests that "the structures of action and attention provide benchmarks for interpreting the order rules in initial grammar; that is, a concept of agent-action-object -recipient at the pre-linguistic level aids the child in grasping the linguistic meaning of appropriately ordered utterances." (Bruner, 1975, p17).

In contrast, Slobin (1982), studied language acquisition cross culturally and found that there are a whole range of differing acquisition tasks posed by differing languages. He comments that "It is indisputable that children are aided in acquisition by the fact that the system was evolved by minds like their own, in adaptation to the human situation."

(Slobin, 1982, p129), but goes on to refute claims that semantic categories are given in cognition, and that word order is a natural reflection of thought. Not only do word orders alter cross linguistically, but many languages do not use word order as the primary device for marking semantic relationships. Cognitive development may lead a child to see the need for linguistic expression, but acquiring language entails a different mechanism.

Harris (1992), examined in detail the evidence for cognitive prerequisites to language. Looking first for analogies and correlations between sensory-motor intelligence and language development, he found none. Even Slobin's (1982) suggestion that cognitive development had a pacesetting function was not clearly supported. He turned next to aspects of language comprehension which have been linked with cognitive development and found that on the whole, comprehension preceded expression. There is some evidence from Donaldson (1978) that expression can precede comprehension. Harris's point was that the one is not the necessary precursor of the other. Finally, he looked at language acquisition in bilinguals, (Harris, 1992). Following the suggestion that cognitive development dictates the order of acquisition of language, one would expect the order to be different for second language acquisition. By and large this is not so, and language acquisition proceeds along the same sequence for both languages. He concluded that there was little evidence for cognitive prerequisites.

Language First?

Vygotsky (1962) in contrast, thought that cognitive abilities begin as social exchanges (such as language) which are internalized. *"Thought development is determined by language ie by the linguistic tools of thought and by the sociocultural*

experience of the child." (Vygotsky, 1962, p94). For him the starting point from which to understand development is social activity such as the 'sign system' (speech) which is used as a psychological tool to master higher mental processes. However, Hood, Fiess and Aron (1982) argue that he did not contrast learning and learning language, but saw both of these activities as part of the process of becoming a social, historical being.

The Sapir-Whorf hypothesis suggests that language constrains thought. The structures that exist within any particular language direct the thought processes of its speakers. Most quoted is the example of the Eskimo who have dozens of words for snow, the most significant feature of their environment, (see Slobin, 1974 for details of this concept, expounded in detail in the 1950s). This is the strongest version of linguistic determinism, and few would subscribe to it now. However there are some who suggest that language influences how we come to think.

Social Context?

Macnamara, (1982) proposed that children acquire language just because they already have lots of other skills, both social (such as the capacity for making sense of situations involving human interaction) and cognitive (such as a grasp of meaning, primitive hypothesis testing and inference). He recognised that long before language emerges, children are making sense of the world and making sense in the world. As Halliday had said " *By the time a child produces language he has already been meaning for a long time.*" (Halliday, 1975, p140). This making meaning takes place within a social context, and it is these cognitive and social skills which pave the way to learning language.

Without giving precedence, Rice and Kemper (1984), conclude that it is probable that linguistic distinctions not only help children to communicate, but also help to shape children's developing social cognition. This leaves social, cognitive and linguistic progress knotted together interdependently, a position supported by Bever (1982). He talks of language being discovered by the child. He suggests that there is an innate faculty of language and an innate faculty of learning. The child's environment then has a major influence on the independently emerging faculty of communication.

Perhaps it is not possible to extricate the parts played by language, cognition and social context in the development of the child. Social relationships facilitate the growth of thought and speech, thinking clarifies social and linguistic meaning, language explores thought and society. Like a three legged stool, all parts are essential.

6. SOCIETY

Cultural Constraints

The socialisation process that turns out the all American boy, or the inscrutable Chinese, begins at birth. It would be inappropriate to do more than look briefly at this, but the pragmatics of a language, as well as its structure define how the language can be used. There is an excellent example in Givon (1985). He describes how, unlike the Western child, most American Indian children are not expected to talk to adults, but to listen.

" Only the oldest and the wisestwere traditionally expected to indulge in long deliberations. Even there the goal of deliberation is profoundly different from what we are accustomed to in Western cultures.....The goal of deliberation is not to convince...Rather it is

to create a *spiritual consensus*." (Givon, 1985 p1025). Moreover, even in neighbouring European countries, babies are born into differing cultures. Snow, de Blaw and van Roosmalen (1979) have reported on the role of ideologies in child rearing. Difference included the amount of playing and talking mothers expected to enjoy with their children.

For children themselves, they must learn the meaning ascribed to actions and feelings by their culture. Initially mothers mark these actions for their children, teaching them the socially defined requirements of a situation, (Shotter, 1979). Children are taught to wave bye-bye and play peek-a-boo before they are a year old, and before they go to school they know that completing a jigsaw is a socially significant event usually followed by praise. Similarly, they learn the meaning of speech events and the socially acceptable (and unacceptable) contexts for those events.

Halliday (1975) describes children as surrounded by text (spoken and written), in context (usually familiar situations), which uses a particular register of the available linguistic system, (perhaps using a baby voice in English) within the local social structure. To expand on Halliday's own example, a mother reading a fairy story to a child at bedtime, adopts the story-teller's style and is perpetuating a British child-rearing tradition. At all levels this has meaning, and children learn how to mean in more ways than just speaking.

Pragmatics

Children learn how and when to use what sort of language; to use language pragmatically. For linguists this usually means the development of communicative intent. Dore (1974) has described the 'primitive speech acts' of children at the

single word stage as evidence of communicative intention. The child knows how to use language purposively, to greet, call, protest or label. Developmental pragmatics also includes the child's skill as a conversational partner. Shatz and O'Reilly (1990), have shown that two year olds can repair miscommunications, and Foster (1986) argues that children of this age can manage the topic of conversation. Other functions of communicative competence include the integration of old and new information, queries, negations and reference, (Ochs & Schiefflin, 1979):

As children develop beyond the one word stage, their pragmatic knowledge increases, (Dewart & Summers, 1988). This knowledge includes knowing how to use polite forms, to take turns in conversations, to use a pretend voice and to find ways of winning an argument. They also know what sort of language to use with whom. At as young as two years old, children are sensitive to the relative power of the speaker and to social distance, (Ervin-Tripp, 1982). She used an American sample so there may be cultural differences, but the children were more likely to use imperatives with their mothers than with their fathers, to use directives with their siblings and to speak politely to strangers. Learning language and learning to use language in context appear to be inseparable.

Fathers

It is usually mothers who guide the social and language learning of their children, and as such they have received much attention. Until the mid 70s, parent-child relationship almost always referred to the mother, but since then there has been much more interest in and acknowledgement of the role played by fathers in the family (for example, Beail & McGuire, 1982). They most often play a supportive, second carer role,

and so some of the differences in their relationships with their children may relate to lack of familiarity, both with the children and with the child-care routines.

Almost all studies have shown differences between the language used by fathers and that used by mothers. Fathers' speech has been shown to be less repetitive (Giattino & Hogan, 1975) and more directive (Engle, 1980,) and they interrupted more often (Greif, 1980) and failed to acknowledge children's comments more frequently (Tomasello, Conti-Ramsden & Ewert, 1990) than did mothers. There are also similarities. Both parents adapt their speech to accommodate small children, (Rondel, 1980) but fathers are less able to adjust their accommodation as the child develops (Engle, 1980). McLaughlin, White, McDevitt and Raskin (1983) suggest that these adjustments are more similar than different, but that mothers are more skilled at 'fine tuning' their language to that of the child.

Fathers' language is characterised by declaratives, imperatives and interrogatives, and full of new information and challenge. In contrast, mothers' language is reflective, responsive and integrative and was often imitated by the child. It has been suggested that the two parental styles are complimentary (Rondel, 1980; McLaughlin, White, McDevitt & Raskin 1983; Tomasello, Conti-Ramsden & Ewert, 1990) the last authors arguing that fathers provide a linguistic bridge between the familiarity of the home language to the language of strangers.

On the larger stage, it has been shown that generally features of the language of men and women differ. Women show more expressivity and sensitivity than men, (Henley & LaFrance, 1984) and are perceived as having more socially acceptable language characteristics (Fishman, 1983). These language characteristics include clear enunciation, a very wide range

in rate and pitch, use of hands and face to express ideas, concern for the listener and non dominating speech, all of which would facilitate communication with children. There is also evidence that females have a greater aptitude for second language learning (Carroll & Sapon, 1959).

The debate is complicated by issues of power and dominance. Traditionally men have worked outside of the home and their more assertive speech style has been not only appropriate in a competitive environment, but has been valued. The speech style of women has been valued less, and some feminists have equated this with inappropriate male domination, (see Kramarae, 1981). As the roles of men and women become more flexible within the family it will be interesting to see if changes in family role are echoed by changes in speech style.

7. CONCLUSION

A great deal has been discovered about the abilities of small children, especially about their ability to communicate and to respond to communication. Before they are three years old, children are using language and not just words, and are sensitive to pragmatic cues in the language environment. It is arguable whether these achievements are possible without the rich interactive environment provided by a primary caregiver, usually the mother. The mother-child relationship is the context for learning about reciprocity, as language partner as well as playmate.

As with many human skills, it is not easy to decide the significance of observed behaviour. Debate remains about the relationship between language and cognition, and about what counts as language. Different workers have emphasized the actual words of the child, the child's communicative intent

or the child-mother dialogue. Measures have been devised with the aim of describing these and other features of child language, of which MLU has proved the most useful.

The chapter ends with an excursion into the wider community of the child. Each cultural community has its own mores. As they grow up, children learn what expectations it has of them and in particular, how they are expected to behave linguistically. It is possible that their father will act as a bridge between the familiar home setting and the outside world. The influence of fathers has only recently been acknowledged, but they have a language style that is both different from that of women, and possibly more stimulating for the developing language user.

It is not clear at this point how much of the research into early child language has been extended to the study of bilingual children, or better still, to the study of the range of children acquiring language in a bilingual environment.

B) BILINGUALISM

1. INTRODUCTION

General Comments

Firstly some of the major issues in the field of bilingual research will be outlined, prior to focusing on two languages in contact in the United Kingdom, Welsh and English. By so doing, questions that arise in this smaller arena can be seen within the context of world wide attempts to understand the nature of bilingualism and its implications both for persons and for States.

Although the focus of this research is on individuals, government policies cannot be ignored as they affect not only what individuals can do, but also the climate in which they can do things. In particular, some States have one official language, some have two, and some have not addressed the issue, though one language is usually assumed to be the most important. Some States have tried to accommodate the needs of minority groups and their languages through legislation, while others ignore their existence. It is in the field of education where this has been of greatest significance, with some countries trying to facilitate the assimilation of immigrants and others encouraging the continuation of a multilingual culture.

Differences also abound when considering individual bilinguals. Children from cross language marriages are likely to acquire language bilingually, the children of migrants from rural areas are likely to pick up the dominant language through broadcast media and local children, and the children of immigrants may face education in a foreign language they have never heard. These may be extreme examples, but they

highlight the differences in child bilinguals. Furthermore, the bilingualism of individuals, both adults and children changes over time.

The following sections look at bilingual communities and at some of the factors involved in language maintenance and language loss. Before trying to explain bilingualism, an attempt will be made to describe what it is and how it can be measured.

Definitions

'Bilingual' is one of those words which most people use, but which eludes unambiguous definition. It is connected with the speaking of two languages or expression in two languages and it can be used to describe societies or individuals. Looking first at the individual, this description gives no indication of the balance between the languages either in terms of knowledge of them or in terms of their respective usage. There are two issues here; are bilinguals defined by the amount of their two-language use and/or knowledge, and which (use or knowledge) is a better indicator of their bilingualism? In the field of language acquisition, Saussure (1916) first described *langue* (the knowledge of language) and *parole* (the use of language) as interacting but separate aspects of language development. Knowing is not the same as doing. In bilingualism, early researchers focused on the knowledge of two languages and how it could be measured. There are, as Mackey (1962) said, a number of skills necessary for competence in a language. By measuring levels of ability in each area and comparing the results for both languages it should be possible to identify 'balanced bilinguals'. These were people who, as Bloomfield said, had "native-like control of two languages" (1933, p56).

When Grosjean (1982) asked groups of students what they understood by being 'bilingual', most of them thought a bilingual was equally fluent in two languages. A group of 'bilingual' students gave similar answers. Fluency is here contrasted with use, showing that popularly bilingualism is defined by the degree of proficiency in languages rather than by the degree of language usage. Grosjean (1982) has focused on language usage. He is critical of measures of fluency which purport to give a 'balance' score. His main argument is that laboratory testing ignores completely the range of situations in which language is used. He quotes Malherbe

" It is doubtful whether bilingualism per se can be measured apart from the situation in which it is to function in the social context in which a particular individual operates linguistically." (p50)

The performance of any one individual will vary not only from language to language, but also according to who they are talking or listening to, what they are reading and writing and where they are at the time (Fishman, 1965). Immigrants who have acquired a high degree of competence in their adopted spoken language, may use only their native language at home but use it for all language tasks. Their bilingualism is different from that of children brought up in homes where two languages are used regularly, as in cross language families. And the bilingualism of both the children and the immigrants may change over time according to their social environments. Thus both a person's knowledge of a second language and their use of that language must be described in order to define their bilingualism accurately.

This leads to the second issue, that is how much knowledge or how wide a use of the second language is needed before someone can be called a bilingual? Baetens-Beardsmore (1982) suggests that bilingualism can only be seen as a continuum along which people know and use two languages to varying

degrees. It is not so easy to see how degrees of bilingual use and bilingual knowledge can be described, and issues of measurement will be discussed in the next section. Some conventions have been adopted to describe individual bilinguals. Children acquiring the beginnings of two languages before the age of three are sometimes called primary bilinguals, whereas those who learn a second language later are secondary bilinguals. Dodson (1983) calls them developing bilinguals. The term acquisition is usually reserved for languages not learned formally, and this natural acquisition of a second language is contrasted with second language learning (2LL). As an older language user, however much the second language (L2) is used, the language a child acquires first (L1) remains the mother tongue, but L2 may become the preferred language (but see Skutnabb-Kangas, {1981} for a full discussion of the meanings of 'mother-tongue'). Finally the terms receptive and productive bilingualism are almost self explanatory; many people understand some of the second language they hear, before they begin to use it productively. These conventions span the knowledge and use dimensions, but do not go far enough. Measurement of some sort is necessary to sharpen the definition of bilingualism.

Measurement

In order to compare people and situations, and to engage in research, measurement is essential. Unfortunately, the relationship between definition and measurement is complex. Choices have to be made about which factors should be measured and how they can be measured, and other factors are thereby ignored. People could be categorised as bilingual or not on the basis of any knowledge (or use) of a second language, or they could be described as individuals with complex patterns of language skills which they use idiosyncratically. The one is too simplistic to be of value, and the other too complicated to be manageable. At best, classifications should

be treated with caution, and the reasoning underlying choice of measurements made explicit. Accurate description may be as important as validated testing in an area as multifaceted as bilingualism.

Some measurement is needed to approach the earlier question; how much of a second language do you need to have or to use to count as a bilingual? Mackey (1962), suggested that the main abilities involved in language competence were listening, speaking, reading and writing, and that these abilities could be subdivided to give 20 testable language skills. By measuring levels of competence in each area for both languages it was possible to identify 'balanced bilinguals', people having equal native-like ability in two languages. These were seen to be the ideal type of subject to extend our knowledge of a range of mechanisms involved in language acquisition and language functioning. Unfortunately, they have also been seen as the ideal representatives of bilinguals, and that notion is flawed on two counts. Firstly, it ignores the majority of bilinguals who have a motley collection of skills in languages. Grosjean (1982), for instance, showed that in a group of thirty college educated bilinguals, only eight felt that their language skills in both languages were equal, and the figure could have been much lower in a less well educated group. Secondly, it ignores how and how much these balanced bilinguals actually use their languages.

Quite apart from the focus on balanced bilinguals, tests of language abilities for bilinguals are not above criticism. Mostly they have been developed within an educational setting where it has been necessary to identify the needs of a population using a minority language. In order to do this, there has been a search for 'language proficiency' that is, proficiency in the dominant language. In these circumstances, the aim has been to improve the child's use of the dominant

language, not to explore the whole range of his language abilities. This is further complicated by the fact that in some places equivalent tests in both languages are not available. Tests used include word association tests, vocabulary tests, word detection tests, tests of syntactical comprehension, tests of pronunciation, and other tests of surface linguistic components of language. This highlights a growing concern that language testing in a formal situation, by testing one aspect of the person's language use, does not do justice to his range or depth of linguistic abilities. Cummins reports on studies in the USA which have tried to assess "functional language proficiency in a naturalistic context" (Cummins, 1984, p207) where the emphasis is shifting away from assessing semantic and syntactic skills towards assessing pragmatic language use.

Turning to the functions of languages, is it possible to measure the extent of someone's language use? Apart from observational approaches, the main attempt to measure language use has been with Language Background questionnaires (for example Baker & Hinde, 1984; Lyon, 1991). Subjects have been asked to indicate which language they use with whom or in which situation, and to what extent a particular language is the only one they use in certain circumstances. Even straightforward questions such as these are not without hazard. The range of situation probed, the frequency of that experience for the subject, and the methods of scoring can all distort the final picture, especially if answers are summed to give a global score. These difficulties and more are discussed in detail in Baker (1985).

Measurement of both of these aspects of language has inherent problems. Baker's suggested solution is the use of a statistical technique known as cluster analysis (Baker, 1985). Whereas factor analysis identifies data from individuals which

are grouped together to produce underlying factors, cluster analysis identifies data from individuals which allow the individuals to be sorted into groups. A hierarchy is created indicating degrees of similarity between groups, which can suggest appropriate categories. Thus, rather than perhaps discovering factors labelled "Wide Usage" or "Grammatical Sensitivity" which are associated with successful bilingualism (whatever that may be), groups of bilinguals might be described as "Orally Competent Bilinguals" or "Monolingual at home and Bilingual elsewhere".

As stated previously, many of these attempts to measure and describe bilingualism are within an educational framework and they aim to facilitate the learning process. Measurement is therefore necessary not only to allow comparison of children's functioning, but also to gauge their progress. Measurement is more important than description in this case. In other research the reverse may be true, but whatever aspect of bilingualism or whatever kind of bilingual is under scrutiny the field of study needs to be described in detail and measured if possible. That description will need to include an account of the social environmental features, the context of the bilingual speaker.

2. BILINGUAL COMMUNITIES

Introduction

Britain is one of the few countries in the world where it is common to spend a lifetime using one language only. Throughout the world people need to accommodate other languages either by acquiring language bilingually or by learning the surrounding languages with varying degrees of proficiency. There is no common pattern. Languages in contact often means languages in conflict (Nelde, 1987). Even

in places like Quebec where attempts are being made to ensure that two or more languages have equality of esteem, the situation is complex and fraught with tensions as recent history shows. In some areas the dominant language has such wide currency that the native minority language is hardly used, as in the Highlands of Scotland. In many parts of Europe the heartlands of small language communities are shrinking as people favour the language of the national media, (eg. Frisian and Dutch, Finnish and Norwegian, Welsh and English). Many native communities have also lost or are losing their language. In 1970 only 34% of native Americans reported Eskimo or Indian languages as their mother tongue (Grosjean, 1982), only about 19% of the population of Wales can speak Welsh, (OPCS, 1983) and the Egyptian language is not spoken at all.

The most commonly studied situation is that of immigrant populations. Some immigrants to countries such as the United States of America lose their mother tongue fairly quickly, whereas others have retained a strong linguistic identity for centuries. The tendency is for the first generation of immigrants to be monolingual, the second generation bilingual and the third generation monolingual in the language of their adopted country (Grosjean, 1982; Mackey, 1988). Great interest has been shown in the factors that influence this process. Why do some groups maintain their first language while others gradually move to using the dominant language? This leads to a consideration of Language Maintenance and Language Shift.

Language Maintenance and Language Shift

Isolated communities with a strong religious tradition and a strong feeling of ethnic identity tend to retain their native language. Jewish ghettos of the past and the Welsh speaking

communities in Patagonia are obvious examples. If the communities are immigrant, a supply of new immigrants from their country of origin also contributes to language maintenance. Such groups can protect themselves from the dominant language environment to a large extent. In contrast, small groups of immigrants wanting to identify with the adopted country are likely to shift from first language speaking to use of the dominant language. Marriage across languages also leads to the adoption of the dominant language, and children tend to accelerate the process. Harres (1989) found that women were the major factor in language maintenance in German speaking Australian immigrants, because they tended to remain at home, isolated from Australian institutions. The men needed to use English at work so they contributed to language shift. However, the arrival of children and their subsequent entry into English speaking schools was a major factor preceding first language loss. Language maintenance is initially achieved through bilingualism, but bilingualism can facilitate a shift to dominant monolingual language use, that is, bilingualism can serve as no more than a stage on the road to majority language monolingualism.

Assimilation

Many of the people who emigrate to a new country, or who move from one distinct community to another are searching for a new life style, or are persecuted in their native land. In either case, most will want to establish themselves in a new community, and find the means to thrive, economically, culturally and socially. Frequently they find themselves in a less powerful position as one of a minority group. They need to adapt in order to survive, and learning the lingua franca is often the first step. There are obvious benefits attached to fluency in local languages. Local employment prospects can be increased and access may be gained to a wider

range of friends and cultural and leisure activities. Many show a great willingness to adopt the culture as well as the language of the majority. Schumann's acculturation model for second language acquisition predicts that "learners will acquire the target language to the degree they acculturate to the target language group." (Schumann, 1986, p379). In order to learn a second language thoroughly, it is necessary to adopt at least some of the cultural values of its speakers. Complete assimilation into the dominant culture is the obvious, (though difficult) route to the full benefits of that culture. As Ross has remarked, "A requisite for assimilation is the adoption of the language of the dominant group." (Ross, 1979, p6). This is a necessary but not sufficient condition.

The assimilation route is taken by migrant groups within a country as well. Nelde (1989) described in detail a group of 800 people who had moved from a rural, Dutch speaking part of Belgium to urban Brussels where French was the dominant language. They all spoke French by choice and their reasons were primarily for perceived higher status and social advancement. 74% had sent their children to French speaking schools. Nelde asked his group why they had chosen to speak French. The major reasons given were a lack of courage and self confidence, belief in superiority of dominant standard language, and more possibilities of social advancement with the dominant language. They also suggested that they, as the minority, not only needed to adjust to the prevailing circumstances, but also had a better gift for languages, (Nelde, 1989). Schumann (1986) suggests that second language learning and acculturation are facilitated by social, affective and personality factors, amongst others. Those who want to adapt to the new life, who like the language and the customs, and who have made social contacts are likely to be assimilated into the culture.

Loss

As Mackey (1988) has outlined, complete loss of a language occurs most quickly following the death of the people who speak it, their dispersal and fragmentation, the interdiction of a dominant group, or a combination of all three. For individuals and families, the loss of their mother tongue can be slower. The children of immigrant monoglots become bilingual, and, adopting the values of their new community, see less and less need to speak their first language. Language is often the medium of adolescent rebellion, with older children choosing to address their parents in their second language, thus demonstrating their superiority and distancing themselves at the same time. Though they may continue to use their mother tongue with grandparents, it is unlikely that they will see the point of teaching it to their own children.

Reversing Language Shift

Many have assumed that the process of language loss described above is inevitable, once the population of speakers declines. However, Fishman (1991), has suggested that regeneration of a language is possible and desirable. Dealing first with his reasons for supporting minority languages, he argues that as improved communication networks turn the world into a global village, the need for individual cultural and linguistic identity becomes greater rather than less. Language and culture are entwined. They developed together, the language symbolizes the culture, and parts of the culture do not translate into other languages without loss of meaning. Thus, languages and cultures are to be appreciated as adding to the quality of life, especially on the small stage. He supports cultural pluralism and advocates additive bilingualism. (Other views of the relationship between language and culture are presented later in this chapter).

Fishman (1991) outlines a Graded Intergenerational Disruption Scale, which comprises eight stages of language decline, and, more importantly, the remediation appropriate to each stage. Thus, if a language is used by only a handful of ageing speakers (scale 8), it is vital to record as much as possible for future reconstruction, whereas if it is still widely spoken but not written (scale 5), the need is to support literacy programmes to increase its status, (Fishman, 1991). The crucial stage is scale 6, that of intergenerational transmission. The language is passed to the children and used as the common currency of daily living by both adults and children. Fishman (1991) sees it as the essential stage for the reversal of language shift. Stages to scale 5 depend on the support of the immediate community. Later stages require wider support in their bid to share the rights and responsibilities of the dominant language.

Ross (1979), discussed the revival of a language as a route for ethnic mobilization; "*a once acculturated intelligentsia takes up its ancestral language and makes it the mobilizing of its literature and politics.*" (Ross, 1979, p10). He gives as an example the Irish in the nineteenth century calling for a revival of Irish Gaelic in preference to imperial English. A second route which he mentions is through the use of the native language as a symbol of the culture under threat, leading to demands for safeguards such as geographical restructuring along linguistic lines as, for example, in Belgium. Ross sees language as a support which ethnic groups can use to protect their culture, either symbolically or practically against the dominant linguistic culture. In this, he differs from Fishman (1991), who sees the strengthening of minority languages, not as challenging the dominant language, but as fostering cultural self determination.

Returning to the second part of Fishman's scale, for languages that have literacy (scale 4), the struggle moves from the community to the political arena (1991). Efforts are needed to ensure language choice in formal compulsory education, local employment, local government services, the mass media and, finally, national government and higher education. At this level, it may become an official language.

Fishman's scale has been criticised as too simplistic (Williams, 1992: Baker, 1993). It assumes that there is general goodwill towards the regeneration of languages, and that dominant language institutions welcome power sharing. Little account is taken of the feelings and attitudes towards the language by speakers and by non-speakers; a large degree of commitment is needed by those facing indifference or even hostility to their way of life. Finally, on a factual level the scales are not discrete or necessarily ordered. As Baker (1993) noted, minority language literacy, education provision, business usage and use in general can differ from community to community even within one country. However, it is an optimistic and practical approach, offering proactive suggestions about language shift rather than bemoaning its existence. Perhaps Fishman's most important message is that without the work needed to ensure intergenerational language transmission, minority languages will be lost.

In Wales, progress has been made in re-establishing the Welsh language. Welsh is used in public schooling, local employment, and local government services, but to a widely varying extent. As mentioned earlier, there is a Welsh medium television channel, and some university degree courses are taught through the medium of Welsh. It has not been granted official language status. Despite the gains that have been made, this withholding of official recognition by national government has caused a great deal of disappointment and

frustration.

National Policies

Governments do have a role in bilingualism, but it is far from straightforward. Not only do policies vary by country, but they also vary within a country and over time. Ridge (1981), for example, describes the situation in the United States. At the beginning of this century, federal governments fought efforts by the American Indians to preserve their languages and cultures, and Hispanics were not encouraged to retain a distinct identity. On the other hand, a laissez-faire attitude was adopted by government to small linguistic/cultural communities of European origin. Following the civil rights movement of the 60s and 70s, minority groups are asking for policies that will allow continuation of their linguistic and cultural lives, and that includes education policies.

Homel and his colleagues examined the language policies of Canada, and the United States (and China and the USSR) with particular reference to the education of bilingual children, (Homel, Palić & Aaronson, 1987). Canada is officially a bilingual country and in some provinces (e.g. in Quebec), bilingualism is often the norm. The aim of Canadian education policy is to provide " *educational opportunities for minority (indigenous) students, as well as the establishment of programs of bilingual education and second language instruction for both French and English speakers.*" (Homel et al., 1987, p13). The policy in Quebecois Canada has been successful in halting the decline of French, and is often used as a model by others. In the United States, the aim of education for bilingual children is assimilation, and the policy has been far from successful. Many of their linguistic minorities have not become assimilated and have not been able to benefit from educational opportunities.

Protection of a language doesn't always help; Belgian minorities are protected but Nelde's migrants chose to shift from Dutch to the more prestigious French (1989). As Grosjean states, " 'bilingual' countries do not promote individual bilingualism and do not contain many bilinguals; their linguistic role is to guarantee the use of the languages spoken within their border and to help ease when possible tensions between the different linguistic groups." (Grosjean 1982, p18). In fact, supporting bilingualism can lead to the loss of one of the languages in question. Grosjean translated a telling comment by Chaput, a Quebecois;

"The more bilingual our children become, the more they use English; the more they use English the less they find French useful; the less they find French useful the more they use English. The paradox of French-Canadian life is the following; the more we become bilingual the less it is necessary to be bilingual " (quoted in Grosjean 1984, p17-18).

By contrast, where language communities have not been encouraged to become bilingual, the minority language has survived. In such a situation there is a diglossia, a place where two language areas exist, the language that people use at home and the language they use in the outside world. Jewish communities throughout history are good examples of this. Within the home territory, families share a mother tongue and may establish institutions such as churches, which use that language. In their contact with officials and in the world of work, some members of the community will need to be bilingual, but as both languages have a necessary place, the minority language is protected (Fishman, 1980).

It seems that protecting a language means protecting a culture, and benevolent government policy may do the opposite by encouraging rather than restricting movement across linguistic boundaries. One of the reasons given by Grosjean

(1982) for failure to retain a language was the perceived lack of opposition from central government. If nobody minds you using your mother tongue, you have no one to quarrel with and nothing to defend. As Fishman said "*much bilingual education unknowingly leads to transitional rather than stable accommodations in the areas of language and culture.*" (Fishman, 1980, p3).

3. SOCIETAL CONSIDERATIONS

Culture

Language is closely associated with cultural identity and sometimes with national identity, but culture is a word that is difficult to define. It is usually taken to mean a distinctive way of life, with social rules of behaviour, moral values and conventions, and identifiable art forms. These may be embodied in social institutions, religious practices or in festivals and ceremonies. The term 'ethnic' is a close associate in the bilingual literature, usually referring to racial or national groups who have separate cultures.

However, it is not clear whether a common language is necessary to bind together a group of people who share a way of life, or if culture and language are separable. Many researchers have seen language as essential for maintaining ethnic or cultural identity. "*Language is not merely a medium of communication.... but the unifying factor of a particular culture and often a prerequisite for its survival.*" (Giles & Saint-Jacques, 1979, p7). Elsewhere Taylor and Giles have argued that ethnicity is created through language, rather than language developing from ethnicity (1979). This follows the seminal linguistic writing of Sapir and Whorf who proposed that language defined the way in which a community was able to perceive the world and its experience of it (Slobin, 1974).

Others have felt that it is quite possible for a culture to lose its traditional language and yet not lose its sense of identity. *"Ethnic consciousness is not necessarily dependent on maintenance of a unique traditional language , although linguistic change in an ethnic group may be to some extent an indication of acculturation and assimilation."* (Anderson, 1979, p72). Native minority cultural groups often feel under threat from the dominant culture as well as from the dominant language. Their mother tongue then becomes the symbol of their separate identity, even if it is no longer used by all members of the group (Ross, 1979). That is very much the situation in Wales today.

The challenge for immigrant groups is not to defend their culture, but to re-establish it in their new surroundings. In such circumstances it is perhaps less surprising that they are prepared to accept the dominant culture, especially as it is usually necessary to learn the dominant language for instrumental purposes. They will not necessarily be accepted by members of that culture. If the wider opportunities which first made immigration attractive remain attractive, reasons for adopting the dominant lifestyle and language will result in parents trying to ensure that their children at least gain access to these benefits. Thus both first language and first culture get pushed to one side.

But can such people, or their children, belong to two cultures? Grosjean (1982) quotes a number of bilinguals in Canada who feel they do belong to two cultures and who give intriguing accounts of the way in which they see themselves behaving differently according to the language/culture in which they are functioning at the time. It must be said that these are all bilingual in languages of more or less equal esteem. He also quotes from native Hispanics who report that they do not belong to either culture and feel that they are

accepted by neither. Baetens-Beardsmore (1982) calls this a state of 'anomie'. Adolescents in particular experience conflicts of loyalty and frustration as they try to accommodate the expectations of two cultures. It is possible that the language policy of the United States, while aiming at the assimilation of its immigrants into an American culture has, in some cases, led to their alienation from both cultures.

Attitudes towards Languages

Immigrants and migrants are not always accepted by members of the dominant culture, who see them as competing for resources. They are most easily identified by their language which symbolises a whole way of life, both for themselves and for their hearers. While people whose native tongue is a minority language usually look favourably on the dominant language and attempt to learn it, a complementary attitude rarely exists. Speakers of a dominant language may not only look disparagingly at the speakers of a minority language, but may feel there is nothing to be gained by learning the minority language themselves.

Gardner and Lambert (1972) have suggested that there are basically two reasons which motivate people to learn a second language, integrative and instrumental reasons. Instrumental reasons include the pursuit of status, employment, and other benefits exclusive to a linguistic group. Integrative reasons include the wish to become closely associated with members of the second language speaking community and to join in their cultural activities. Both reasons apply more to the minority than to the dominant language group. This model has received support from many workers (for reviews, see Gardner, 1985; 1991; and Baker, 1992).

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bilingual family require all of its members to be bilingual?

Bilingual Families

Apart from sociological studies of bilingual populations, there has been little research into kinds of bilingual family. Even within one community, bilingual families differ according to who speaks which language/s within the home, how frequently they do so, and which, if any, of these languages is spoken in the community.

In reporting strategies adopted by parents to promote bilingual development in their children, Romaine (1989) and De Houwer (1990) have both described a few of the possible types of bilingual family. They have included differing kinds of language use within the family, which may or may not accord with language use in the locality. The most well documented type is that where one parent uses only the minority language with the child while the other speaks to the child only in the language dominant in the community (eg. Ronjat, 1913; Leopold, 1954; Taeschner, 1983). However, these are each reports of one or two children in particular families. Arguably, families who control the language input to children so closely are atypical. Romaine (1989) does add the suggestion that the type where children hear a mixture of two languages is a more common kind of bilingual family than is often acknowledged. Although single cases have often highlighted issues in bilingual development relevant to all children (such as code switching, mixing and metalingual awareness), few studies have looked at bilingual development in commonplace family situations.

Families, or at least marriages, where each partner has a different first language are becoming more commonplace. Barbara (1989) presented evidence that in France cross

language marriages are increasing. More French women marry foreigners than do French men, the ratio being approximately 3:2. However, although he outlines many of the issues facing such partnerships, much of his book is anecdotal and adds little to the description of kinds of bilingual family, or of their language use. Giles, Bourhis and Taylor (1977) found that in cross language marriages the language with the higher status tends to become the language of the family. In her research with six couples in Australia, Harres (1989) found that the women were more likely to keep their German alive than were the men, and Clyne (1982) reports that in 1976 only 4% of German-English couples in Australia were successfully passing on their German to their children.

From a 10% sample of the Welsh Census data for 1981, Williams (1987a) has been able to show that if both parents speak Welsh, 91% of their children speak Welsh, whereas if only one parent speaks Welsh this drops to 36% for Welsh speaking fathers and 42% for Welsh speaking mothers. He does not make it clear, but these figures represent people who were asked if they could speak Welsh, not if they did speak Welsh. It is possible that many of the "parents who speak Welsh" can do so, but rarely choose to do so. This gives no useful information about the language spoken in the home, or of the range of bilingual families that exist.

Lewis (1975) reported a study of 200 families in three bilingual communities in South Wales. He classified individuals as Monolingual Welsh (MW), Monolingual English (ME), Bilingual Welsh (BW) or Bilingual English (BE). This produces 16 types of family (only seven of which were reported in his sample). He reports that about twice as many families were predominantly English as were predominantly Welsh, and comments that English monolingualism is the most probable outcome of mixed language families. Unfortunately he gives

no details of how the data were collected, of how the linguistic competence of the parents or children was assessed, or why only 7 of 16 categories are represented.

Language Background Questionnaires have approached the question of functional bilingualism, and a number have been created for the Welsh/English population (eg Sharp et al., 1977; Baker & Hinde, 1984; Lyon, 1991). They have each attempted to classify speakers according to how much Welsh/English they use. Mostly questions have referred to the home situation, but questions about language use in, for instance, the school environment, have also been included. Baker and Hinde (1984) critically evaluated such questionnaires, pointing out that a major drawback is that equal weight is usually given to all answers, irrespective of the frequency with which a situation occurs, or the relevance and importance of a particular language usage. These are classifications of individuals and not of families. The current research (reported in Lyon, 1991) also uses a language background questionnaire, but uses classifications of individual parents to arrive at a classification of families (or more accurately, of couples).

4. SUMMARY

Occasionally, as in Switzerland, languages may have similar status, but mostly, when languages are in contact, one is seen as the more prestigious. In that situation, the less prestigious language will be regarded as less worthy, less rich and generally less valuable by speakers of both languages. This can lead to language shift and assimilation, and possibly even to loss of a language. Fishman (1991) has optimistically suggested that languages can be regenerated, and liberal national policies can facilitate multiculturalism.

In Wales two cultures and two languages co-exist. Both English and Welsh are valued languages, but not uniformly valued, and central government has so far resisted requests to grant equal status to the Welsh language legislatively.

In this review of the literature relating to bilingual communities a range of pertinent issues has been examined as a necessary background to the exploration of child bilingualism. Few studies have emerged that addressed the question of language use by families in a bilingual environment or the consequent classification of types of family.

In looking at who speaks which language or languages (and who wants to speak which language or languages), attitudes to the language play a major part. They can influence how much effort people put into learning a second language, and how much encouragement they give to their children in a bilingual school. The integrative-instrumental model described by Gardner and Lambert (1972) has received support across a range of situations.

The present study used a questionnaire to assess the language use of parents and included questions about parental attitudes to Welsh and English (Lyon & Ellis, 1991). Although the language of children is the primary focus, it was seen as important to describe the background against which the children's language was acquired.

C) CHILDHOOD BILINGUALISM

1. INTRODUCTION

The bilingual acquisition of language, both simultaneous and sequential, and childhood second language learning are all included in childhood bilingualism . In simultaneous bilingual language acquisition children have been exposed to two languages from birth. Those who are exposed to one language initially, and come into contact with a second language during infancy, are said to acquire their languages sequentially. Evidence from Grosjean (1982) indicates that language use and other psychosocial factors have more influence on later bilingual development than whether acquisition was simultaneous or sequential. Many researchers have adopted MacLaughlin's suggestion (1978) that in either case if infants use two languages by age three, they are said to have acquired language bilingually. This can be a useful shorthand. However, even within this group there are differences, and it is not always easy to keep the distinction between these children and young second language learners. Many have turned to children who have acquired language bilingually hoping that the process by which they learn to communicate can throw light onto the fascinating complexity of "normal" language acquisition.

Early Studies of Childhood Bilingualism

Parents in cross language marriages were the first to study their own children, more or less systematically, and to report the progress of their child's bilingual language acquisition. One of the earliest systematic records comes from Ronjat who described the progress of his son, Louis (Ronjat, 1913). Wanting his child to be bilingual, he sought the advice of

Grammont, a linguist, shortly after his son was born, and thereafter decided to adopt a one person one language approach with him. Ronjat's wife used only her native German and he used French with the boy. His was a large household, with a range of servants and relatives speaking either German or French. The commonly used language alternated at various times in Louis' early life according to the household, but by age 38 months he was able to ask ABOUT language as well as use and understand simple French and German (Ronjat, 1913, section 51, p90 onwards).

Later, Leopold published four books of data about his daughter's bilingual language acquisition, this time English and German. He and his wife also adopted a one person one language strategy with their child, and by age four Hildergard too could communicate in both languages (Leopold, 1949a; 1949b; 1954 {originally published 1939}). With both children, their mother's language was stronger, at least initially. Since then many scholars have recorded and reported the bilingual language development of their own children (eg Saunders, 1983; Taeschner, 1983; Fantini, 1985).

There are problems with all of these studies; they deal with special children. They are the children of linguists, or at least language-aware parents, and the parental relationships cannot be assumed to be unimportant in the development of a child's language. Although language samples are gathered in a natural context, parents have often adopted a special strategy to facilitate bilingual development, and there is rarely any measurement of child or parent language use.

To contrast with these studies, and to illustrate some of the problems, a critique of a recent case study follows. This study, by DeHouwer (1990), takes a child un-related to the researcher as its subject, and raises many issues which recur

in studies of child bilingualism. These are dealt with in more detail later in the chapter, but their presentation in DeHouwer's work illustrates how they interact in a natural context.

A Recent Case Study

One of the most well organised studies published recently is that by DeHouwer (1990), of Kate, the daughter of upper middle class parents. Kate's mother used only American English with her and her father used only standard Dutch. No attempt was made by the parents to conceal their own bilingualism from Kate, but visitors were asked to stick to one language when talking to her. DeHouwer used only Dutch with Kate, but used English with Kate's mother in Kate's presence. The family had spent time in Australia and holidays in the USA but lived in Belgium. Thus, although avoiding the possible parental bias found in other studies, DeHouwer chose a special child, a child with relatively wealthy, language aware parents, who had adopted a deliberate strategy to foster their child's bilingualism, and who had exposed her to at least two different language environments.

In her initial review of the field, DeHouwer rejects McLaughlin's (1978) suggestion that all children exposed to two languages before age three can be treated as acquiring their bilingualism simultaneously. Instead, she suggests that the term 'simultaneous bilingual language acquisition' be reserved for those children who are exposed to two languages from the first week of life (as was Kate). She concludes her review with a statement of the aims of her research, namely to look for answers to *"the two main questions in the greater field of bilingualism itself, i.e the questions of the distinctiveness of the bilingual child's two languages and of the similarities or differences between bilingual and*

monolingual children's speech productions." (DeHouwer, 1990, p5). These are the questions of a linguist; a psychologist would be just as interested in the factors influencing bilingual development, the mechanisms whereby it develops, and the child's experience of bilingualism.

DeHouwer, (1990) recorded Kate's developing language/s from age 2;7 to 3;4, for one hour at intervals of approximately two weeks, using a good quality tape recorder (but no field notes). Recording sessions took place in Kate's home, and usually comprised her conversation with DeHouwer and whoever else was in the room; Kate's mother was often in the adjoining room, but most sessions included some English and some Dutch interactions. During that time DeHouwer actively joined Kate in pretend play of all sorts, rough and tumble play, drawing, naming colours and general conversation. DeHouwer deliberately chose a naturalistic setting as best representing the child's language, but the lack of control of participants in the sessions confounds the situation. The relationship between speakers colours their discourse. Had the intention been, as it seems, to record roughly equal proportions of Kate's Dutch and English speech, restricting participants to DeHouwer (Dutch) and Kate's mother (English) would have been appropriate, and would have restricted the variables affecting the situation.

Subsequently recordings were transcribed using only one column and inserting additional information in brackets at the end of the relevant utterance. Ambiguous sequences were transcribed phonetically, and if that was not possible, question marks were used. All interactions were transcribed, including false starts, nonsense words etc, but excluding conversations between adults (they were indicated in brackets). The transcriptions were then coded using " a language choice code, a morpheme count, utterance

characterization codes, morphological codes per individual word and syntactic codes." (DeHouwer, 1990, p81). As the writer is not a linguist, she is not competent to review critically the last two codes. The first three codes will be discussed.

The language choice code comprised English (E), Dutch (D), Mixed (M) and Non language Specific (NS) utterances (babbling and nonsense sounds). E and D utterances could include one 'wrong' phonological feature, and utterances were coded M, "if there was a lexical item consisting of one English and one Dutch morpheme, if there was a Dutch lexical item next to an English one, or if it contained a 'blend', ie a free morpheme which without doubt combines phonological elements from both languages (only two of these occur in the entire corpus)." (DeHouwer, 1990, p86). Words (or lexical items) were not so coded, and there is no indication of how proper names or words shared by English and Dutch were counted within the utterance.

MLU, (mean length of utterance) was then calculated for Kate's speech. As with earlier researchers (eg Hickey, 1991), DeHouwer did not follow Brown's (1973) criteria for MLU strictly, arguing that they entailed too much data interpretation, especially if the language was not English. She is one of the few researchers, (Schlyter, 1987, is another) who reports separate MLUs for each of the child's languages. They vary from 3.33 to 5.58 in English, and from 2.16 to 5.33 in Dutch. Brown (1973) has suggested that beyond about 4.0 MLU becomes a less useful indication of a child's development, but even allowing for that, the variation in Kate's MLUs is erratic giving no indication of progression even before MLUs of 4.0. The 'utterance characterization code' appears to refer to whether the child's utterance is an initiation, or a response to the speech or actions of an adult.

Mixing occurred in about 5% of Kate's utterances, and was constant across languages and sessions. Almost all mixed utterances (89.4%) comprised one word insertions and almost half of these (46.4%) were nouns. DeHouwer suggests that this could reflect the limitations of her language production generally. It could also be 'borrowing', a term that will be discussed in detail later in this chapter. She thinks not, saying that "a word may be tagged in memory as belonging to both languages without the child realizing in any way that it in fact belongs to only one." (DeHouwer, 1990, p106). That implies two word-language stores. She found that Kate knew (had used?) the lexical equivalent in up to half of the cases, so she discounts the idea of words borrowed to fill a lexical gap. Instead she suggests mixing could be accounted for by the increased availability of a word recently used, the differing perceptual saliency of words, the greater frequency of some word use, the fact that some words are learned earlier, or a simple slip of the tongue. DeHouwer adopts an information processing model for bilingual language acquisition, using the idea of an internal 'monitor' which notes discrepancies in language choice etc. (Lindsay & Norman, 1977). The child's under-developed monitor simply makes the wrong choice.

DeHouwer (1990) reports a number of linguistic phenomena such as the occurrence of noun phrases and verb phrases in both of Kate's languages which will not be evaluated here. She also reports signs of metalinguistic behaviour which she defines as "spontaneous (or self-initiated) repairs, elicited (or other-initiated) repairs, sound-play, hesitations, self repetitions, and explicit metalinguistic statements." (DeHouwer, 1990, p310). These become evident around and following Kate's third birthday. She takes this as evidence for the similarity between monolingual and bilingual language acquisition; self corrections are indications of language

monitoring and equate with reports in monolingual studies.

In conclusion, DeHouwer (1990) claims that "the morpho-syntactic development of a pre-school child regularly exposed to two languages from birth which are presented in a separate manner proceeds in a separate fashion for both languages." (DeHouwer, 1990, p339). She does not mention lexical development, although she comments earlier that the bilingual child has "a bilingual lexicon, and two closed linguistic rule systems" (DeHouwer, 1990, p114). Thus, she supports the Separate Development theory. The mixing that was found is seen as peripheral. Greater mixing could indicate transference which represents evidence of an initial common language that has to separate gradually, that is the alternative, Gradual Differentiation theory.

This study avoids some of the pitfalls of earlier studies; it takes an un-related child as its subject, it measures the language use of the child and her partner, (DeHouwer), it looks in detail at issues such as language mixing and language switching, and it uses a familiar, normal setting. But it is still the study of a single, special child, and although more details are available about the language environment, the language of Kate's parents is not analyzed. There is no indication how words shared by Dutch or English are dealt with, and there is no comparison with other children in similar or different settings.

DeHouwer takes pains to define bilingual first language children as those exposed to two languages from within a week of birth. There is evidence that babies recognise sound systems neonatally, if not prenatally (Genesee, 1989). However, external presentation is not the same as internal assimilation. A baby CAN distinguish sound patterns, but infrequent input lacking saliency may not be noticed. Can

babies be called bilingual because two languages are spoken in their presence? When, in fact, can children begin to be called bilingual? As soon as they use a word in the second language? When parents think they understand both languages? Given such problems of definition, McLaughlin's (1978) ad hoc boundary at age three has great heuristic value. But it still needs to be questioned.

2. TWO LANGUAGES

Acquiring Language Bilingually

Moving into the more commonplace world, the most widespread route to bilingual language acquisition is also the most natural; there is one language for the home and one language for the wider world. This is the common situation with immigrant families, but as a result of circumstances rather than by design. The immigrant mother tongue is the first language used, and so the child's bilingualism may be acquired, or may be learned as a second language after school entry.

Romaine (1989), reviewed types of bilingual acquisition reported in the literature, and the above situation would probably fit the type she calls "non-dominant home language without community support", that is, a minority language is spoken at home but not in the community. She also describes "double non-dominant home language without community support", where parents not only don't speak the dominant language, but have different first languages which they each use with the child. In what she calls "non-dominant home language", the parents, one of whom speaks the language dominant in the community, both use the non-dominant language at home (eg Fantini, 1985), and in the "non-native parents" type, the parents share the dominant language, but one chooses to use

a non-native language with the child, (eg Saunders, 1982). Of the remaining types described by Romaine (1989), the "one person- one language" type has been mentioned already; both parents are bilingual, one parent uses the dominant language and one a non-dominant language with the child (eg Ronjat, 1913; Leopold, 1949a; Taeschner, 1983). The last type, "mixed languages", occurs when parents who are bilingual and who may live in a bilingual community, have no rigid language rules, but mix languages and code switch. Romaine comments that the "mixed languages" type is probably more common than it might seem from the literature. The "one person-one language" type is probably less common than it would seem from the literature. As she comments "*the majority of detailed longitudinal studies (of bilingual acquisition) deal with elitist or additive bilingualism.*" (Romaine, 1989, p169).

Where parents have consciously attempted to ensure their child acquired language bilingually, the one person one language method has been the most popular. In this way, each parent in a cross language family can communicate most comfortably with his or her child. Other specific strategies have been tried in attempts to facilitate bilingual language acquisition and second language learning. Where parents are bilingual, they may try using only one language at home (often the minority language) initially, and then introducing the second language after a year or two, usually as a preparation for formal schooling (a version of Romaine's {1989} "non-dominant home language" type). Some parents have tried identifying language use by time, (weekdays for one language and weekends for the second) or by topic/activity (L1 used for playing etc, but only L2 for mealtimes or church), or place (L2 when visiting grandparents for example).

Schmidt-Mackey (1971) has critically described a number of cases where differing approaches were used, adding telling

comments from her own experience. There were three languages in use when she was a child, first German and Hungarian and later Serbian. Although she learned all three successfully, she comments that the emotional elements involved cannot be easily quantified. Her parents used only German with her and did not realise that she had learned Hungarian until she was four years old. Hungarian was the language that they used with one another. It always seemed more appealing than German, and she felt excluded by their use of it when she was expected to use German.

Reports of the one person one language formula, (for example Swain & Wesche, 1975; Volterra & Taeschner, 1978), have come exclusively from well educated, well motivated, cross language parents throwing doubt on its wider applicability. DeHouwer (1990), following an extensive review of studies of bilingual first language acquisition, concludes that, although the 'one person/one language principle' is most often recommended, there is no evidence that it is better or worse than any other style of language presentation. In all of these strategies there is a risk that the dominant language in the cultural environment will gradually predominate in the child's language.

A detailed account of what is known about HOW children acquire language bilingually is to be found later. There seems to a general consensus that it is possible for young children to acquire language bilingually with relative ease (although this cannot be assumed as Itoh and Hatch {1978} have indicated). At first they may mix or borrow words from both languages, but later they keep them separate. They may notice that they are using two different languages and soon learn which language to use with whom, becoming distressed if someone addresses them in 'the wrong language'. They also manage the switch from one language to the other and quickly learn to ask for

a translation if they are stuck for a word they know in the other language. Their bilingualism at a later age is not so well documented. Many lose their bilingualism as they grow up. A child who had a German nanny and was bilingual in English and German at age five, one day refused to answer in German as it was a language for babies, and deeply regretted her action as an adult (Freed, 1961).

The Language Environment

Children do not just learn languages in isolation. They learn to use language in a social context. The naming game that infants play with their mothers has two major components, getting to know about the nature of the world and getting to know about the structure of social discourse. Infants learn how to signal that they want to communicate, that they do not understand, that they want attention and so on. These early speech acts are the beginning of an extremely complex learning process necessary for communicative competence. It includes learning the meaning of words, but that includes the word's pragmatic meaning, as well as its semantic meaning. Language is embedded in society, and so the child learning language is learning both social and linguistic facts and how they are related.

This aspect of bilingual language development is not commonly examined. When Redlinger reviewed the field in 1979, of 51 studies there were six which took a sociolinguistic perspective. Fantini (1985) set out to provide "an extensive investigation into the developmental sociolinguistics of bilingualism" (1985, p2), by describing the development of his son, Mario. He then described the social factors which influenced the language choice of his bilingual son, and his choice of linguistic style in communications. These features will be explored in greater detail in the next section.

Language Code and Language Switching

Bilinguals are able to choose the language of their discourse as well as the code and style of communication. Researchers are intrigued by the way bilingual speakers can keep their two languages separate, and so occasions when they chose between them have come in for especial scrutiny. It is well documented that monolingual speakers choose differing language codes according to features of the immediate environment. Farris (1992) suggests that use of babytalk by carers can be seen as a form of codeswitching. Ervin Tripp (1968) listed the following features of codeswitching; setting and situation (whether you are at a lecture or shopping), actors (whether you are with a peer or an elderly clergyman), topic (sport or a business agenda), and the function of the interaction (invitation or impression management). Using colloquial speech in a formal setting with an outsider represents a set of choices intended to lead to maximum discomfort!

Ferguson (1971), described a related situation where there co-exist two codes (or two languages) which have separate and different functions. This is known as a diglossia, and he gives Switzerland, Greece and most Arab countries as examples. A high and a low variety of a language exists, such that the high language is never used for more mundane purposes, and the low language is only used for common everyday speech. Church services, and 'good' literature use the high code, whereas the low code may not even have a written form. These ideas have been applied to the bilingual situation where one language is regarded as the more complex and worthy, and the other is the language of the street. In the US, immigrants tend to devalue their native language in favour of the majority language, which is often the only language they are allowed to use for official purposes. However, this is rarely a true diglossia. Although their native language is the language of

the home and English the language of work, English can also be used at home, especially amongst the children, and Spanish may well be the language of the church, (McLaughlin, 1987).

Factors influencing which language a bilingual chooses are similar to the features listed for code choice by Ervin-Tripp (1968). Most important seems to be the person to whom one is talking. Bilinguals use their first language with speakers of that language, and their second language with people who speak their second language. It is rare for two bilinguals to use their second language with one another unless a third person is with them who could not otherwise join their conversation. The formality of the situation, the topic under discussion, the age, sex and status of the participants and the function of the event all influence language choice in bilingual adults.

Code switching in bilinguals is the switch to a second language in the middle of a first language conversation. It usually involves a part or a whole sentence which is inserted into the first language. Language switching occurs most frequently when the speaker knows that his partner too is bilingual, and is associated with discussions about subjects first learned through the medium of the second language. It is also used to emphasise a point, to convey a feeling tone, or even to exclude (or impress) another listener, (Heller, 1988).

Children develop a sensitivity to language choice early. At age three, Louis objected to his father answering him in German. His father was a person with whom he spoke French (Ronjat, 1913). With children, the person-language bond is the first language choice made. Lanza (1992), maintains that children as young as two years old can code switch. The phenomenon she describes is more usually called language

mixing, but her subject, Siri, mixed her languages with an apparent sensitivity to context. Siri used less mixing with her mother (who used English) than with her father (who used Norwegian), even though she was dominant in Norwegian. An examination of the scripts suggests that, whereas her mother's communicative style fostered monolingual English use, her father's style accommodated both language outputs from the child, (Lanza, 1992).

Many researchers have reported that bilinguals as young as four years old choose their language to accommodate their partner, and that they will move to their second language if the partner proves to be less fluent in the first (e.g. Fantini, 1978). If there are no clues associated with the person, they choose their language by the setting or by its function; Fantini also reported how his small sons used the 'wrong' language deliberately on occasion to amuse or to startle their relatives.

Children will also switch to their second language to repeat themselves thus ensuring they are understood, or to attract attention. On the other hand, if they are answered in a switched language, usually the 'wrong' language for that person, they may well protest, (Fantini, 1985, p68). Older children switch languages for similar reasons, but less often for translations and more often by topic. By secondary school age they will have begun to language switch for reasons associated with increased socialisation, such as establishing their group membership and influencing peers, (Harrison & Piette, 1980). In such a situation, children who cannot make a similar switch will be excluded from the peer group.

The child who learns a second language also needs to learn to communicate, to use his or her second language in as natural a language environment as possible. It is difficult to learn

the pragmatic uses to which French people put their language in an English classroom. An accepting social setting is particularly important for immigrant schoolchildren acquiring communicative competence in their second language, (Fillmore, 1991). The child needs natural models in a variety of natural settings where the range of language use and linguistic styles can be observed and their social meaning understood.

Second Language Learning

Older children and adults who learn a second language can become bilingual, but unless they make use of their second language and use it with reasonable competence, they are not usually classified as bilinguals. As well as research into education for bilingual and minority language children which will be discussed in the next section, there has been a great deal of research into the teaching of second languages in a formal setting (for example, Dulay, Burt & Krashen, 1982: Ellis, 1985: Klein, 1986). That body of work is not central to this investigation, apart from studies of factors which help or hinder the learning of a second language and may therefore be relevant to the difficulties faced by migrant and immigrant families, such as English speaking incomers to Wales.

A second language is most successfully learned where there is the possibility for learners to use their language to communicate naturally, thus emphasising the importance of language as a functional skill. They also need time to listen without the need to respond, in much the way that infants do before they start to speak. As previously discussed, the learner's attitude to the language, and to the language teacher will affect their motivation to learn, and people who are more self conscious will be less able to tolerate the mistakes that are inevitable in the learning process. Thus

affective characteristics of learners and situational factors determine the rate at which a second language is learned (Dulay, Burt & Krashen, 1982; Ellis, 1985). Dulay and her colleagues have argued that there exists a natural sequence of development in the learning of a second language which is not influenced by these factors, but which is arguably common to first language acquisition. Learners make the same series of mistakes, and correction by a teacher does not necessarily help. They also learn routines, patterns of speech which they can adapt to the immediate situation. Finally, as found in other work, understanding the feelings, beliefs and thoughts of the people who speak the new language helps greatly. That is "successful language learning is more likely when learners succeed in acculturating" (Ellis, 1985, p 292).

Bilingual Education

The education available to children born into a multilingual society varies widely. At one extreme there is submersion. Children who are monolingual in the minority language have been expected to attend schools where all teaching is through the medium of the dominant language. This was the experience of many immigrant children in the United States, and some prosper but many do not. In recent years, following legislation, attempts have been made in the States to ease the entry of these children into mainstream schooling through 'transitional' facilitation programs. These programs use two languages initially, that of the child and English, and may also teach English as a second language (Cummins, 1984). Cummins calls this "Majority Language Bilingual Immersion", but it is usually termed 'Transitional Bilingual Education'. After three years the child is expected to be ready for mainstream education (through the medium of English). Both of these methods lead to the assimilation of children into the dominant culture with consequent loss of skills in their first

language.

By contrast, attempts were made in Canada to encourage the continuation of a multilingual society. The type of bilingual education often adopted is the "Minority Language Bilingual Immersion" programme. The most well-documented of these was the St. Lambert project (Lambert & Tucker, 1972; Swain & Lapkin, 1982; Cummins, 1984). In St. Lambert, Quebec, French is the dominant language and a group of monolingual English parents wanted their children to become competent bilinguals. Consequently, these monolingual children had a French teacher for their first two years, and were educated through the medium of French. They were allowed to speak English, and their English background was respected. As they proceeded through the school, English was introduced as a second medium for education, and by grade six they were competent bilinguals with English language skills which matched those of a control group (Lambert & Tucker, 1972).

A crucial difference here is the status of the minority language. French and English are the official languages of Canada, although the province of Quebec is monolingual French for official purposes. Nonetheless, English is a respected language. Other Canadian provinces have also provided bilingual education programmes to encourage the maintenance of languages other than English and French, languages they term "heritage languages". These programmes have been less effective (Cummins, 1984).

In England, there are many ethnic minorities, and provision of education for their children has been similar to that in the United States. As skills in the English language are viewed as essential both in school and at work, most policies have been aimed at helping the transition of pupils to mainstream English medium education. English as a second

language is taught in some schools, but maintenance of the child's first language is usually left to the family.

In Wales, the situation is quite different. Although there are groups of immigrant non English language speakers, especially in the south, over the years Wales has received a large migrant population of English speakers. The native language of Wales is Welsh, but not all Welsh people speak their native language. The debate is between the use of Welsh, which is spoken by the minority, and the use of English which is the majority language. The distribution of Welsh speakers and of education policies which accommodate Welsh is uneven. In Gwynedd in North Wales, primary education is through the medium of Welsh. Whichever their first language, children enter a school where their classteacher is bilingual and where the amount of English used will vary according to the languages spoken by the children. It approximates the 'Minority Language Bilingual Immersion programme' for the monolingual English children, and aims to maintain the Welsh language and to produce bilinguals. There has been too little research into the effectiveness of this approach, and all the aforementioned reservations about measurement do not make that an easy task. However, evidence so far indicates that the English language skills of neither group are adversely affected, and that the Welsh speaking children become bilingual as do some of the English speaking children. Some bilingualism is gained without loss (Baker, 1988b).

Having briefly explored some of the broad areas of research in child bilingualism, it seems appropriate to look at the theoretical considerations that underpin research into the factors which lead to children becoming bilingual, or into how that process occurs.

3. THEORIES and MODELS

Theories of (monolingual) language acquisition (LA) were outlined briefly in a previous section (Piaget, 1959; Skinner, 1959; Vygotsky, 1962; Chomsky, 1965; 1968; Bruner, 1978a; 1978b). Theories have been suggested to account for second language learning in both schoolchildren and adults (Ellis, 1985; McLaughlin, 1987), and to account for the phenomenon of bilingualism in general, (Homel, Palić & Aaronson, 1987; Baker, 1993), but few theories of bilingual language acquisition exist. What do exist are models which purport to explain some of the phenomena observed in the acquisition of two languages by young children. Theories of language acquisition will be re-examined first to see if they can be extended to cover bilingual language acquisition. Theories of second language learning (2LL) will be examined subsequently to see if they can be applied to the preschool language learner. Following that, general theories of bilingualism will be similarly explored, before turning to the most useful models for explaining aspects of bilingual language acquisition.

Theories of Language Acquisition applied to Bilingual Language Acquisition

Skinner (1959) used Learning Theory, to explain how a child learns to use language. Although Learning Theory has provided many useful insights into the regulation of behaviour, its application to this field was more notable for the reaction it provoked in Chomsky (1959) than for the research it stimulated. Behavioural analyses entail the identification of the factors which precede and follow a particular response, in the belief that the latter best predicts the re-occurrence of the response. This approach has proved helpful in remedial programmes to encourage language in learning disabled children

(for example Jeffree & McConkey, 1976; Crystal, 1979; McConkey & O'Connor, 1981). However, Learning Theory has had little to say about the origins of bilingual language acquisition.

By contrast, Chomsky's theory of Universal Grammar (1965), which explains language in terms of innate characteristics, has stimulated a great deal of research. His theory has the virtue of simplicity, but it is not simple to test hypotheses concerning language development, or bilingual language acquisition. If the theoretical notion of a Universal Grammar is accepted, then it is logical to postulate the existence of language universals. Slobin has collected a massive database looking for evidence of the language making capacity in children and the operating principles which might govern such a construct (Slobin, 1985b). A theory of Universal Grammar could explain the mechanism which enables young children to learn two languages, but has nothing to say about why they do so, about the factors leading to bilingual rather than monolingual language development.

Piaget's Stage Theory of Development (1959), suggests that language grows out of the child's interaction with the environment. His theory says nothing about how a second language might develop, or about the features in the environment that would facilitate its development. Vygotsky's developmental theory saw children as pre-eminently social beings, learning language through their interactions with others and then internalising it (Vygotsky, 1962; Hood, Fliess & Arron, 1982). Although he did not comment on the factors influencing or the mechanisms involved in childhood bilingualism, he did suggest that children with two languages had a cognitive advantage, as discussed already under 'Language Awareness'. Unfortunately he did not expand that idea which, like many of his ideas, has acted as a framework for the creative thinking of others rather than offered

suggestions about how children become bilingual.

It is possible that a theory of Universal Grammar could be extended to explain how children become bilingual. None of the theories of Language Acquisition examined suggest explanations of the factors that predict bilingual language acquisition.

Theories of Second Language Learning applied to Bilingual Language Acquisition;

a) Interlanguage

The Theory of Universal Grammar has been productive in the field of second language learning. It has led to the Interlanguage Theory which postulates internal mechanisms to explain second language learning. 'Interlanguage' is a construct used to describe an approximate language system which is unlike either the learner's first or target language. It is seen as developing with the child's growing second language skill, and providing the basis for hypothesis testing about what does and does not work in the new language (Selinker, 1972). This concept can be fitted into Chomsky's theory. He saw children as *discovering* the rules of grammar despite inadequate input and little correction of their output. Second language learners, using interlanguage, also face a lack of negative feedback and a paucity of linguistic input.

Dulay and Burt tried to show that there is a natural sequence in all language acquisition, and to apply that to young bilinguals, (1974, 1978). Such a finding would support the interlanguage hypothesis, but unfortunately there are methodological difficulties with their work relating to the instrument they devised, the Bilingual Syntax Measure, and to their error analysis (McLaughlin, 1987).

Most researchers using the interlanguage model have looked at the experiences of older child or adult second language learners, rather than at second language acquisition by preschoolers (Ellis 1985). In this they have been encouraged by recent challenges to the suggestion put forward by Lenneberg, (1967) that there is a 'critical period' for language acquisition, after which children cannot acquire language for the first time. As McLaughlin says; " the *Universal Grammar approach (has) generated useful predictions about the course of interlanguage and the influence of the first language.*" (McLaughlin, 1987, p108). Despite the lack of interest in preschool children so far, it might be possible to extend the interlanguage concept to explain how young children develop two languages.

b) The Monitor Theory

The Monitor Theory has also been used primarily to explain the second language learning of adults and older children, but has been sufficiently influential to require a brief description here. Krashen (1980) proposed a general theory of second language acquisition, comprising a set of hypotheses. Initially, the most central of these was the notion that there is a mechanism which monitors the language produced by the second language learner. The monitor edits language production using learned rules. While acquisition is seen as an unconscious process, learning a language is a conscious (even a self-conscious) process. He also postulated a natural sequence for the acquisition of grammatical features, that language acquisition proceeded via 'comprehensible input', and that an 'affective filter', can block or facilitate acquired competence in the second language, (Krashen, 1981; Krashen, 1982; Dulay, Burt and Krashen, 1983; Krashen, 1985).

McLaughlin has been one of its strongest critics, arguing that its definitions are imprecise, it has little predictive value

and it is largely untestable (McLaughlin, 1987). He does acknowledge that some of the teaching implications have proved very useful in the classroom, but a useful tool is not the same as a useful theory. And it has little to say about preschool children.

c) Acculturation

Two further, related theories, have emphasized the importance of the social-interactive dimension. Again they apply more to older children and adult learners than to young children, but are described here briefly for their relevance to the parents of children in this study (see also Lyon & Ellis, 1991).

Lambert's Motivation Theory suggested that "*linguistic distinctiveness is a basic component of personal identity.*" (1974, p96). As such, learning a second language has implications for the self perception of the learner. While acknowledging that natural aptitude and intelligence played a part, his theory has focused on affective influences such as attitudes. He suggests that there are basically two kinds of attitude towards learning the language of another culture, one integrative and one instrumental. By integrative is meant a positive, personal interest in and identification with the target language and its culture. By instrumental is meant an interest in learning the target language for the sake of the benefits and practical advantages it can bring (Gardiner and Lambert, 1972; Lambert, 1974; Gardiner, 1985). Integrative reasons are usually stronger than instrumental ones; as Baker says; "*Canadians learn French and people in Wales learn Welsh predominantly for friendship, for social and cultural reasons.*" (Baker, 1988a, p168).

Schumann's Acculturation Theory (1978) emphasizes the

importance of integrative motivation. He states that " the degree to which a learner acculturates to the target language group will control the degree to which he acquires the second language." (Schumann, 1978, p34). Acculturation is more easily achieved when the learner has a positive attitude towards the cultural values associated with the target language and hopes to become assimilated into that culture. In turn, the target culture can facilitate the process by its attitude to learners and its willingness to share social and cultural activities. Acculturation is more likely to succeed when the number of learners is small and the first language of the learner shares equality of esteem with the target language, (Schumann, 1978; 1986).

On the other hand, research into language change in Wales has suggested that economic advantage and status were the main reasons given by Welsh bilinguals for choosing to speak English, (Williams, 1979). Instrumental or 'Machiavellian' reasons were also given by parents in Canada for sending their English speaking children to French immersion schools, (Genesee, Tucker & Lambert, 1975). Soh later took the debate a stage further and suggested that these basic motivations are not mutually antagonistic, but are independent variables (Soh, 1987). She also suggests that language use is an important factor in second language competence.

These theories aim to explain the features in the environment, and the factors in the individual which promote or predict second language acquisition. They do not address the question of how children acquire a second language.

d) Discourse Theory

Hatch (1978b) suggested that children become bilingual through discourse with others, an idea known as Discourse Theory. She

postulated that second language acquisition occurs in a similar manner to that of the first language, by learning to communicate in that language. The contribution of both partners in the discourse is necessary to explain the process. As a mother adjusts her speech to accommodate her infant, native speakers adjust theirs to the needs of the language learner. It should be noted that this is not necessarily in conflict with the theory of Universal Grammar. Children and second language learners alike get little feedback on the accuracy of their speech. Discourse, in contrast, cannot proceed unless both sides learn how to play the game, how to keep the conversation going. Thus it is the 'natural' route to bilingualism, and explains much casual, informal learning of a second language.

As far as the bilingual language acquisition is concerned, this is still an unformed theory. Possibly it has something to say about both the mechanisms and the factors associated with bilingual language acquisition, but it would require further consideration and research.

Theories of Bilingualism applied to Bilingual Language Acquisition

There are few general theories of bilingualism, or theories to account for how bilinguals accommodate their two languages. Cummins (1980) suggested two such models, the Separate Underlying Proficiency and the Common Underlying Proficiency Models. In the first, the bilingual is seen as storing his two languages in separate abutting areas within a limited space. Therefore, a second language is accommodated only at a cost to the first. There is much evidence to contradict this model, evidence of transfer of information and skills from one language to the other (Baker, 1993). This evidence supports Cummins' preferred model, the Common Underlying

Proficiency Model (Cummins, 1980; 1984). This postulates a common language store, a central information processing system which can communicate through one or two (or more) languages. Thus, the bilingual can present information from the central system through two different channels. The Common Underlying Proficiency Model could be applied to the developing bilingual child.

Theories of Bilingual Language Acquisition

Three theories will be discussed here, although one is usually called a model (the Threshold Theory), and is usually discussed in connection with classroom bilingualism. However, before examining that model, two other, related theories will be discussed, the Gradual Differentiation theory, and the Independent Development Theory.

a) The Gradual Differentiation Theory

Merrill Swain was the first worker to suggest that children acquiring their language in a bilingual setting acquired not one or the other language spoken locally, but 'Bilingualism as a First Language', (the title of her PhD thesis, Swain, 1972). She suggested that there are no fundamental differences between a child's acquisition of one language and their acquisition of two. All children learn language using one language store and later, bilingual children separate this into identifiable language systems according to the speaker-situation, much as monolingual children learn to separate codes within their native language according to the speaker-situation (Swain, 1971; Swain, 1972; Swain & Wesche, 1975).

Supporting this comparison, there is evidence from Ervin-Tripp (1982), of the use of two codes by two year olds when they addressed their siblings and strangers differently, and in parallel, Vihman (1985) reported the separation of two

language systems by a boy of the same age (25 months). However, the two languages/two codes analogy is not an appropriate explanation of the mechanisms involved in bilingual language acquisition. Using a language requires knowledge about grammatical systems. Using a code requires knowledge about the social environment. A set of rules cannot be equated with a set of situational cues.

Volterra and Taeschner (1978), later proposed a three-stage model for the gradual differentiation theory. Initially the child has one lexical system with words from both languages. Next the child recognises that there are two lexical systems but uses both in one syntactic system. Finally the child has two linguistic codes each comprising a separate syntax and lexicon. The Volterra and Taeschner model uses evidence of language mixing for support, and most researchers who have reported mixing take the view that children in a bilingual setting have one language store and progressively separate their languages, (eg Swain & Wesche, 1975; Volterra and Taeschner, 1978; Redlinger & Park, 1980; Vihman, 1985; Schlyter, 1987).

There are two important issues here, firstly whether the first syntactic system used by the child is a truly mixed syntactic system, or is an approach to one of the available grammars, and secondly whether language mixing is significant as claimed. If the postulated first syntactic system is a mixed syntactic system as Volterra and Taeschner (1978) suggest, then the child is bilingual from the start (a simultaneous bilingual). This sounds very much like Swain's (1972) bilingualism as a first language. If, however, the child acquires one grammar into which words (mostly nouns) from two lexicons are inserted, then arguably he or she is monolingual in the beginning, for however short a time. As to the significance of language mixing, those who support the

Separate Development theory, see it as no more than evidence of limited, immature, language use (Genesee, 1989; DeHouwer, 1990).

b) The Separate Development Theory

An alternative theory postulates that bilingual children develop separate linguistic systems from the beginning, or at least from very early in their language acquisition, and that they remain separate apart from some borrowing of words and phrases (eg Padilla & Lindholm, 1975; Lindholm & Padilla, 1978; Meisel, 1989; Genesee, 1989; DeHouwer, 1990).

Following their study of three children in their second and third years, Padilla and Lindholm (1975), suggested that children use two systems that are distinct phonologically, lexically and syntactically from the beginning. They found little mixing. Lindholm and Padilla (1978), found that only 2% of utterances in their corpus (from children nearly 3 to 6 years old) were mixed, and that the structural consistency of utterances was maintained. However, it is possible that children progress beyond the stage of frequent word mixing by age three, and so an overall low level of mixing in their older subjects is unsurprising.

Genesee (1989) argued that mixing in the early stages of language acquisition could be explained by a number of general linguistic features such as lexical borrowing and over-extension, features not confined to bilingual children. Arguing for children's ability to separate syntactic systems, Genesee (1989) goes further and cites phonetic evidence to show that infants of a few weeks old can discriminate between the language spoken by the family and a foreign language and prefer the familiar one, and, perhaps more tellingly, between phonetic contrasts in unfamiliar languages.

Meisel (1989), concluded that "an individual exposed to two languages from early on should be capable of separating the two grammatical systems without going through a phase of temporary confusion." (Meisel, 1989, p35). He makes no argument against a common lexicon, but suggests that there has been a lack of clarity in the literature, due to the over extension of the word 'mixing'. Instead he suggests that the term 'fusion' should be used for those rare instances when children fuse two grammatical systems, reserving 'mixing' for the failure of pragmatic competence evident when children use the 'wrong' word or phrase.

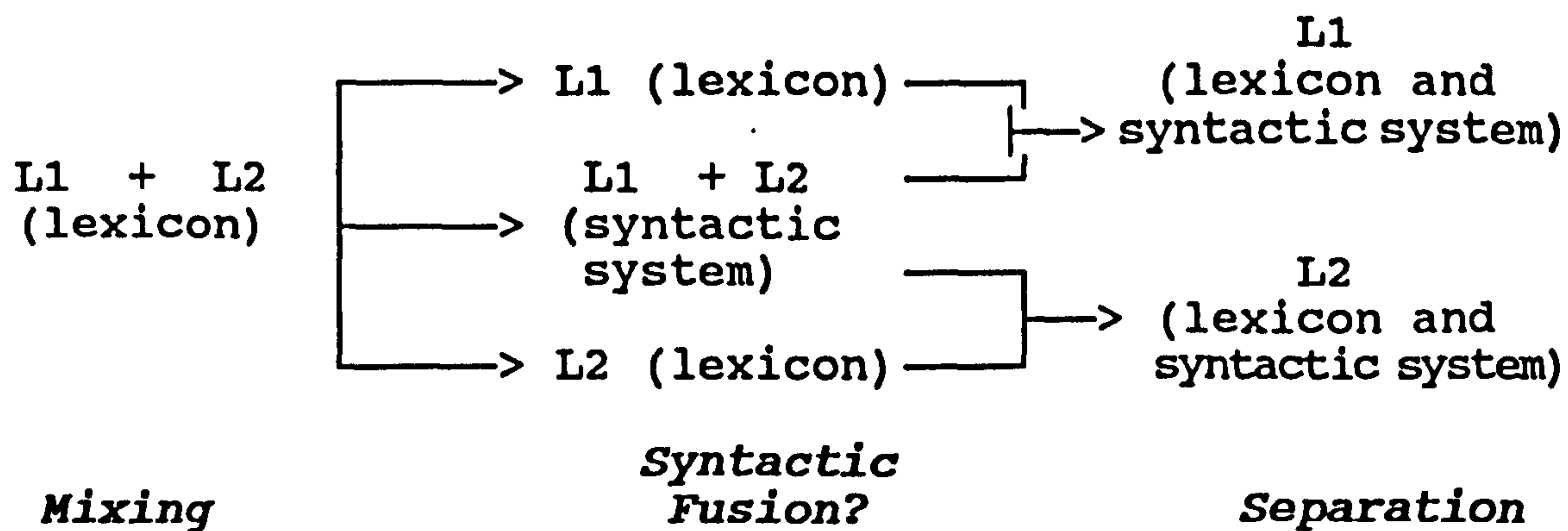
There appear to be two variants of the Separate Development theory. In the strongest version, all language systems, phonology, syntax and lexicon, are distinct from the beginning of language production (Padilla & Lindholm, 1975; Lindholm & Padilla, 1978; Genesee, 1989). In the weaker version, there may be an initial common lexicon, but the two syntactic systems develop without confusion (Meisel, 1989; DeHouwer, 1990). In both versions, early language mixing is not very significant, does not undermine the notion of separate language development, and can be seen as immature pragmatic awareness.

c) Two Theories Compared

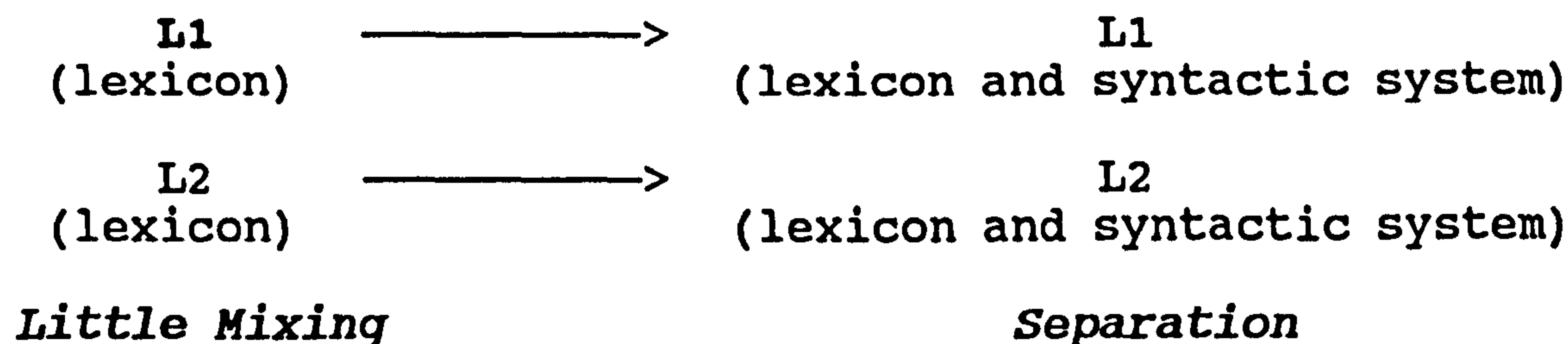
Figure 1 represents these two theories diagrammatically. The labelling beneath stages on the two models is suggested by the author. According to this figure, if children in a bilingual setting acquire their bilingualism as one system which they separate into two, there will be evidence of language mixing other than borrowing, and evidence of syntactic systems that have features of both languages in question. If on the other hand, children differentiate their languages from the

Figure 1; Two Models of Bilingual Language Acquisition

GRADUAL DIFFERENTIATION MODEL (Volterra & Taeschner, 1978)



SEPARATE DEVELOPMENT MODEL (eg, Padilla & Lindholm, 1975)



beginning, there will be little evidence of mixing, or confusion between syntactic systems. However, two other aspects of early bilingualism are not hereby taken into account. It has been suggested that the developmental dimension has been largely ignored in these studies, and that if attention were focused on the language of subjects over time, the language differentiation process would be more evident (Redlinger & Park, 1980). It has also been suggested that context is rarely reported. The mixing evident in the speech of small children may well be a reflection of the speech they hear, (Genesee, 1989). Parental language input is hardly ever monitored. Even parents adopting the one person-one language strategy may be providing contexts that foster or discourage language mixing (Lanza, 1992).

Neither theory predicts the course of children's subsequent bilingual development, or suggests how their two languages may influence one another. Both assume that the child sooner or later achieves two differentiated language systems. As Arnberg and Arnberg (1985) note, that cannot be assumed. In the early school years, some bilingual children are struggling, and difficulties in differentiating two languages may be a cause. The third theory to be discussed does make suggestions about the process of the child's development of two languages. It also suggests how the development of one language may effect the development of the other.

d) The Threshold Theory

The Threshold Theory is different from the two theories discussed so far. It focuses on an older age group (school children rather than preschoolers), and, as well as offering a description of the process of becoming bilingual, this theory purports to describe the effects of becoming bilingual.

The Threshold Model, was originally suggested by Cummins (1976) and Toukoma and Skutnaab (1977). It has been further developed by Cummins, and it is his version that will be described here (Cummins, 1978a; 1987). He suggested that the development of a second language was dependent on the level of a child's first language competence at the time of exposure to the second language. When the first language is dominant and prestigious, it will not be disadvantaged by the child's second language learning. Lambert (1974) termed this situation 'additive bilingualism', a second language is added without cost to the first. On the other hand, when the first language is less prestigious than the second, the first language may be poorly established when the second language

begins to dominate, to the detriment of the first. That situation he called 'subtractive bilingualism' (Lambert, 1974). The first situation is typified by English speaking children who add French to their language store, and the second by Hispanic children in the United States whose attempts to learn English are often at the expense of their first language. Cummins states that;

"The Threshold hypothesis assumes that those aspects of bilingualism which might positively influence cognitive growth are unlikely to come into effect until the child has attained a certain minimum or threshold level of competence in his second language."

(Cummins, 1978, p858).

He goes on to postulate that there are two thresholds, the lower threshold is sufficient to avoid the negative effects of bilingualism, but the higher threshold is necessary to reap the positive benefits of bilingualism, (see Figure 2).

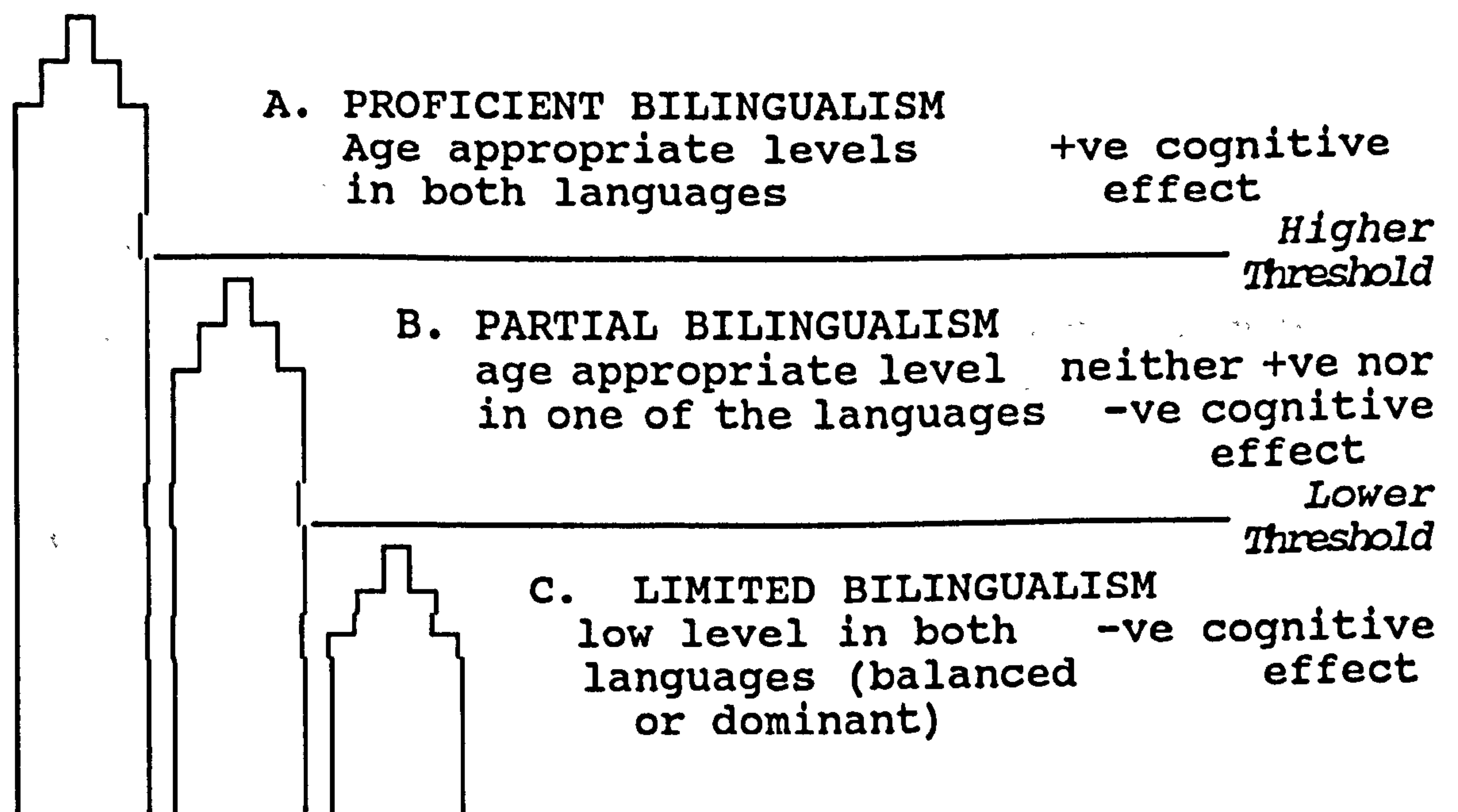
One of the main precursors of this model was the work of Skutnabb-Kangas (1976) in Sweden, which identified groups of minority language and migrant children with less than native-like ability in their first language, as well as in Swedish. These children were failing at school, and gave evidence of low cognitive skills. Social and motivational factors may well be interfering with their bilingual development, but they appear to be suffering from the detrimental effects of bilingualism, and can be seen as unable to cross the first threshold.

Since Lambert's (1974) description of additive and subtractive bilingualism, many researchers have been able to show the cognitive advantages of additive bilingualism. For example, Duncan and DeAvila (1979), showed that proficient bilinguals performed better on a range of cognitive tasks than did either monolinguals or less well developed bilinguals, thus

supporting the hypothesis of an upper threshold. It is possible that the causal link is reversed; children who do well on cognitive tasks may be more able language students.

Some bilingual children may be failing because of social circumstances and/or poor motivation, and some bilingual children may be succeeding because of superior intellectual ability. Nonetheless, this model fits much of the available data concerning the effects of bilingualism on cognitive abilities, and has proved very useful in educational practice. However, as Baker (1992) comments, the problem is "in precisely defining the level of language proficiency a child must obtain in order firstly, to avoid negative effects of bilingualism and secondly, to obtain the positive advantages of bilingualism." (Baker, 1992, p137). What characterizes either threshold?

Figure 2.; THRESHOLD THEORY; The Cognitive Effects of Different Kinds of Bilingualism
(from Cummins, 1987)



The model does not purport to explain informal bilingual development, but might potentially do so. It is possible that children who are developing bilingually need to reach a certain level of proficiency before they are able gradually to differentiate their two languages, or that they need to develop to a certain level in a first language before the second language can be acquired as a system. Further thresholds might also be a useful way of conceptualizing subsequent normal bilingual development. Although it would have little to add to the separate development theory, these ideas will be explored in more detail in the Discussion Chapter.

A number of the theories discussed have identified key issues in the area of normal bilingual development, but there are others which have so far been neglected, and some of the issues identified will bear further examination, as the next section hopes to show.

4. ISSUES IN CHILD BILINGUALISM

Borrowing

Much of what had been called language mixing could more appropriately be called, borrowing (Poplack, Wheeler & Westwood, 1989). Foreign words (such as hamburger, dungaree, par excellence, et cetera) inserted into English dialogue are often not recognised as non-English; it is easier to recognise those English words borrowed by others. Bilingual speakers tend to be a little ashamed of using borrowed words, feeling it marks an inadequacy in their expressive repertoire, and august bodies such as the Academie Francais would like to eradicate 'Franglais', the use of English words and phrases as part of normal French speech. However, it is extremely common, and can enrich a conversation when the speaker can

best express an idea in this way. Unlike the switch to a second language, it may be the only word or phrase borrowed by a monolingual speaker. The present author has used words and phrases from ten or more languages, but has only used three language systems. Borrowing is part of the process of creative language use which enriches all living languages and it includes 'Franglais' and 'Wenglish' (Welsh-English word mixes).

Poplack, Wheeler and Westwood (1989), in their study of the language of adult bilinguals, found that borrowing could be identified as a phenomenon separate from code switching in communities where two languages were in contact. They found that much of the borrowing comprised words for new objects or new ideas, what has been called 'cultural borrowing'. Adult borrowing and code switching were the topics of Myers-Scotton (1992), research in parts of Africa. She differentiates the two by frequency of occurrence (borrowings are more common), and the degree to which the word or phrase has become part of the matrix language. Unlike Poplack, she thinks there is a continuum from borrowings to code switches, rather than distinct categories, (Myers-Scotton, 1992; see also 1988; 1993).

Language Mixing and Borrowing

The picture is not so simple where children are concerned. When they start to use language there is a long period of single word usage and children living in a bilingual culture acquire words from both languages, from whatever language is heard. It is not clear whether this should be called 'mixing' or 'borrowing'. The term 'mixing' is generally used, and many researchers have reported that young children do mix words from two languages as discussed earlier in connection with DeHouwer's (1990) study. (see also Swain & Wesche, 1975:

Volterra & Taeshner, 1978: Redlinger & Park, 1980: Vihman, 1985: Arnberg & Arnberg, 1985: Schlyter, 1987). However, 'mixing' is rarely defined, and its significance is disputed according to theoretical background.

Redlinger and Park (1980), studied the bilingual language development of four two year olds and showed initial language mixing decreased with increasing MLU from about 25% of utterances at Stage I (using Brown's Stages, {1973}) to about 4% at Stage IV. Vihman (1985), reported a similar decrease, in language mixing from 30% at age 1;8, (single word stage) to 7% at age 2.0, and Schlyter (1987), found a decrease from 20%-30% at Stage II (in both languages) at age 2.0, to 0% at Stage III at age 2.6 (in the dominant language). It will be remembered that DeHouwer found a constant 5% mixing between ages 2;7 to 3;4 (she did not report Stages). Thus, despite some variation between studies, it seems that language mixing occurs in about a quarter of the utterances of children at around Stage II when they are about two years old, and decreases to less than 10% at Stage III/IV, about three years old.

From many researchers comes the finding that single content words are mixed most frequently, as reported earlier in DeHouwer (1990). Vihman suggested that at the stage when children are increasing their lexicon, *"we may surmise that he (the infant) was not concerned with the difference between language source, contexts or interlocutors"*, (Vihman, 1985, p316). In other words, she suggests that children acquire their own unique lexicon as a single store. Swain and Wesche (1975) recorded slightly older children, children who were nearly three years old at the start of the study. They reported little mixing at this later age, (confirming DeHouwer's study), but they did report mixing within the utterance, and even within the verb. Two of the examples they

give are " *Elle est giving the ball.*" and " *Y veut to keep it, her.*" Similar examples were reported by Volterra and Taeschner (1978).

Meisel suggests that this might more properly be termed "fusion (of grammatical systems)" (1989, p37). He prefers to reserve the term 'mixing' for the failure of pragmatic competence evident when children use the 'wrong' word or phrase. If Lanza's (1992), child (reported earlier), is code switching, the mixing she still uses with her monolingual mother is an example of pragmatic incompetence. Meisel (1989), also comments on how few of the studies under discussion define what they mean by grammatical structures or the mixing thereof. There may well be occasions when errors and inaccuracies in a child's language are due to immature speech development rather than to language mixing, (Dulay & Krashen, 1974).

Just as surprising is how rarely studies state what they take as evidence that a young language learner is bilingual or is becoming bilingual. The tendency is to call children acquiring language 'bilingual' if they happen to have speakers of two or more languages around them. The acquisition of L2 words or phrases in a child's lexicon is hardly sufficient reason to call him or her bilingual. Such a term is more appropriately applied to children who can express themselves in two languages, and who give evidence of having two syntactic systems, however rudimentary.

Throughout these and other studies there is general agreement that mixing occurs, but little reference to the criteria used to define 'mixing'. Swain and Wesche (1975), Redlinger and Park (1980), and Lanza (1992), omitted negatives and affirmatives (largely on the grounds that their linguistic provenance was ambiguous). Volterra and Taeshner, (1978) had

categories of words which they called 'IG' and 'EG' (Italian-German and English-German), words that are close in form and meaning, and Lindholm and Padilla (1978) noted that the similarity of some words made categorising difficult.

It is not clear from this work, or from the work of other studies, how this issue has been handled. Is the word or the utterance the unit of mixed-ness? Most studies use utterance, but do not define how an utterance is classified. Would '*dolly wants a diod {drink}*' count as a single mixed utterance, or as a speech sample with 25% mixing? And how are words defined as mixed?¹ How, for instance are proper names, or international words such as 'okay' and 'hi!' classified, or are they discounted? Lanza (1992) comes nearest to using the word as unit of mixedness. She defines 'turn to talk' as the unit, but in the case of her two-year old subject, this was often a single word. She defines words as mixed if they contain morphemes from two languages; she does not explain how words not obviously English or Norwegian are handled.

The term mixing means the taking and combining of things from separate sources. It is possible that the language children hear is already mixed, and that some of it at least contains borrowed words. Too little interest has been paid to the source of children's language, except in those families sufficiently well organised to be able to adopt a one person one language strategy with their children (as did Taeschner {Volterra & Taeschner, 78}). Parental language is not reported in most of the studies above, although Redlinger and Park (1980), reported the parents said they did not mix their languages. Bilingual speakers are not always aware of the language they use. Genesee (1989) suggested that language

¹ The example is made more ambiguous by the fact that '*dolly*' and '*doli*' sound the same and mean the same in English and Welsh.

mixing in young children could be related to mixed parental language, and Arnberg and Arnberg (1992), suggested the role of parental/social input had been underplayed. Lanza (1992) is the exception. She suggests that the language context of the young bilingual is of primary importance. As reported earlier, Siri's language mixing varied according to whether she was talking with her father or her mother, (Lanza, 1992).

Language Awareness

Although supporting the notion of a single linguistic system at an initial stage, Vihman (1985) suggested that subsequent differentiation of languages was associated with language awareness. At the time when her subject, Raivio, began to separate his languages, he also began to ask for translation and to comment on own speech acts. The boy was 25 months old when this was first noted. Arnberg and Arnberg (1985), in reporting that differentiation takes place sometime between the child's second and third year, commented that those children who become aware of both languages rarely mixed their languages. They suggested that metalingual awareness was often prompted by some dramatic event in the child's life, such as the first experience of a failure of communication (1985). Thus, both are suggesting that some time after their second birthday, potentially bilingual children start to separate their languages and to become aware of language per se.

Vygotsky (1962) was probably the first to suggest that, in learning that their language is one of many systems, bilingual children become aware of their linguistic skills. Many terms have been employed to describe this phenomenon, and the terms 'language awareness' and 'metalingual awareness' appear to be used interchangeably. In describing the language use of small children it is difficult to avoid imputing more knowledge and

awareness than can be justified. Children may be skilled pragmatically, making requests in just those circumstances where parents find it hard to refuse, without knowing how they do this. One of the clearest examples of language awareness is talking about talking, as with Raivio quoted above, (Vihman, 1985). More liberties have been taken with 'metalingual', although Bialystock has suggested defining metalinguistic ability by the operations needed to solve specific tasks, (Bialystock, 1991b), and identifies these operations as skills and awareness, (see later discussion). Thus, for the purposes of this study, language awareness will be used to discuss evidence that children are aware of language, most clearly evidence of when they talk about talking. Metalingual ability will be used to include both awareness and other skills entailed in knowing about language and linguistic systems.

McLaughlin (1984) criticised the concept of language awareness, commenting that, without criteria, to say that the child who separates language systems has language awareness is a circular argument. The Arnbergs (1991) responded to this by devising a test of language awareness. Language awareness was judged by a simple word naming task, repeated on separate days in separate languages. Children who substituted a word from the 'other' language were deemed to be less language aware than those who acknowledged that they did not know the right word.

Cummins (1987) in a review of the studies relating bilingualism and cognitive development, found that bilingual children showed more evidence of metalingual awareness than did monolingual children. However, he felt that " the phenomenon of metalingual awareness (was) still inadequately understood and the literature (was) devoid of instruments whose construct validity (had) been demonstrated." (Cummins,

1987, p67). Since then, Bialystock has gone a long way towards providing valid measures of metalingual skills, (Bialystock & Ryan, 1985; Bialystock, 1988; Bialystock, 1991b; Bialystock, 1992). In 1985, Bialystock and Ryan outlined a "Metacognitive Framework for the Development of First and Second Language Skills" (title of paper). They claimed that two components of linguistic awareness (and other language tasks) could be identified, analysis of linguistic knowledge and control of linguistic processing. The first they described as the skill component, responsible for organising and understanding language implicitly or explicitly. The second they described as the executive component, responsible for directing attention appropriately and integrating new information.

Subsequently Bialystock (1988), used metalingual tasks such as the Arbitrariness of Language Task to compare monolingual and types of bilingual children. In this task children are told of a special place where the sun has been called 'moon' and the moon has been called 'sun'. They are then asked to retell a sun/moon story making appropriate substitutions. As hypothesized, most bilingual children performed better on tasks involving cognitive control, and fully bilingual children performed better on tasks involving analysis of knowledge. Although her subjects were slightly older children (between six and seven years old), she was able to demonstrate that bilingualism influences the development of linguistic awareness. Later, she has cited evidence that younger, (age 3;0 to 5;0), bilingual children consistently performed better than monolinguals in tasks requiring high levels of selective attention (Bialystock, 1992). For this she used a Lego/Duplo Tower Task where children had to compare the quantity of blocks despite gross disparity in their respective sizes.

Although there is less evidence concerning younger children

(below age three), it would seem that Vygotsky (1962) was correct in his supposition, and that children who are or are becoming bilingual are more likely to develop language awareness and other metalingual skills than are monolingual children, or at least to do so at an earlier age. What, then, is the wider significance of metalingual abilities? There have been claims in Bialystock's work that metalingual skills are indicative of more general cognitive ability. VanKleek (1982), who used a Piagetian framework to examine studies that reported linguistic awareness in children, postulated that "*cognitive reasoning abilities provide the bases for all metalinguistic skill development.*" (VanKleek, 1982, p261). Therefore evidence regarding bilingualism and intelligence will be examined next.

Bilingualism and Cognition

"Bilingualism is an experience that has major consequences for children's intellectual development." Bialystock (1991a, p5). Initially, Bialystock had been interested in the literacy skills of bilingual children, and began experimenting with metalingual tasks as a means of explaining some of the inconsistent findings regarding bilingualism and cognition.

Palić and Homel (1987), reviewed the early studies of the relationship between bilingualism and intelligence, and found that virtually all writers until 1962 concluded that there were at least some negative consequences of bilingualism, mainly associated with verbal intelligence. Bilingualism was thought to dissipate the stock of available intellect. Then, against their expectation, Peal and Lambert found that children who were balanced bilinguals, measured on tests standardized in both French and English, performed significantly better on tests of verbal intelligence than did monolingual children (1962). Others have replicated their findings (see reviews by Cummins, 1984; Palić & Homel, 1987;

Baker, 1988b).

The greatest pressure for research on this question has come from education, and most of that in Canada or the United States of America. In both countries as many as 50% of a school population may not speak the language of the school, and earlier emphasis on the assimilation of all children into English medium education produced what has been called, pejoratively, 'semilingualism'. A critique of the term can be found in Skutnab-Kangas (1981) and Baker (1993). These children have poor skills in English AND have underdeveloped skills in their first language. Thus, to find that there were positive correlates of at least some kinds of childhood bilingualism led to a re-appraisal of education policy (Grosjean, 1982). As Baker (1988b) has suggested, many factors are involved in this debate. The positive effects have been found using children whose linguistic development in both languages is balanced, and it could be that more intelligent children become more balanced bilinguals. Parental attitudes may play a part. Those who wish their children to be bilingual are more likely to encourage their child's bilingual education. And children may be more motivated to become bilingual in a society that values bilingualism.

Turning to work with younger children, Bialystock (1992), showed that bilingual children consistently performed better than monolinguals in tasks requiring high levels of selective attention. This she defines as a metalinguistic skill which is central to cognitive functioning. Bilingual children between the ages of 3 and 5 were shown to have the advantage over monolingual children in tasks requiring high levels of control of attentional processing. While emphasizing the need to identify the degree and type of bilingualism children had achieved before making comparisons with a monolingual sample,

she suggested that if bilinguals develop these cognitive skills differently from monolinguals, then differences should be evident in oral, literate as well as metalingual tasks.

In the bulk of studies, including that of Peal and Lambert (1962), subjects were school-age children. This is understandable for at least three reasons; the education authorities have the problem of helping bilingual children who are underachieving, the school population is more accessible and provides greater opportunity for matching subjects, and the reliability of intellectual assessment with preschool children is dubious. Nonetheless, little research has focused on the preschool child.

Children in a bilingual situation do use words from different languages. Mixing may occur but in some children there is remarkably little confusion. The significance of mixing is disputed. The bilingual's languages are differentiated, but it is not clear how or what facilitates the process. Bilingual children do seem to have the edge, at least metalingually, but the extent and the implications of that advantage remain unclear. The theories and models that do exist have suggested some interesting issues, but have not greatly clarified the picture. As Arnberg and Arnberg comment, this is not simply a theoretical pursuit. In a bilingual world the more that is known about the mechanisms of successful bilingual acquisition the more effective the interventions on behalf of children who are not succeeding (Arnberg & Arnberg, 1985).

Children in Wales

Turning nearer to home, there has not been a great deal of research into the bilingualism of children in Wales, and even less into that of preschool children. What little there is tends to be either linguistic or educational, rather than

psychological. In a recent edited book covering "Aspects of contemporary usage of the Welsh language " (Ball, 1988), Bellin reported on a study of pronunciation in children of 5 to 9 years old, (Bellin, 1988) and Munro compared the normal speech development of Welsh children reported in case studies with that of two boys who had phonological disorders (Munro, 1988). There have been more studies of the education system in Wales (for example Dodson, 1967; Dodson & Price, 1978; Dodson, 1985a), and of the bilingualism of its pupils, (Sharp, Price, Francis & Davies, 1973; Price-Jones, 1982; Baker, 1988). The most comprehensive work in the area is that of Baker which, as well as describing the overall language situation in Wales, examines education policy, how bilingual education works in practice, curriculum development, and the influence of the media and the microcomputer on schools in Wales (Baker, 1985).

There is also some research on attitudes to Welsh expressed by children. Sharp et al. (1973) found that whereas all schoolchildren tended to have a mildly positive attitude towards Welsh just before the start of secondary schooling, this became less positive during the subsequent four years as attitudes towards English became more positive (Sharp, Thomas, Price, Francis & Davis, 1973). Price-Jones (1982) looked at children of about the same age and his findings were similar, findings he associates with the use or non use of Welsh language mass media.

Reasons given by adults for their attitudes to the Welsh and English languages formed part of a later report by Lewis (1975), who had been involved in the Sharp et al. project of 1973. There has also been work on the measurement of language use, language ability and classification of language background (Sharp, Thomas, Price, Francis & Davis, 1973; Baker & Hinde, 1984; Baker, 1985). The language background

questionnaires reported above were designed for schoolchildren. Those used in the present study were designed for the parents of small children.

There has been occasional reporting of the Welsh-English language development of individual children such as Harrison and Thomas (1975), Bellin (1985) and Evans (1987), but Harrison, Bellin and Piette (1981) appears to be the only study which includes a group of young children in their home setting. Their project set out to discover why bilingual mothers in Wales did not bring their children up to be bilingual speakers. They interviewed 300 bilingual mothers of children ranging from less than a year to more than 16 years old, in six areas of the principality. The interview schedule asked about maternal language use, maternal opinions, individual child development, child preferences and a number of demographic questions. It is an interesting descriptive study, but reports mainly in percentages and uses only simple analyses of the data.

The child born in the North West of Wales will almost certainly come into contact with both Welsh and English by the time he or she is old enough to attend nursery school. Although English is the dominant language in Gwynedd, and the 1991 census indicated that the percentage of people who can speak Welsh has fallen from 63% to 61% since 1981, the percentage of children between the ages of three and 15 who can speak Welsh has increased from 69.3% to 77.6%. (Office of Population Statistics 1993). This is probably due to the policy of the local Education Department regarding Welsh medium schooling. Thus, parents of such children, whether Welsh speaking or not, whether Welsh by birth or incomers, will have the opportunity to enable their children to become bilingual. It is within this population that the research reported here was conducted.

D. CONCLUSIONS

1. UNDER-RESEARCHED AREAS

Following this review of the literature in three fields of study, there appear to be a number of areas that are under-researched, particularly in the field of child bilingualism. The language development of the very young language learner has been largely ignored, except by parents with a professional interest. Subjects un-related to the researcher are a comparative rarity. While acknowledging the debt owed to linguists who reported the bilingual language development of their own children, it should be recognized that these are special children. They have parents who decide to control or at least monitor the language input to their children and who choose to foster bilingual rather than monolingual development. Parental attention is possibly the most powerful motivator for young children, and so their language development per se is likely to have been optimized in a way that is unusual in ordinary families. Ordinary families are not often the subject for study; even non-related subjects seem to be the progeny of academic colleagues or graduate students. Further, as a psychologist, it seems that these researchers focus on the linguistic aspects of language acquisition, leaving psychological aspects less well documented.

The language environment of the child subjects of research has been given little attention, and consequently there is little information about the language/s they hear. Types of bilingual background into which children may be born have been described, but that is based on reported research only. There are no indications about the sorts of linguistic situation

which might exist either within the family or within the wider community. Similarly, the children who have been reported have been from 'bilingual' families and comparisons have not been made with the children of their monolingual neighbours. To make sense, such a study would need to include a group of children, or even a large sample of a child population, in order to describe and compare the range of language experiences children have. It is unlikely that this would be neatly separable into bilingual and monolingual.

Finally, here as in many areas of study, much can be learned from longitudinal studies in a natural setting. Although there are studies of the bilingualism of schoolage children that have followed their language use to adolescence, they start only once the child is established at school, and are conducted in school. It should be possible to begin at the beginning, at the stage of language/s acquisition, and to tease out the factors that mediate the development of bilingualism in a range of children in a normal population.

Identifying these gaps in the literature identified the need for research. It was decided to look at a population of families initially, and then to choose representative families from that population. The large sample was necessary to answer questions about the range of language backgrounds that exist locally, and how they might affect the language development of children. The small sample was necessary to allow closer study of the mechanisms within language acquisition that lead to bilingual or monolingual development, and to facilitate longitudinal working.

Many questions had now arisen. Some were practical and needed to be addressed before second order questions could be tackled. For example, it was necessary to know what languages families in the study were using (Q1) in order to identify the

effects of language background on a child's language acquisition. It was necessary to know what language each child was using (Q3) in order to look at the process of acquisition (Q4) and to discover if one parent had more influence than the other (Q7).

Nine questions were chosen finally, and they are listed below prior to detailing how attempts were made to answer them. For the purposes of this research, bilingualism is defined as age appropriate use of two languages.

2. THE QUESTIONS

Q1; What Language Backgrounds exist on Ynys Mon (Anglesey)?
As suggested, given an interest in bilingual language acquisition this was the most basic question to ask. The majority of children are born into and develop within the home. Thus their earliest experience of language is that which they hear from the family. To clarify the extent of that influence it was an important first step to clarify the nature of the language background.

Q2; What Opinions do Parents hold concerning Language?
Children learn attitudes and values from those around them, and this influences their willingness to perform in certain ways. This general observation applies to the learning of language. Therefore, what are the range of opinions and beliefs held by families about the language of children in general and the Welsh language in particular?

Q3; What Language are a small sample of children learning?
Having chosen children to represent differing language backgrounds, it was important to know precisely what language they were each learning. Within this question lies the answer to whether children under three can develop monolingually in Welsh. These children were monitored closely over almost two years, so what language did develop? As communication precedes language, what pre-verbal interactions were observed and did they differ according to background?

Q4; How are the small sample learning language?

This question focused on the process of language acquisition as displayed by these ten children. In particular, what differences and similarities in language acquisition could be highlighted across monolingual and bilingual families of different kinds? By calculating the stage of language development reached at any one session and investigating aspects of the mother-child dyad, could this process be elucidated? This question allowed a very detailed examination of the progress of individual children and comparisons between them. Questions such as "Is the early LA sequence the same for all subjects?" and "Do all Mother/Child ratios follow the same path?" could be approached under this heading.

Q5; How are these children using language?

This was the pragmatic question, the question which asked about the ways in which these children were learning the functions of language. Could they use it to express feelings, to pretend and tell stories, to distract and to manipulate others? Much more than verbal information is communicated by language, and this question examined when and what children learned to do with language, and whether that differed if they were bilingual or monolingual. Possibly this was the most

difficult to answer with any certainty as most of the evidence is anecdotal, but some indications can be identified.

Q6; When do children become aware of language per se?

It is possible that children in bilingual surroundings become aware of language sooner than do their peers. It is also possible that they do not know whether they are using two languages or languages codes. If they are aware, at what age does this begin to happen? Language awareness can take a number of forms, so reference to another language as well as translations and code switchings were sought and examined in context.

Q7; Which Parent has more influence on the Language of the home?

It is often assumed that the mother's language is the language of the home and yet the father is often the more powerful of the two parents. Who then decides which language is spoken at home? Evidence was available from both of the questionnaires and in the last two recordings for differing maternal and paternal influence. Further comparisons could be made across and within different couple groups.

Q8; Do the opinions and language use of families change over time?

As well as providing a normative group for the small sample, QII allowed for temporal comparisons. Is language background group membership stable from one questionnaire to the second? Are parental opinions stable over time?

Q9; What factors predict a Child's Language?

This had to be the last question as any answer to it was dependent on answers to the other questions. With longitudinal data from the small sample, and two temporally separate sets of related data from the larger population, it should be possible to identify factors that predict the language/s used by three year old children.

These questions form the framework for the collection of data. Many other questions could, and maybe should have been asked. These particular questions were chosen partly because they form a logical sequence, partly because they appeared to be answerable, but mostly because they most interested the author.

Chapter Three; METHODOLOGY

1. INTRODUCTION

Overall summary of research sequence

The original aim of the research project was to look at the development of language in children from bilingual backgrounds. On Ynys Mon (Anglesey) in North Wales, both Welsh and English are spoken extensively, but language use varies widely from ward to ward. If comparisons were to be made it was essential to be able to define the kind of linguistic background in which children grew up, and so the first step was to survey language use in a large number of families on the island.

All families into which a baby was born in a twelvemonth period received a questionnaire, QI, asking for details of the past and present language use of both parents. From the results of QI, families were defined as mostly Welsh-speaking (WW), mostly English-speaking (EE), having a Welsh-speaking mother and non Welsh-speaking father (WM), having a Welsh-speaking father and a non Welsh-speaking mother (WF), or having both parents with both languages in their background (MM). MM, the least cohesive group, was not used in all analyses.

Once the groups were defined, two representative families were chosen from each group for further study. Eight recordings were made of communication between these ten mother-child dyads from age fifteen months to age three years, and a recording was made of the father-child dyads at age three for comparison. The focus was on pre-school children before they were routinely exposed to language influences outside of the home. The results were analyzed quantitatively and qualitatively and the children were also assessed

psychometrically and descriptively.

About three years later, a second questionnaire, QII, was sent to those families who replied to QI, asking about current language use, and about the language development of their children. These data were used as the normative sample against which those from the small group could be compared. They were also used with data from QI to identify factors predicting language use.

Assumptions made.

The first assumption was that the acquisition of language is primarily influenced by the language of the home. Many families on Anglesey use both Welsh and English, but in differing proportions. QI set out to find what language backgrounds existed on Anglesey. Parents were asked about past and present language use and language preference for key activities, namely reading thinking and watching television. Mothers were asked to answer questions concerning their partner's language use and language preference.

Secondly it was assumed that the opinions held by parents about the Welsh and English languages affect language use (Saunders, 1982). To this end, parents were asked about their hopes for their infant's future as far as language was concerned, about their own beliefs in the future of the Welsh language, and for comments.

It was further assumed that the language development of the child is represented in mother-child interactions during play. Therefore both the development of language in a single child and differences in language development between children could be identified by scrutinizing such dyadic communications. Implicit in this is the assumption that mothers are more influential than fathers in the development of children's

language, and mothers had been asked to answer on behalf of their partners in QI. An attempt was made to validate those answers by sending a separate questionnaire to all fathers on the second occasion (QII).

Finally, it was assumed that features of the language development of the small sample could be generalized. In the selection of the small sample, unusual children were excluded and attempts were made to choose children who were representative of the population. The second questionnaire was a further attempt to check that this group's development was similar to that of the reference group, and that any changes in family language use and family preferences in the small group mirrored changes in the large group.

2. LANGUAGE USE QUESTIONNAIRE

The questionnaire

The questionnaire was addressed to the baby's mother and asked for information about her own and the child's father's background (see Appendix I, page app.1 onwards). Questions about current and past language use were asked, followed by questions asking for an opinion about the Welsh language, and for demographic details. The questionnaire was written in both English and Welsh. Questions concerning language use, used a five point scale. These questions covered both with whom the language was used and in what situations it was used, for example;

Q 1. "At present, which language do you use... with people at work?"

Q 5. "When you were a child in primary school, what language did you use ... with your sisters?"

The questions of opinion were fewer, specifically;
- *whether they would describe themselves as speaking Welsh*

- how much Welsh they wanted their child to learn
- why they wanted their child to learn Welsh (or not)
- how important they thought it was for children to learn Welsh
- how much they thought Welsh would be used in the future
- where they hoped their child would choose to live
- whom they hoped their child would marry.

Demographic questions asked about the presence or absence of a partner, the age band and socio-economic status of each parent, the numbers and ages of other children, the length of time the parents had lived on Ynys Mon (Anglesey) and about the child's grandparents. There were also questions inviting comment.

Returns

The questionnaire was sent to the mothers of all babies born in one year on Ynys Mon (Anglesey), North Wales. This is a part of Wales where the Welsh language is used widely and where, according to the 1981 census, 61.6% of the population is Welsh speaking (Office of Population Census and Surveys, 1983).

In the year from March 1st 1988 to February 28th 1989, 963 children were born on the island. Of these, eight died within a few days, five were sufficiently ill to require extended hospitalisation, and 23 left the area within a fortnight of their birth. This left a possible sample size of 927, (see Table M.1).

Questionnaires were distributed by Health Visitors who reported that 12 families refused directly to complete them. It should be noted that many of the other non returns could well be indirect refusals.

TABLE M.1; THE SAMPLE FOR QUESTIONNAIRE I

	NUMBERS	%
A) Total live Births; (1.3.88 to 28.2.89)	963	100.00
Died within a few days	8	0.83
Remained in Hospital	5	0.52
Left area within a few weeks	23	2.39
Residual Possible Sample Size	927	96.26
B) Total Possible Returns	927	100.00
Questionnaires Returned	417	44.98
C) Returns Received	417	100.00
Incomplete Returns	4	0.96
Returns answered in Welsh	52	12.47
Mothers Alone	30	7.19

417 questionnaires were returned, representing 45% of possible returns. According to Oppenheim, between 40% and 60% return rate is to be expected from a postal questionnaire, (Oppenheim, 1966). It is quite encouraging that, at such an important time in the family's life, almost half of the mothers found time to complete and return the questionnaire. Four of these returns were incomplete and so unavailable for analysis, therefore the final total was 413 completed questionnaires. Only 52 questionnaires were answered in Welsh, representing 12% of those returned, although a great many more families can be classified as Welsh-speaking, (as will be seen by the later analyses). However, many Welsh speaking parents have commented that they were glad the questionnaire was in Welsh as well, but they find it easier to complete most official forms using the English version.

The sample

Data were obtained from the Welsh Office concerning this population and were used to compare those returning the questionnaires with those not returning it. There were no

significant differences in socioeconomic status, maternal age, or in the sex of the baby.

For the whole sample, most of the parents, (85% of mothers and 89% of fathers), were between 20 and 39 years old. About a third of families (37%), had no other children. Just under half of the women and just over half of the men had been born on the island, but about a quarter of all parents had lived there less than five years.

Allocation to Groups

The mean scores of the language usage questions were used to classify subjects. These were questions 1, 2, 3 and 5, which gave 22 data points (see Appendix I, app. 1-2; app. 7-8). Initially, the mean scores of mothers and fathers were calculated separately, and each was assigned to a primarily Welsh speaking group (W) for mean scores between 1.00 and 2.50, a Mixed group (M), mean scores 2.51 to 4.50, or an almost entirely English speaking group (E) for mean scores of 4.51 to 5.00.

Because of the pervasive nature of the English language, the cut-off point for inclusion in the first group was deliberately high. In this population there was no-one who could speak no English, whereas the English speaking group, by contrast, uses virtually no Welsh at all. (It should also be noted that when "English" or "Welsh" parents are described, this refers to their language usage, not their culture or nationality). The sample was then divided into five groups of differing couples;

- Welsh couples, WW (N = 93)
- Couples with a Welsh mother and non-Welsh father, WM
(N = 36)
- Couples with a Welsh father and non-Welsh mother, WF
(N = 46)

- English couples, EE (N = 132) and
- Mixed couples, MM (N = 77), where one or both partners have a mixed language background. Table M.2 shows how this was done. The total sample size is reduced to 384 by the exclusion of single respondents, and results from the Mixed couples groups are not reported in all analyses.

TABLE M.2; Allocation of Couples to Groups

		MOTHERS		
		Welsh	Mixed	English
FATHERS	Welsh	WW	WF	WF
	Mixed	WM	MM	MM
	English	WM	MM	EE

- WW* = Both parents speak primarily Welsh.
- WM* = The mother speaks primarily Welsh & her husband does not.
- MM* = Mixed language background for one or both parents.
- WF* = The father speaks primarily Welsh & his wife does not
- EE* = Both parents speak primarily English.

Data Analyses

Answers to all questions were cross tabulated with the types of background as detailed above, and most results are presented in terms of percentages. Some analyses used maternal responses only. Some questions were left open-ended and respondents were invited to add comments. These were collected and ordered into categories as described later. They too were analyzed by language background.

Factor Analysis

A factor analysis was completed with varimax rotation, using the language usage variables (the 22 data points referred to earlier) of the respondents (mothers) only. Second-hand reporting of partner's usage was not included. This produced two factors, the first accounting for 79.4% of the variance, the second for 4.8% of the variance (Table M.3). The first

TABLE M.3; Factor Loadings in Analysis of Language Use using Varimax Rotation. Variables from the first Questionnaire (Q1)

LANGUAGE USE VARIABLES	FACTOR 1	FACTOR 2
Present- with Parents	.955	-.097
Past- at Home	.952	-.213
Past- with Brother	.950	-.213
Present- at Church/Chapel	.947	-.109
Past- with Sister	.947	-.207
Past- with Mother	.944	-.220
Past- with Father	.937	-.208
Present- with Children	.937	.141
Past- with Grandparents	.934	-.187
Present- with new Baby	.934	.072
Past= at Primary School	.931	-.159
Present- with Friends	.924	.168
Past- with Friends	.920	-.141
Present- at Work	.906	.095
Present- for Thinking	.899	.089
Present- with Neighbours	.893	.162
Present- in Shops	.887	.112
Present- with Partner	.803	.228
Past- used at First School	.802	-.153
Present- for Watching T.V.	.729	.507
Past- used at Last School	.705	-.142
Present- for Reading	.676	.515

FACTOR 1. accounts for 79.4% of the variance. It loads most on variables associated with family language use in the past, current language use with own parents and current use at church or chapel.

FACTOR 2. accounts for 4.8% of the variance. Loadings are much smaller and on variables associated with the media (reading and watching TV).

factor loaded significantly on ALL of the variables, but most highly on variables associated with past family language use (.952 to .934), current language use with their own parents and their own children (.955 to .934) and current use at church or chapel (.947). It was labelled the 'Language Use' factor.

The second factor had significant loadings on only two variables, present language use for reading and for watching television, making it a 'Media' factor. The loadings were not as high as for the first factor; the highest were .515 and .507 respectively.

Strengths & Weaknesses

As Health Visitors were willing to promote the study in the early stages, it was possible to contact a total population, namely all families with a new baby in one year. Further, it was possible to show that those who chose to reply to QI were not different from the rest of the sample on key dimensions as population data were available from the Welsh Office.

As the fathers were not asked questions directly, it is possible that answers pertaining to their language use were skewed. They represent their partner's judgement at second hand rather than the father's answers directly. These judgements were tested by the second questionnaire and found to be reliable.

3. RECORDINGS

General Procedure and Subject Selection

For the small sample, the aim was to select mother-baby dyads to represent the five types of family defined by the language use of parents from the Language Use Questionnaire, and to

make audio recordings of the vocal interactions between these mothers and babies at three monthly intervals from approximately 15 months of age to three years old. These were subsequently transcribed, annotated, and analyzed. The development of the language of these children was formally assessed at the end of the second year and of the third year when a non-verbal test of intelligence was also administered.

It was decided that in order to match subjects, they would be chosen from the pool of first children with both parents living with them. This was to exclude the influence of other children and ensure the influence of a mother and a father. Those with very young parents (below twenty years of age) and those with older than average mothers (over forty years of age), were also excluded. Next to be excluded were those who might not remain for three years, namely those with the RAF, and those who had only lived on Anglesey for a short time. A list of those remaining was examined for practical constraints, and families living in the more inaccessible parts of the island, and those known to the experimenter were excluded. Ten children were needed, two from each kind of family.

A letter was sent to 35 families asking if they would be willing to take part in further research, and offering a phone number, or the choice of times for an initial visit. Four declined, 17 did not reply and 14 expressed an interest in learning more about the project. These letters were sent out in batches over a nine month period and, as two babies were found to fill a slot, no further families of that kind were approached. Of those interviewed, one had to drop out as she became pregnant almost immediately and was not well, one was found to have a much older child who lived with his grandmother but who spent a lot of his time with the new baby, and the other two 'extra' families were excluded in favour of babies of the opposite sex. Although the inclusion of one boy

and one girl from each type of family was not an original aim, only one of the pairs comprised same sex babies in the end. These ten children were the subjects for this second part of the study.

Selection Procedure

The first step was an initial interview which took place when the baby was about a year old. This took the form of an explanation, a semi-structured interview, and a discussion. The explanation outlined the requirements of each recording session, the number of sessions and the timing of each, and the general aims of the research. It took place with the mother and her baby, in her home and, if she agreed to continue, the interview schedule was completed on the same occasion. This schedule (see Appendix II, app.13-15) began by eliciting more details of the family background (some were already available from the questionnaire) and brief details of the progress of the mother's pregnancy, the birth of her baby and the child's early development. It then asked specifically about the child's early attempts at communication and the family's language background, and finally tried to elicit the mother's ideas for the future of her baby. There was also a brief parental style questionnaire, used to give some indication of maternal beliefs about bringing up children. The last part of this session was spent making practical arrangements for the forthcoming recording sessions, and discussing any queries or ideas the mother wanted to broach, either about the project or about child care in general.

The sample was not matched for socio-economic status. Some parents did not know how they would describe themselves, some said working class and some middle class. These perceptions did not match their class as defined by Census Office on the basis of occupation. However, none of the families could be

described as either needy or wealthy, and standards of child care were uniformly high. All ten families lived in a house on their own except one and they were in the middle of building a house and living with paternal grandparents meanwhile. Eight of these were owner occupiers, one was considering buying the house they lived in and one had a house which went with the job. All of the fathers were in full employment and seven of the mothers had temporary or part-time jobs during the course of the study. Only two said they did not want more children, and five had a further baby before their first child was three years old. Only one had significant problems at birth, and these appear to relate to the mother rather than the baby as she was advised to have no more children. Five of the fathers were very closely involved with their baby from birth, the others adopting a more traditional paternal role and only starting to play with their children once they became more independent. Some of the children's names have been changed to protect their identity, and only their first names are used. The children chosen were;

Nerys	WW family
Iwan	WW family
Becky	WM family
Emyr	WM family
Gareth	MM family
David	MM family
Nia	WF family
Matthew	WF family
Llywela	EE family
Michael	EE family

A summary of subject characteristics can be found in Table M.4.

TABLE M.4; CHARACTERISTICS OF SMALL SAMPLE

Subjects	S1 WW	S2 WW	S3 WM	S4 WM	S5 MM	S6 MM	S7 WF	S8 WF	S9 EE	S0 EE
Mat.Age	35	29	22	30	30	31	31	27	26	36
Pat.Age	37	33	26	31	29	24	33	38	30	31
Mat.Working	--	--	pt	--	pt	--	pt	pt	pt	pt
Pat.Working	ft	ft	ft	ft	ft	ft	ft	ft	ft	ft
Mat.Gpts near	Y	Y	Y	Y	Y	Y	N	N	N	Y
Pat.Gpts near	Y	Y	N	Y	Y	Y	Y	N	N	N
Mat.Sibs near	?	Y	Y	Y	Y	Y	?	N	N	N
Pat.Sibs near	Y	Y	?	Y	Y	Y	Y	Y	?	Y
Time in home (years)	4	6	2+	2	1	-1	10	1+	2	2
Time in area	35	10	22	30	30	31	12	8	2	4
More childrn?	N	Y	N	Y	Y	Y	Y	Y	N	Y
Mat.Attitude to Welsh	+	+	+	+	+	?	+	+	?	+
Pat.Attitude to Welsh	+	+	-	+	?	?	+	+	+	+
Mat.SES; Self Report	U MC	L MC	WC	WC	WC	NS	NS	NS	U MC	NS
Pat.SES; Self Report	U MC	L MC	WC	L MC	WC	NS	L MC	NS	U MC	WC
SES; WO data	3	3	5b	4	5b	3	2	2	3	2
Pat.Involve.	++	++	?	++	++	?	+	+	++	?
Child age at birth of Sib.	--	21	32	28	--	31	32	40	27	--

LEGEND for TABLE M.4;

Subjects= S1 is Nerys from a Welsh speaking (WW) family
S2 is Iwan from a Welsh speaking (WW) family
S3 is Becky from a Welsh Mother (WM) family
S4 is Emyr from a Welsh Mother (WM) family
S5 is David from a Mixed language (MM) family
S6 is Gareth from a Mixed language (MM) family
S7 is Nia from a Welsh Father (WF) family
S8 is Matthew from a Welsh Father (WF) family
S9 is Llywela from an English speaking (EE) family
S0 is Michael from an English speaking (EE) family

Mat. = Maternal
Pat. = Paternal
Gpts. = Grandparents
Sibs. = Siblings

SES = Socio Economic Status
WO = Welsh Office
Age at birth of Sibling is
given in months

Negative attitude = -
Uncertain Attitude/
or Involvement = ?
Positive Attitude/
or Involvement = +
Very Positive Attitude/
or Involvement =++

Full time working = ft
Part time working = pt
Upper Middle Class = UMC
Lower Middle Class = LMC
Working Class = WC
Not Specified = NS

Recording Procedure

Although the plan was to record the children at three monthly intervals from age 15 months, it did not prove possible to keep to a precise timetable. The children had minor illnesses and birthday parties and holidays, as did the author. Table M.4 gives details of the actual ages of each child at each session, and it can be seen that children were about 16 months old at the first session, and just over three years old at the last maternal session. The session with fathers took place about a month later.

The sessions took place in the child's home, in the part of the house where the child usually played. The mother had been asked to play with the child as she would do normally. If that provoked questions or concern, she was told all that was expected was ordinary commonplace games and pastimes. The mother was also told that the experimenter would try not to

TABLE M.5; AGES OF SUBJECTS in SMALL SAMPLE by SESSION

	I	II	III	IV	V	VI	VII	VIII	Father
NERYS WW	16;01	18;16	22;04	25;16	27;25^	30;18^	33;00^	36;11	36;28
IWAN WW	16;00	18;14	22;25	25;19	27;27^	30;11^	33;18	36;11	37;05
BECKY WM	15;29	19;20*	23;00*	27;01*	29;04*	31;19*	34;05	37;11*	38;08*
EMYR WM	15;14	18;23	22;14	25;18	28;18	31;09	34;04	36;06^	36;25^
GARTH MM	16;25*	-----	22;04	25;03	28;17	31;00	33;22	36;09	37;05
DAVID MM	16;15	-----	-----	25;01	28;14	31;02	33;15	36;17	37;07
NIA WF	15;15	19;11	23;01*	25;19	27;28^	30.26	34;12*	36;15	37;27*
MAT WF	16;00	18;15	21;24	25;24	28;25	31;07	34;00	36;19	37;17
LLYW EE	15;17	18;18	21;08^	25;08	28;28	31;23*	-----	36;21	37;08
MICH EE	16;29*	19;29*	22;23	25;13	28;28	31;06	33;16	-----	-----
Mean	16;03	19;00	22;11	25;18	28;15	31;03	33;24	36;17	37;11
SD(days)	15.9	18.9	18.2	16.8	14.2	12.8	12.9	10.3	13.9

Ages are given in months and days (m;d).

* indicates more than one SD above the mean age

^ indicates more than one SD below the mean age

respond to the child at all, and not to speak during recording. On occasion this proved impossible. Sometimes mothers naturally included the experimenter in the conversation and no reply would have been impolite; sometimes the child's overtures were irresistible. However, both mother and child soon became accustomed to the silent observer, and rarely appeared to notice when the tape recorder was switched off or on.

The sessions took about 75 minutes on average. They were planned to be completed within the hour, but many of the mothers liked to use the occasion to discuss problems and worries about their child. As the experimenter was also monitoring the general development of the children, this seemed to be a legitimate expectation.

Usually the equipment was set up immediately on arrival. Much of the best transcriptions came from the first part of the recording sessions. The tape was switched off if the child became very angry or distressed, or if the child was very silent. It was often difficult to judge this last situation as the silence could be broken without warning (and thereby missed), but mothers became anxious if their child did not speak at all, and so the experimenter sometimes chose to switch off the recorder and talk about the child's general progress. Generally, about forty minutes recording was made in a session. On the second and sixth session, the experimenter took novel toys (a teddy, a doll, a bed and a bath) and at the fourth and eighth session the child had the small toys of the Reynell Test to play with. On other occasions, mothers read from story books, built things, held children up to see what was outside, talked about family photos, played with small toys, drew pictures, and got drinks for their children. Originally it had been hoped to record mothers feeding, changing and cleaning babies, but in practice they preferred not to have these activities recorded, and

· dressing small children is frequently associated with going outside. However none of the mothers ran out of ideas for games with their child and all appeared to enjoy the sessions as did the children.

While the mother and child were engaged in playing, the experimenter wrote copious field notes, trying to catch the train of events. This required attention to the gross physical activity of both participants, and to fine motor activities such as pointing, looking, nodding and a variety of other gestures and non-vocal clues to communication. Originally, a check list of such cues and clues was devised, but it was not possible, in practice, to complete this and attend to the details of a sequence.

Data Selection

Subsequently, parts of the tape were selected for transcription and later analysis. Usually three sections were chosen, representing about 25% of the tape, or 10 to 14 minutes of recorded time (see Table M.5). With the younger children, the sections were chosen as the best or most voluble examples of the child's vocalisations. As the children got older, they were chosen to include the sections best illustrating the pragmatic aspects of mother-child interaction. It was apparent from the beginning that some of the pairs were more silent than others, and so the quantity of material transcribed varies.

The transcripts were typed in a standard format with three columns, the first for maternal vocalisations, the second for child vocalisations and the third for accompanying or intervening actions (see Appendix III, app. 30-45). A new line indicated when an utterance initiated a communicative interaction, and a slash indicated the end of each utterance. An utterance does not need to be a sentence. It could be

TABLE M.6; LENGTH OF TRANSCRIPTIONS

Session	I	II	III	IV	V	VI	VII	VIII	Father	Mean	SD
NER WW	128.0	150.0	106.0^	132.0	172.0	172.0	232.0	133.0	138.0	156.14	39.00
IWAN WW	184.0*	107.0^	219.0*	165.0*	173.0	210.0*	156.0	164.0	139.0^	173.23	34.62
BECK WM	219.0*	170.0*	156.0	112.0	201.0*	162.0	202.0	183.0*	199.0*	184.71	33.65
EMYR WM	116.0	168.0*	157.0	165.0*	157.0	157.0	148.0^	120.0^	189.0	146.14	19.78
GAR MM	125.0	-----	134.0	180.0*	154.0	164.0	205.0	163.0	176.0	157.50	27.03
DAV MM	107.0	-----	-----	109.0	130.0^	161.0	197.0	130.0^	158.0	145.00	34.45
NIA WF	142.0	132.0	126.0	101.0	150.0	184.0	161.0	180.0*	145.0	153.57	27.95
MAT WF	101.0	113.0	130.0	104.0	159.0	157.0	167.0	147.0	199.0*	139.14	26.33
LLYW EE	118.0	126.0	166.0	129.0	171.0	167.0	-----	166.0	168.0	155.67	26.89
MICH EE	101.0	117.0	107.0^	103.0	175.0	197.0*	176.0	-----	-----	145.50	41.38
Mean	134.10	135.38	144.56	130.00	164.20	175.10	182.67	154.00	167.89		
SD	38.58	24.55	35.09	29.75	18.88	18.49	27.80	22.54	24.49		

Length of transcription was measured by the recorder. One minute is about 13 units, therefore the mean length of the transcriptions varies between about 10 to about 14 minutes.

* indicates more than one SD above the mean length

^ indicates more than one SD below the mean length

defined as a phrase that carries a message. Thus, a vocative such as " John" is an utterance if it is a call for attention, but is not a separate utterance in the following "Come here John". (Gutfreund et al, 1989). As each utterance was subsequently given a new line, 'line' and 'utterance' are used synonymously.

Minimum punctuation was used, but exclamation marks and question marks were used to mark intonation. No other indications of intonation were used. Attempts were made to transcribe early baby vocalisations phonetically, but as the author has not been trained in the proper use of the International Phonetic Alphabet, this was recognised as a rough approximation at best. Their purpose was to register possible early attempts at words.

For children whose mothers were mainly Welsh speaking, first language Welsh speaking transcribers were used. They were given the sections of tape to be transcribed and an 'action script', a running commentary from the field notes to assist with the transcription. These transcripts were then checked by the author, and typed out in a standard format.

Data Analyses

The data were retained in two forms, in standard format, referred to as the *script*, which included vocalisations and accompanying actions, (see Appendix III, app. 30 onwards) and in an edited form, stripped of all detail except words and utterances, the *text* (see Appendix IV, app. 48 onwards). The words, or tokens, used by both mothers and children were computed, as were the numbers of different words (types), for each script. By dividing the latter by the former, type/token ratios (T/T) were obtained. This is usually used as a measure of the richness of a text. If a speaker uses a wide vocabulary, their T/T will approach unity, whereas the T/T of a more limited speaker will approach zero. The situation is

less clear with early language users. A high T/T could indicate simple object naming (*car/dolly/train/drink etc*), whereas a more sophisticated learner would achieve a much lower T/T when using simple formulae (*there a car/ there a train/ my dolly/ my drink /*). This measure was used with caution.

From the standard format it was possible to identify dynamic sequences of mother-child interaction from the script and to highlight the pragmatic nature of these interactions, and to assess the level of language development for comparison with normative data (at least for the English-speaking children) using the work of Brown (1973) and Crystal (1976). This is discussed in more detail later.

Most dialogue includes a lot of 'fillers', sounds which have no intrinsic meaning but which indicate that the partner is listening, prompting, or reacting appropriately to the speaker. Examples are usually written as 'oh!', 'ah' or 'mmm?' and so forth. These, together with other extraneous detail, were stripped from the scripts making it possible to compute word and utterance counts, mean length of utterance (MLU), type/token ratio and ratio of mother/child words and utterances for each transcript. From this text it was also possible to assess the use of Welsh and English in each session by identifying words and utterances as Welsh, English or Common. How these words and utterances were identified is described in the section below on 'Mean Length Of Utterance'.

Formal Assessments

It was fortunate that a group of Speech Therapists was concurrently producing a standard version of the Reynell Developmental Language Scales in Welsh (Huntley, 1986). Consequently it was possible to administer this test at ages two and three to all ten of the small sample (see Appendix

Iib, app. 16-27). There are difficulties with this test, the greatest being the antiquity of the picture cards which are supposed to evoke spontaneous language if enough has not been heard in the test situation. However, it is a standardized test with reasonable reliability which produces an Expressive and a Comprehension score for children from age 18 months to 7 years, (Reynell, 1987). As can be seen from Table M.6, at the fourth session (mean age 25;18) the mean age for expressive language was 26.7 months and for comprehension was 26.2 months. At session 8 (mean age 36;17) these means were 39.4 months and 40.4 months respectively. The language of one of the children, David, was significantly slower than the rest throughout. His language background was mixed (MM), but only English was actually spoken at home. It is possible that the parental style of management did not facilitate language development as it tended to be over-controlling (see later discussion). For the rest, the children's language development was within the average range.

The Performance half of the Weschler Intelligence Test for Pre-school and Primary Children (WIPPSI-R) was also administered at about age three to monitor non-verbal intelligence. This is the most widely used standardized test of intelligence, and can produce a verbal as well as a performance, or non-verbal score for children from age three years (Weschler, 1991). Given that these children were only just old enough, there may be some floor effects. From the same table (M.6) it can be seen that the mean score was 104.8. All scores except two fell within the 'Average range of Intelligence' of 100 +/- 15 points. Two boys had scores of 120 and 130 respectively, and the latter was becoming bilingual by the time the test was made. Overall these two tests indicate that the small sample chosen was within the average limits for the general population.

TABLE M.7; SCORES FROM FORMAL ASSESSMENTS OF SMALL SAMPLE

	2 YRS (Reynl)		3 YRS (Reynl)		3 YRS PIQ
	Expr.	Comp.	Expr.	Comp.	
NERYS- WW	27.00	29.00	37.00	36.00	93
IWAN- WW	28.00	23.00	39.00	40.00	130*
BECKY- WM	24.00^	26.00	40.00	34.00	90^
EMYR- WM	27.00	25.00	34.00	42.00	97
GARETH- MM	27.00	28.00	42.00	50.00*	120*
DAVID- MM	23.00^	22.00^	34.00	31.00^	97
NIA- WF	28.00	31.00*	49.00*	47.00	100
MATTHEW-WF	27.00	22.00^	34.00	32.00^	101
LLYWELA-EE	28.00	27.00	46.00*	52.00*	115
MICHAEL-EE	28.00	27.00	----	----	---
Mean	26.70	26.20	39.44	40.44	104.78
S.D.	1.77	3.16	5.43	7.84	13.64

The Reynell Developmental Language Scales were administered twice, at about 2 years old and again at about three years. They comprise an Expressive scale (Expr.) and a Comprehension scale (Comp.)

The Performance subtests of the Weschler Preschool and Primary Scale of Intelligence (WPPSI-R) were also used at age three to give a Performance Intelligence Quotient (PIQ).

* indicates more than one SD above the mean of the group
 ^ indicates more than one SD below the mean of the group

Mean Length of Utterance (MLU)

Mean length of utterance (MLU) first became a widely accepted measure of children's language following Brown (1973) when he used morphemes to calculate the length of utterances in young English-speaking children. Some of his rules are straightforward; they require calculations to start on the second page of transcriptions, fillers (oh, ah etc) and unintelligible words to be ignored, and compound words such as birthday and quack-quack to count as only one. But his system also requires knowledge of morphology;

" Count as separate morphemes all inflections, for example possessive {s}, plural {s} third person singular {s}, regular past {d}, progressive {ing}."

(Brown, 1973, p54).

These could have been applied to the children acquiring English, but ad hoc judgements would have been necessary about what constitutes a morpheme in Welsh as no standard system is agreed. Even more crucially the core question remains about what counts as Welsh or as English.

Hickey (1991) discusses the advantages and disadvantages of MLU(morphemes) and MLU(words) at some length and used both measures in her study of the language development of two year old Irish children. She concludes that the two versions of MLU are equally effective, provided they are used with caution, *"as an initial ordering of the data, which precedes a more complex analysis."* (p566, 1991). Crystal (1979) is amongst other researchers who have found the MLU (words) a useful measure when used in this way. Consequently, the older version of MLU was used, that which takes words as the countable unit. Brown's other rules were applied; fillers were stripped from the script and compound words treated as single words. However, as recording and subsequent transcription did not start until the child was settled, all that which was transcribed was used, in its edited form, to calculate MLU. Appendix IV (app. 48 onwards) shows an example of stripped text and of a text analysed by MLU, utterances, and language of utterance.

For most purposes a sentence is an 'utterance', but the two are not synonymous. To utter is to give vocal expression and an utterance is the act of vocal expression. Thus a sentence or a word can be an utterance, but an utterance is not necessarily a sentence (or even a word). Although a robust measure, it is difficult to define precisely, but natural pauses in conversation, change of speaker, questions and

exclamations all mark the end of an utterance. There is a danger in equating sentence and utterance too closely for two reasons. A sentence is a literary imposition on natural language, entailing rules such as the need for a verb. Much natural speech is supplemented with gesture and gaze and needs no such rules. Secondly, as Bloom (1973) has shown, to dignify a child's one-word utterance with the title 'sentence' is to imply that the child already knows a linguistic code for talking about relationships in the world. At the one word stage they do show evidence of understanding quite a lot about relations between things. The key question is whether they have developed a code for expressing these and that is not proven.

For the purposes of this study, an utterance is defined as an independent segment of communication, mostly ending with a pause or a change of speaker. This follows the guidelines suggested by Gutfreund, Harrison and Wells (1989).

Six of the 84 scripts (7%), were examined for inter-rater reliability. The measure used was number of utterances per speaker turn. The utterances counted by the Welsh transcriber were compared with those of the writer. The transcriber's services had been used to supplement the non-native Welsh listening skills of the writer, and the focus had been on the content of the tapes. Inter-rater reliability was computed approximately two years later based on utterances. Thus, while these two sets of judgements are not entirely unrelated, they represent different assessments of the segments of recorded speech. Agreement ranged from 75.5% (the session later called Iwan 4), to 91.3% (Gareth 8), but variation was not obviously related to the age or sex of the child. Overall, there was 85% agreement between the two raters on a total of 963 judgements, (see Appendix VI, app. 70-75).

Stages of Language Development

As outlined in Chapter Two, Brown (1973), has also described Stages in the development of children's language in terms of an MLU(morpheme) distribution. Originally the stages were defined as equidistant and were '*simply a device for sampling the data*' (p58, 1973). Although he states clearly that he did not conceive his stages in a Piagetian sense, his naming of them does describe the new development/s evident at each point (and they are invariate).

Stage I is '*Semantic Roles and Syntactic Relations*', a stage which he later described as '*made up of content words and (which) does lack functors*' (p403, 1973). The MLU of this stage he defined as 1.75, that is, beyond the one word sentence, usually containing two morphemes. Stage II is called '*Modulation of Meaning*' and requires two meaningful elements within an utterance, and an MLU of 2.25. Stage III is '*Modalities of the Simple Sentence*' which refers to the use of negation, interrogation, and imperatives etc,. This stage has an MLU of 2.75. Stage IV has an MLU of 3.50 and involves embedding sentences in one another (eg. *I gonna get the book upstairs/*). The final stage, Stage V, Brown calls '*Coordination of Simple Sentences and Propositional Relations*'. It has an MLU of 4.00, but he states that at this level, the MLU is a less reliable measure of the stage of development than is the complexity of the language. Finally, he mentions that the grammatical tag question (*can't he?/*) does not occur until after Stage V.

As mentioned in Chapter Two, the stages described by Crystal (1976) are those through which children progress as they learn to use the grammar of their language. He defines Stage I as the '*single-element stage*' when the child's utterance comprises a single word such as *mama/ allgone/ ta-ta/ doggie/*. Although the child is clearly communicating, it is not possible to make grammatical claims at this stage. The child

could be naming, commenting, requesting and so on. At Stage II the child is putting two words together, but that still doesn't make meaning precise. *All gone doggie/* while connecting the two concepts, could mean that the dog has gone, or that the child is telling the dog something else has gone. By Stage III there are three elements in the child's utterance, though not necessarily the traditional subject-verb-object. Sentences like *mummy gone drink/ green car crash/* indicate a growing precision, and by Stage IV, when four or more elements are present, children can make themselves understood, although grammatical mistakes will continue to occur. At this stage a child might say *Sion felled on my bike/ do a proper picture mummy/ me want the 'nother box/*. Stage V is typified by the use of clauses (*I said Mr Fixit wants the tractor/ she goes to bed and she does get up now and she has her breakfast/*.) and Stage VI sees the consolidation of grammatical systems such as pronouns, auxiliary verbs and passives. Children can use sentences such as *you shouldn't do that mummy/ no the coffee was melted by the boy/*. Crystal suggests that further stages can be identified, and that the acquisition of grammar continues to develop until adolescence. He (Crystal, 1976) says that for the normal population, Stage I occurs before age 18 months, Stage II between 18 and 24 months, Stage III between age 24 and 30 months and Stage IV is achieved by 3 years of age. Stage V develops around 42 months and Stage VI in the following year.

There is a great deal of agreement between these two schemes. The major difference concerns the earliest stages. Brown suggests that many two word utterances, (Stage II in Crystal's scheme), are still only at Stage I. However, the more generous criterion was adopted for this study; if a child was able to use two word sentences, they were credited with reaching Stage II. MLU was used as a measure of developing language, not as a pre-requisite for stage achievement. Table

M.8 lists the names and features of the two stage models for comparison (a simplified version of this table appears as TQ4.4 in Chapter Four).

**TABLE M.8; STAGES IN LANGUAGE DEVELOPMENT;
Brown and Crystal Compared**

BROWN		STAGE	CRYSTAL	
MLU	FEATURES		FEATURES	AGE
1.75	Semantic roles, Syntactic relations, 2 morphemes, Content words, No functors	I	Single element	2 by 18m
2.25	Grammatical morphemes Modulation of meaning Some plurals, Differing intonations, Early use of 'a', 'the' & 'in' etc.	II	2 words together	18m - 24m
2.75	Modalities of the simple sentence, Modulations such as Negation, Interrogation, Imperatives	III	3 or more element utterance. Use of 'a' & 'the'	24m - 30m
3.50	Embedding one simple sentence in another. Early embedding	IV	4 or more elements, Simple sentences 'errors'	by 36m
4.00	Co-ordination of sentences, Propositional relations. Use of 'and' & 'but'.	V	Clauses, Embedding, Use of 'and' & 'but'	about 42m
Later	Tag questions etc.	VI	Pronouns, Auxiliary verbs, etc	about 48m onwards

Pragmatic Language Use

Once the recordings had been transcribed, the scripts were examined for examples of the ways in which the children were using language. Early naming and requests were not systematically analyzed, but it soon became apparent that even very young children learn how to use language to serve their own purposes. All instances of apparently functional language use were abstracted and classified, and then examined for developmental trends and for inter-subject differences.

The number of examples available is small, and the likelihood of recording appropriate interactions is capricious, however the data that were recorded are intriguing. Children were heard to use language to distract mothers, to create stories, to manipulate the truth, to take another's perspective, and to comment on the existence of two languages in their environment.

These findings relate to qualitative data which are open to interpretation. Reference to them will be to enrich more substantive information, and to suggest further hypotheses.

Dictionary of Common Words

Whenever two languages are in close contact, a great deal of borrowing occurs between them. Single words are borrowed most frequently and, in the course of time, become assimilated into the second language (Grosjean, 1982). English, for example is full of borrowed words such as *restaurant*, *shampoo*, *abseil*, *anorak*, *ruse*, *patio*. The syntactic structure of conversations usually enables one to say that someone is using one language rather than another, but words develop before syntax. When children use words which are currently shared by more than one language, it is very difficult to decide which language is being learned, or whether one or two language systems are developing. Consequently it was found

necessary to list the words common to both Welsh and English that were being learned by the children in this study, (Appendix V, app. 67-69).

For the purposes of this study, there are five types of Common word. Proper names comprise the first type and include the names of popular characters such as Postman Pat and Swperfed. Baby words such as wow-wow, quack-quack (cwac-cwac) and bye-bye (bei-bei) form the second type and foreign and/or technical words the third. This last group includes words such as video (fideo), and okay, an American importation into both languages. All words which sound very similar and which have the same meaning in both languages are defined as Common. These include words such as bus|bws, car, Dad, doll|dol, lot, right|reit, train|tren, top, yea|ia, (see Dictionary of Common Words Appendix VII for complete list). Criteria for inclusion in the Dictionary of Common words were that they were found both in the data collected, and in either Y Geiriadur Mawr (1986, the standard Welsh-English Dictionary) or else in Y Geiriadur Lliwgar (1979, a popular Welsh Children's Picture Dictionary) as well as in an English Dictionary. Mostly these are nouns, but include some adjectives, adverbs, and prepositions. Lastly a group of 'Wenglish' words have been included. There are some words which do not appear in either the formal or informal dictionaries of Welsh words, but are English words used locally and changed to conform with Welsh syntax. These are almost all verbs and have a Welsh alternative. Although cwympto is to crash and nofio is to swim, families often use crashio and swimio. Martin Ball in Bristol (1988) has suggested that the transition of words from one language to another is a process and that some words are still in transition. Where English and Welsh are the languages in question he calls English words used creatively like this with Welsh syntax, 'Wenglish'. Theoretically this term could cover words in transit from Welsh to English.

Utterances were similarly defined as Welsh, English or Common, but the criteria were more difficult to define. If the structure of the utterance was clearly Welsh or English, then the inclusion of Common words makes no difference. If the utterance was entirely composed of Common words and no clues were obtainable from the structure, then it was called Common, and if the utterance included words from both languages with no clear structural clues then it was defined as Common. Both of these last events tended to occur only in immature utterances, for example, *dadi car stop ia?/ (daddy car stop yea?/)* uses only Common words, and *Mr Fixit 'di mynd and gone to bye-byes/* uses structures from both Welsh and English. Once the child had progressed to simple sentences, classifying lines was usually straightforward.

Much of a child's early language consists of baby terms and proper names which fall into the 'Common' category. They also delight in naming objects, and many of these names for things are the same in both languages. Consequently, a large part of the early language used by children in this study, whether from primarily Welsh or English speaking families, has been classified as 'Common', that is shared by the two languages.

Maternal Questionnaires

Two questionnaires were administered directly to the mothers in the small sample. As has been mentioned already, an open-ended interview schedule was used at the very start of the recording phase. At the same time the second maternal questionnaire, an Attitude to Child-rearing Questionnaire (ACRQ) was administered, and this was repeated when the child was three (it appears in Appendix VII, app.76).

The Interview schedule asked about the mother's use of Welsh, her opinions about the language and her hopes and expectations regarding her child's acquisition of Welsh. As it was an

open-ended schedule, some mothers were more expansive than others in describing their views. However, on the basis of these interviews, predictions were made about the language each child would acquire.

The ACRQ was designed to tap maternal beliefs about child rearing. In the absence of an appropriate scale, a questionnaire was devised comprising 24 statements paired to avoid response bias. Mothers were asked to respond on a five point scale (see Appendix VII, app. 76). It was used when the child was about a year old and again when the child was about three. As it is not a standardized scale, its value was in the changes it reflected over time, and in the comparisons which could be made between the ten mothers.

Strengths & weaknesses of recording procedures

It cannot be claimed that the small sample of children chosen is completely representative of that population. Self-selection bias will have operated to some extent as only those interested in the development of their child's language and/or bilingualism are likely to have accepted the invitation to take part. However, as so little is known about pre-school children hearing two languages, it was hoped that these ten children would provide a range of information that could provide some valuable pointers at least.

Further, despite precautions the observer effect will have operated to some extent during the recording itself. Subjectively, it felt as if the mothers and children were able to forget the presence of the observer after the first session, but it is quite possible that mothers would not have played with their children, or would have played differently with them if no one else had been there. The recorder could have been left with the family with instructions about timing, (as in the Wells, 1981 study) but many of the setting

features of interactions would have been unobserved with the consequent loss of richness.

Finally, the procedure adopted could not guarantee to trap the most productive, creative, or even the most representative examples of child/maternal language use. Although the intervals between sessions ensured that visits were novel for the child, many factors could impinge on the occasion, so that at times a normally talkative child was fractious and tired and silent. At other times, however, the observer ran out of tape before the child ran out of invention!

4. SECOND QUESTIONNAIRE

Compilation

The aim of the second questionnaire, QII, was to check the progress of families three years after the first questionnaire. Consequently, the current language use questions from QI were repeated, including those which asked about thinking, reading and watching television (see Appendix VIII, app. 77 onwards). The next set of questions asked about the language used for activities shared with the three year old child such as talking, reading and watching television, and the language heard by the child from a number of sources (such as peers, grandparents etc). Thirdly, questions were asked about the child's language development. A global question asked if parents were happy with their child's language development in general and then parents were asked about the acquisition of nine key aspects of Welsh and nine of English on a three point scale, for example;

"Q 6. Does your child;

NOT YET/SOMETIMES/OFTEN

say things are 'big' or 'little'

say things are 'mawr' or 'bach' "

(Appendix VIII, app. 79).

The questionnaire was produced bilingually, so this question also appeared as;

"Q 6. A yw ei plentyn;

DIM ETO/WEITHIAU/YN AML

dweud bod pethau yn 'big' neu 'little'

dweud bod pethau yn 'mawr' neu 'bach' "

(Appendix VIII, app. 83).

Thus the development of both languages in each child was represented. The last question in this set was a repeat of a QI question about whether and how parents wanted their child to learn Welsh.

Finally demographic questions were asked including questions about who else lived with the child (father, younger siblings etc), whether either or both parents worked, and what child care arrangements existed.

Distribution

The questionnaires were posted (with reply-paid envelopes) to all families who had responded to the first questionnaire, 418 in all. To check the accuracy of reports of father's language use, two questionnaires were sent to each family with the request that parents complete them separately. They were sent out in batches to coincide with the third birthday of their children.

Of the 418 families who responded to the first questionnaire, 178 responded to the second. 16 of the original responders are known to have moved out of the area and it is likely that more have done so. Thus a return rate of 44% of possible families is within reasonable expectations. Of those returning, 124 families included two questionnaires, one from each parent, and they provide the data for most of the subsequent analyses. One of the single questionnaires came

from a father and the rest came from mothers. In some analyses, the group of 177 mothers are used.

It is not possible to say why more families who were willing to co-operate on the first occasion did not feel able to do so three years later. It is possible that the enthusiasm felt at the time when a new baby joins the family has waned by the time a toddler is making constant demands for attention. On the other hand, life events such as illness, death and divorce must make a questionnaire like this seem irrelevant.

The Sample

Those who replied were compared with the rest of the population who gave birth in the year in question, using the data made available by the Welsh Office. There were no significant differences between the two samples in terms of maternal age or sex of child, but this time there were significant differences in socio-economic status between the two groups. There appears to be a bias towards SE classes 1 in those returning QII. However, if the returns are bifurcated, the figures look more representative, with 48.2% from SES 4 and 5 in both the responding and non-responding groups. Question 8 discusses these differences in more detail (Table Q8.1).

Couples were again allocated to a Language Background group using the procedure described for the first questionnaire.

The results were as follows;

- 38 WW, primarily Welsh-speaking couples
- 15 WM, Welsh-speaking mother and non Welsh-speaking father
- 5 WF, Welsh-speaking father and non Welsh-speaking mother
- 33 EE, mostly English -speaking couples
- 33 MM, couples with a mixture of languages in their
backgrounds

Differences between these groupings and those in QI are discussed below and in the next section under Question 8.

Developmental Groups

The primary aim of QII was to sample the language development of the base population. Answers to the 'Aspects of Language Development' questions were computed for both Welsh and English, and then subtracted to give a Bilingual score. A child using all and only the nine aspects of English would score 27 for English, and 9 for Welsh ('not yet' counts as 1) and so their Bilingual score would be 18. A child whose first language was English but who was acquiring some Welsh as well, might score 24 for English and 18 for Welsh ('sometimes' counts as 2) giving a Bilingual score of 6. Thus, the nearer a child's Bilingual score approached 0, the more balanced was their two-language development. These data were then split into three language development groups, those who were monolingual or tending to be monolingual in English, (+18 to +7) those using the two languages fairly equally (+6 to -6) and those who were monolingual or nearly monolingual in Welsh (-7 to -18). For the sake of brevity they are referred to as the 'English', 'Bilingual' and 'Welsh' groups of children. The numbers in each group are as follows;

English N = 79

Bilingual N = 57

Welsh N = 41

Data Analysis

Data regarding background group membership were compared with those from QI. To check the validity of these groupings it was necessary to calculate the proportionate agreement between the allocation of the fathers, the mothers and the couples on the two occasions. The proportionate agreement was above 81% in all three comparisons, and the Kappa value, the coefficient of agreement, ranged from 0.76 to 0.82, well within

the limits of acceptability (Youngman 1979). This is reported in more detail in Question 8 (table Q8.2), and changes in group membership were noted and discussed.

These data were cross tabulated with answers to the questions and with the language development groups as outlined above. Data were also analyzed on the basis of gender of respondent, and free text comments were similarly ordered as for the first questionnaire.

Regression Analyses

A number of regression analyses were performed to look for predictors of language development. These used the four 'aspiration' variables and the maternal, paternal and couple language group variables from the first questionnaire as independent variables, and the language development, child-use and child understand variables as dependent variables.

Strengths and Weaknesses

With hindsight, it would have been useful to replicate more of the questions from the first questionnaire and omit the child care questions which have not proved helpful. In particular questions concerning parents' self perception as a Welsh speaker, opinions about the future of Welsh and about the current importance of the Welsh language could have indicated whether changes are occurring in parental attitudes.

The strength of the second questionnaire is closely associated with its weakness; it provides a view of change/no change over time, and could indicate which factors can remain stable.

5. SUMMARY

The three phases of the research project have been described in some detail, and the use made of these investigations will be described in the next chapter. It remains to be explained how the assumptions identified as those underlying the project were tested. Mostly they were not resolved, nor was there an expectation that they would be. It was felt to be important to specify these and how they were questioned in the clear knowledge that there are likely to be others which have escaped notice.

The assumption that the family into which a child is born is the most important factor in that child's language development was examined via correlations between language background groups of parents and couples, and language development groups of children. It could also be tested through the matching of maternal and child language use in the small sample sessions, especially the later sessions.

Reasons, beliefs, opinions and general comments were solicited from parents in both questionnaires and in examining those it was possible to correlate opinions with language backgrounds. Furthermore, 'Aspiration for Welsh' factors were entered into the multiple regression analysis to see if they predicted language development. These procedures test the assumption that parental opinion influences child development.

It was assumed that the mother-child interactions recorded would represent the range of communication skills acquired by children. The development of each child's language was closely monitored, and differences between the children were noted. As the paternal sessions made clear, that did not encompass all of the child's skills, and the assumption was not as well explored as it might have been.

Although an assumption had been made at the start that maternal language was the more important, doubts arose during the course of the research, and so this assumption was treated as a question in its own right and investigated accordingly. (See the next section under Q7).

The assumption that features of the language development of the small sample could be generalized was examined by comparing the data available from the base population with comparable data from the ten children.

A series of nine questions has already been compiled to guide the research, as listed at the end of the Review. To attempt to answer them, evidence was gathered from every available source, that is from any part of all three sections of this study. If anything, too many data are available, and so each question acted as a focus and as a boundary. Overall an attempt was made to deal with each question within a strictly bilingual framework, and to identify those answers in which the bilingual dimension is important. It was seen as a search for clues, not only about how children acquire language bilingually and for what, if anything, makes that a different process from monolingual language acquisition, but also for what predicts a child's language.

Chapter 4. RESULTS OF RESEARCH

INTRODUCTION

The questions to be addressed have already been stated, but are listed below for convenience. They are;

Q1; "What Language Backgrounds exist on Ynys Mon (Anglesey)?"

Q2; "What Opinions do Parents hold concerning Language?"

Q3; "What Languages are a small sample of children learning?"

Q4; "How are the small sample learning language?"

Q5; "How are these children using language?"

Q6; "When do children become aware of language per se?"

Q7; "Which Parent has more influence on the Language of the home?"

Q8; "Do the opinions and language use of families change over time?"

Q9; "What factors predict a Child's Language?"

These questions form the framework for examining the data collected. Many other questions could, and maybe should have been asked, and could still be asked of the information to hand. These questions were chosen partly because they form a logical sequence, partly because they appeared to be the answerable, but mostly because they interested the author most. What follows are the attempts to answer these nine questions.

The Evidence

For all of these questions, evidence was gathered from every available source, that is from any part of all three studies. If anything, too much data are available, and so each question acted as a focus and as a boundary. Overall an attempt was

made to deal with each question within a strictly bilingual framework, and to identify those answers in which the bilingual dimension is important. It was seen as a search for clues, not only about how children acquire language bilingually and for what, if anything, makes that a different process from monolingual language acquisition, but also for what predicts a child's language.

**Question 1; WHAT LANGUAGE BACKGROUNDS EXIST ON
YNYS MON?**

1. PARENTAL LANGUAGE USE

Introduction

As discussed at the beginning, to know a language is not the same as to use it, and it seemed more relevant to ask about what language parents used than to ask about their language knowledge. Not only is it the language used that children hear (and presumably learn), but most people do not know how much they know about language. It does not take a linguist to know that "the lions sits he" is ungrammatical, or to re-order correctly the adjectives in "the embossed red large metal old heavy box".

Therefore, a Language Use questionnaire was sent to all the mothers of babies born in a year in order to identify different language backgrounds.

**TABLE Q1.1; Distribution of Couples,
broken down by Language Use.**

	N	%
WELSH (WW)	93	24.2
WELSH MOTHER (WM)	36	9.4
MIXED (MM)	77	20.1
WELSH FATHER (WF)	46	12.0
ENGLISH (EE)	132	34.4
TOTAL	384	100.0

Complete replies were received from 414 representing 45% of the total and, as described previously, the sample was first divided into mainly Welsh speaking (W), mainly English

speaking (E) and those using a mixture of languages (M). Subsequently five groups were defined; Welsh speaking parents (WW), English speaking parents (EE), couples with a Welsh speaking mother and a non Welsh speaking father (WM), couples with a Welsh speaking father and a non Welsh speaking mother (WF) and finally mixed language couples (MM). The exclusion of single respondents reduced the total sample size to 384 for most analyses (see Table Q1.1).

Language Use in General

From Table Q1.2 it seems that only in the Welsh speaking couples (WW) is Welsh used regularly. The need to communicate easily and quickly means that a couple will tend to rely on their common language when together. But even where one partner is primarily Welsh speaking (as in WM and WF groups), the cumulative effect is for the language to be used less in a range of situations.

Couples in the EE and WW groups used virtually only their main language with their own parents, with their children, at church or chapel and at work, much as one would expect. In the past they had used only their main language for most encounters, although the WW couples did use their second language with friends more than did the EE couples, presumably because they have a linguistically wider range of friends.

When classified into couples, less than a quarter of the replying families could be classified as primarily Welsh speaking, and about a third could be classified as primarily English speaking. However, that does mean that by including mixed language partnerships, in almost two thirds of the families in the sample the Welsh language was used to some extent in some situations by at least one of the partners.

TABLE Q1.2; Present Language Use in Different Situations by Parent and by Language Background Group
(Figures are percentages)

LANGUAGE USED -->		Almost Always or Mostly Welsh	Half & Half	Almost Always or Mostly English			
SITUATION	COUPLE TYPE	Mo. %	Fa. %	Mo. %	Fa. %	Mo. %	Fa. %
PARENTS;	Welsh WW	96	95	4	5	0	0
	W.Mother WM	97	8	3	6	0	86
	Mixed MM	14	16	21	18	65	66
	W.Father WF	11	64	11	12	78	5
	English EE	0	0	0	0	100	100
FRIENDS:	Welsh WW	86	86	13	13	1	1
	W.Mother WM	56	12	39	9	6	80
	Mixed MM	8	11	21	21	71	68
	W.Father WF	17	65	11	33	72	2
	English EE	0	0	0	0	100	100
NEIGHBRS:	Welsh WW	74	72	21	22	5	7
	W.Mother WM	47	9	31	9	20	83
	Mixed MM	8	12	20	20	72	68
	W.Father WF	20	62	13	27	67	11
	English EE	0	0	0	0	100	100
SHOPS;	Welsh WW	57	58	34	35	9	8
	W.Mother WM	36	3	53	11	11	6
	Mixed MM	7	13	28	20	66	7
	W.Father WF	4	46	20	39	76	16
	English EE	0	0	0	0	100	100
WORK;	Welsh WW	73	66	20	27	7	7
	W.Mother WM	66	3	28	12	7	85
	Mixed MM	5	19	19	19	76	3
	W.Father WF	3	68	33	29	63	2
	English EE	0	0	2	2	98	98
CHURCH;	Welsh WW	90	90	10	10	0	0
	W.Mother WM	81	9	19	5	0	86
	Mixed MM	12	21	14	19	74	60
	W.Father WF	23	79	27	18	50	4
	English EE	0	0	0	0	100	100
CHILDREN;	Welsh WW	93	92	4	6	2	2
	W.Mother WM	72	17	22	22	6	61
	Mixed MM	0	3	27	32	73	65
	W.Father WF	21	46	26	46	54	8
	English EE	0	0	1	0	99	100

EG: 96% of mothers in the WW couple group almost always or mostly use Welsh with their parents, and 2% of fathers in the EE couple group use half Welsh and half English at work.

Preference for one language is more clearly evident in some situations than others. It would appear that if Welsh is spoken at work, or with children, this encourages the use of that language by non-Welsh speakers, whereas shopping and conversation with neighbours or friends is almost always conducted in English by the English speaking couples, and by English speaking partners. On the other hand, Welsh speaking mothers will also use English with friends, neighbours, when shopping and at work, as will the Welsh speaking couples. There would seem to be more adaptation towards English language usage than towards use of the Welsh language.

2. SPECIFIC PARENTAL LANGUAGE USES

VIEWING

Three questions concerned parents preferred language for reading, thinking and watching television. The majority of programmes shown on the fourth television channel in North Wales (S4C) are in Welsh. Although those on other channels are never in Welsh, a choice does exist. Even so, 76% of the total sample almost always watch English language television, with just 6% preferring mostly Welsh television (Table TQ1.3).

About a fifth of the WW group mostly or almost always watch programmes in Welsh, but over two fifths mostly or almost always watch programmes in English. Welsh mothers in the WM group and Welsh fathers in the WF group behaved less like parents in the WW group than in other circumstances; fewer Welsh parents from cross-language partnerships watched mostly Welsh programmes than did those married to Welsh speaking partners.

TABLE Q1.3; LANGUAGE USED for WATCHING TELEVISION by PARENT and by LANGUAGE BACKGROUND GROUP (Q1) 1988-1989

	ALMOST ALWAYS & MOSTLY WELSH		HALF & HALF		ALMOST ALWAYS & MOSTLY ENGLISH		N	
	M	F	M	F	M	F	M	F
WW	19 21%	17 19%	37 41%	35 39%	34 38%	38 42%	90	90
WM	2 6%	0 0%	13 38%	1 3%	19 56%	34 97%	34	35
MM	0 0%	0 0%	9 12%	10 13%	65 88%	64 87%	74	74
WF	0 0%	5 12%	10 22%	16 37%	35 78%	22 51%	45	43
EE	0 0%	0 0%	1 1%	1 1%	131 99%	131 99%	132	132
	21 6%	22 6%	70 19%	63 17%	284 75%	289 77%	375	374

WW= Parents are both primarily Welsh speaking
 WM= Welsh speaking Mother and non Welsh speaking Father
 MM= Parents have a mixed language background
 WF= Welsh speaking Father and non Welsh speaking Mother
 EE= Parents are both primarily English speaking
 M= Mothers F= Fathers
 NB; The top number in each cell is a raw frequency.

READING

The English language also dominates most people's reading. Table Q1.4 shows that 86% of the total almost always read in English and that includes about 60% of the WW group. Just 16% of that group almost always read in Welsh. Here mothers in the WM group and fathers in the WF group did behave like parents in the WW group. This is however, a complicated choice. A lot depends on the range and quality of literature available in the two languages, and a similar point holds for television programmes.

TABLE Q1.4; LANGUAGE USED for READING by PARENT and by LANGUAGE BACKGROUND GROUP (Q1) 1988-1989

	ALMOST ALWAYS & MOSTLY WELSH		HALF & HALF		ALMOST ALWAYS & MOSTLY ENGLISH		N	
	M	F	M	F	M	F	M	F
WW	16 17%	13 14%	21 23%	22 24%	55 60%	57 62%	92	92
WM	4 12%	0 0%	6 17%	0 0%	25 71%	35 100%	35	35
MM	0 0%	1 1%	2 3%	3 4%	74 97%	73 95%	76	77
WF	0 0%	5 12%	2 4%	9 21%	44 96%	29 67%	46	43
EE	0 0%	0 0%	0 0%	0 0%	132 100%	132 100%	132	132
	20 5%	19 5%	31 8%	34 9%	330 87%	326 86%	381	379

WW= Parents are both primarily Welsh speaking
WM= Welsh speaking Mother and non Welsh speaking Father
MM= Parents have a mixed language background
WF= Welsh speaking Father and non Welsh speaking Mother
EE= Parents are both primarily English speaking
M= Mothers F= Fathers
NB; The top figure in each cell is the raw frequency.

THINKING

Predictably, there were significant differences in the language preferred for thinking (Table Q1.5). Most parents in the WW group used Welsh or mostly Welsh, as did 68% of the mothers in the WM group. Mothers in the WF group preferred English or mostly English (about 84%) as did fathers in the WM group (94%). All of the EE parents thought in English almost exclusively.

The clearest differences between the groups were found in their choice of language for other activities. Apart from an occasional look at Welsh television, the English speaking couples thought in English, read in English and watched

English language television. Taking the other extreme group, the majority of the Welsh-speaking couples (84% to 89%) thought in Welsh, but only about 14% to 17% confined their reading to the Welsh language and only about 20% mostly watched Welsh language television. By and large the Welsh-speaking partners in the cross-language partnerships made similar choices. Thus, all English speaking couples think in English almost all of the time and most Welsh speaking couples think in Welsh almost all of the time.

TABLE Q1.5; LANGUAGE USED for THINKING by PARENT and by LANGUAGE BACKGROUND GROUP (Q1) 1988-1989

	ALMOST ALWAYS & MOSTLY WELSH		HALF & HALF		ALMOST ALWAYS & MOSTLY ENGLISH		N	
	M	F	M	F	M	F	M	F
WW	82 89%	77 84%	4 4%	10 11%	6 7%	5 5%	92	92
WM	24 68%	2 6%	6 17%	0 0%	5 14%	33 94%	35	35
MM	4 5%	5 7%	4 5%	10 13%	67 90%	60 80%	75	75
WF	2 5%	21 49%	5 11%	16 37%	37 84%	6 14%	44	43
EE	0 0%	0 0%	0 0%	0 0%	132 100%	132 100%	132	132
	112 30%	105 28%	19 5%	36 10%	247 65%	236 62%	378	377

WW= Parents are both primarily Welsh speaking
 WM= Welsh speaking Mother and non Welsh speaking Father
 MM= Parents have a mixed language background
 WF= Welsh speaking Father and non Welsh speaking Mother
 EE= Parents are both primarily English speaking
 M= Mothers F= Fathers
 NB; Figures in the top of each cell are raw frequencies.

3. THE BILINGUAL QUESTION

"Would you say you are bilingual?"

In reply to the above question , it was expected that the Welsh speaking group would say 'yes' and the English speaking group 'no', and mostly they did.

**TABLE Q1.6; Answers to Question 4 in QI;
"Would you say you are you bilingual?"
by Parent and by Language Background Group**

		Mothers		Fathers	
		% YES	% NO	% YES	% NO
WW	Welsh	91	9	90	10
WM	WelshMother	100	0	25	75
MM	Mixed	56	44	58	42
WF	WelshFather	52	48	91	9
EE	English	9	91	5	95

Percentages of replies in each group.

In the sample as a whole, half were said to be bilingual, 52% of the women and 49% of the men. As expected, most of the couples in the WW group, and the Welsh-speaking partners in the cross-language partnerships were reported to be bilingual. That is Welsh speakers who speak English as well. About half of the group of WF mothers and about a quarter of the group of WM fathers judged themselves to be bilingual. Whatever their actual language usage may be, parents in a cross-language partnership tend to see themselves as bilingual, (see Table Q1.6).

Unexpected Results

Turning to some unexpected results, about 6% of the Welsh-speaking mothers said they were NOT bilingual as did

about 9% of both partners in the WW couple group. This suggests that there are people who place an extremely high value on using language well - here Welsh - and are not prepared to claim that minimal accommodation of English makes them bilingual. At the other extreme are those whose Welsh language use is minimal, (English speaking mothers and EE couples). Up to 11% of people in these groups called themselves bilingual. Other languages were excluded, and so for these people bilingual means little more than greeting friends and using a few phrases, (and perhaps knowing some Welsh).

4. TALKING TO ONE ANOTHER

The Influence of Gender

As one might expect, the Welsh couples and the English couples speak to one another almost entirely in their main language. In families where the mother is Welsh speaking and the father is not (WM), they almost always use English. More Welsh is used in WF families where the father is Welsh speaking and the mother's first language is not Welsh, (see Table Q1.7).

It is interesting to compare the women in the WM group and those in the WW group. The latter have partners who are primarily Welsh-speaking whereas the former have not. There is a difference of up to thirty percent between those in the WM group and those in the WW group who use mostly Welsh in all the situations listed except with their own parents. One can easily see that those in cross-language partnerships will have more friends who are monoglot English speakers. It is more surprising that fewer of these women use mostly Welsh when shopping, at church or chapel and with children. This predominance of English would suggest that the influence of a non Welsh-speaking partner is wide-ranging. This influence

TABLE Q1.7; Present Language Use by Couples to Each Other
broken down by Language Background Group.
(in percentages)

			Almost Always or Mostly Welsh %	Half & Half %	Almost Always or Mostly English %
MOTHER to FATHER	Welsh	WW	99	1	0
	W.Mother	WM	19	6	75
	Mixed	MM	4	7	89
	W.Father	WF	27	11	61
	English	EE	0	0	100
FATHER to MOTHER	Welsh	WW	99	1	0
	W.Mother	WM	17	3	81
	Mixed	MM	4	9	87
	W.Father	WF	30	14	57
	English	EE	0	0	100

For example, 75% of Welsh speaking mothers in group WM almost always or mostly use English with their partners, and 57% of Welsh speaking fathers in group WF mostly or almost always use English with their partners.

A)	W Mothers to W fathers	WW	99	1	0
	W Mothers to E fathers	WM	19	6	75
	ie less W in partnership		80%	inc E in part.	75%
B)	W Fathers to W mothers	WW	99	1	0
	W Fathers to E mothers	WF	30	14	57
	ie less W in partnership		69%	inc E in part.	57%
C)	E mothers to E fathers	EE	0	0	100
	E mothers to W fathers	WF	27	11	61
	ie inc W in partnership		27%	dec E in part.	39%
D)	E Fathers to E mothers	EE	0	0	100
	E fathers to W mothers	WM	17	3	81
	ie inc W in partnership		17%	dec E in part	19%

SO; Compared with WW, if mother is W and father is E,
fewer Welsh-speakers use mostly W, & more use
mostly E in the partnership { 80% & 75% } (A)
than if father is W and mother is E { 69% & 57% } (B)

AND

Compared with EE, if mother is E and Father is W
more English-speakers use mostly W & less use
mostly E in the partnership { 27% & 39% } (C)
than if father is E and mother is W { 17% & 19% } (D)

is primarily the influence of the male partner. Almost thirty percent of the Welsh speaking men in the WF group use mainly Welsh with their non Welsh-speaking partners. Far fewer, almost twenty percent of Welsh speaking women in the WM group use Welsh with their non Welsh speaking partners. Perhaps women are just better at learning a second language. What little evidence there is in the literature on second language learning supports the suggestion that this might be the case, (see, for example Carroll & Sapon, 1959).

The Influence of Language

Caution is necessary in interpreting these results. Women answered the questions, giving their recollection of their male partners' behaviour. Furthermore, in looking more closely at language use with one another (Table Q1.7), the language itself, appears to have a greater influence than gender. More mothers in the WM group (75%), and more fathers in the WF group (57%) spoke to their English speaking partner in English than fathers in the WM group and mothers in the WF group used Welsh with their Welsh speaking partner, (17% and 27% respectively).

Language and Gender

Notice that this evidence further indicates that the father has more influence on language use in the home. When he is the Welsh speaker, he is spoken to in Welsh by his non first language Welsh wife in about 27% of WF couples whereas when the mother is the Welsh speaker she is spoken to in Welsh by her non first language Welsh husband in only 17% of WM couples. Conversely, when he is the English speaker he is spoken to in English by his Welsh speaking wife in 75% of WM couples, whereas when the mother is the English speaker she is spoken to in English by her Welsh speaking husband in only 57% of WF couples.

If those in groups WF and WM who reported using both languages equally are included with the almost always or mostly Welsh couples, the effect is clearer. More than 43% of Welsh speaking fathers in cross-language marriages use Welsh at least half of the time to their wives and 39% of them are spoken to in Welsh at least as often by their wives. By comparison, in the WM group, 25% of Welsh speaking mothers use Welsh at least half the time with their husbands and only 20% of them are spoken to in Welsh at least as often by their husbands. That is, two fifths of primarily English-speaking women use a substantial amount of Welsh with their Welsh-speaking husbands, whereas only one fifth of primarily English-speaking men communicate similarly in Welsh with their Welsh-speaking wives. The women who completed this questionnaire emerge as more likely to accommodate their husband's main language than he is to accommodate theirs.

In the factor analysis, the language used with mother in the past had a similar high factor loading to that of the language used with father in the past (see Table M.3 in Chapter 3, p125). This implies that there is little difference between using Welsh with your father or your mother as a girl; both are significantly associated with becoming a Welsh speaking woman. In the group of couples where each has a mixed language background, the gender effect is not evident. Nearly ninety percent of fathers spoke to their partner in English almost all of the time and almost ninety percent of mothers spoke to their partner in English most of the time.

In sum, with the exception of the quarter of the sample in the Welsh (WW) group, the vast bulk of all conversations for the 384 couples are in English.

5. SUMMARY

Only a quarter of the couples in the sample used Welsh frequently and in a wide range of situations, while about a third used virtually no Welsh. However, some Welsh was spoken in the remaining two thirds of families, use varying widely with situation. There are some indications of factors influencing choice of language use. Cross-language partnerships, gender of Welsh speaker, and some specific situations affect language choice. Predominantly, primarily English speaking women with Welsh speaking partners will tend to use Welsh with children or at work. In contrast, Welsh speaking women married to primarily English speaking men will tend to use English more in most situations.

The majority of subjects in the Welsh speaking groups thought mainly in Welsh, while all of the subjects in the English speaking group thought mainly in English. It was this which most clearly differentiated the primarily Welsh speaking groups. Most of the subjects in the mixed groups tended to think in English.

Reading mainly in Welsh was the choice of 14% of Welsh speakers only, with almost everyone in the other groups reading mainly in English. More people chose to watch some Welsh language television, and they came from all groups. However, more than 81% of the total sample watch English language programmes almost exclusively, and more than 86% read English almost exclusively.

These figures partly reflect available choices. Even with a channel broadcasting many programmes in Welsh, the bulk of television is transmitted through the medium of English. Reading material in Welsh is similarly limited. About half of the sample is reported to be bilingual, although

that term is used in such different ways that it fails to describe language use adequately. How this term is used reflects the opinions and beliefs of the respondent.

Finally, the suggestion arises in the data that the father has the more influential role in choice of language use within the family. This will be discussed further in Question 7.

Question 2: WHAT OPINIONS DO PARENTS HOLD
CONCERNING LANGUAGE?

1. INTRODUCTION

Enthusiasm and dislike influence the amount of energy available for any enterprise. Encouraging the language development of a child calls for sustained effort, especially if the development is bilingual. Consequently, parental opinions about language play an important part in the language acquisition of children.

In the Language Use Questionnaire described earlier (QI) a number of questions were included to gauge the opinions of parents regarding the Welsh language. They were asked how much Welsh they wanted their child to learn and invited to give reasons for their answers. They were asked how important they thought it was for children to learn Welsh and for their opinions about the future of the Welsh language. They were also asked to consider their child's future marriage partner; did it matter if that person was a Welsh-speaker or not? Finally, they were encouraged to add comments and most of those who did spoke of their thoughts and feelings about the language and culture of Wales.

Three years later QII was sent to the same parents and the question was repeated concerning the amount of Welsh they wanted their children to learn. They were again asked to give reasons for their answers, and further comments were also invited. Many of the comments charted the progress of their children, but many more were expressions of opinion about the Welsh language.

In the process of selecting subjects for the small sample,

mothers were interviewed using a standardized, open-ended schedule (see Appendix II, app.13-15). This included questions about their attitudes to the Welsh language and their language aspirations for their children. Some also commented on their partners' opinions about Welsh, and about their own feelings of Welshness. These data are selective, but illustrate the depth and divergence of opinion that exists.

Finally, the ten mothers in the small sample were asked to complete an Attitude to Child Rearing questionnaire (ACR) regarding the upbringing of children, and this was administered when their children were aged 12 months and again when they were about three years old (see Appendix VII, app.76).

2. RESULTS from QUESTIONNAIRE I

Language Expectations

The question asking about how much Welsh parents wanted their children to learn was structured so that to be 'fluent' appeared as a step further than 'to learn Welsh at school'. (The other options were 'to pick up some Welsh' or 'to learn only English', although space was left for respondents to specify alternative options).

The majority of parents (86%) wanted their children to learn Welsh at school, or to be fluent in Welsh (Table Q2.1a). Only about 5% (almost all from the EE group), wanted their children to learn only English. In the EE group there was less overall enthusiasm for Welsh learning by their children, although 71% wanted them to learn Welsh at school or to be fluent. This group does not necessarily comprise only English born incomers. Many Welsh born parents, from Welsh cultural

backgrounds use virtually no Welsh, and so were included in the EE group. Nonetheless, this high proportion of support for the teaching of Welsh comes from parents with English

TABLE Q2.1a; Language wanted for their child; Paternal and Maternal choices from QI by Language Background Group

	Eng. Only		Some Wel.		Schl Wel.		Flu. Wel.	
	% M	% F	% M	% F	% M	% F	% M	% F
WW	0	0	0	0	2	2	98	98
WM	0	0	6	6	3	8	92	86
MM	3	3	16	9	23	22	58	66
WF	0	0	4	2	20	15	76	83
EE	14	15	15	13	46	45	26	26
ALL	5	6	9	7	24	23	62	64

Eng. Only = Learn only English

Some Wel = Pick up some Welsh

Schl Wel. = Learn Welsh at School

Flu. Wel. = Fluent Welsh

Replies shown as the percentage of mothers (M) and fathers (F) in each group.

TABLE Q2.1b; Language wanted for their children; Maternal replies from QI by Language Background Group (simplified)

	English Only	Some Welsh	School Welsh	Fluent Welsh	
WW	0 0%	0 0%	2 2%	89 98%	91
WM/MM/WF	2 1%	16 10%	28 18%	113 71%	159
EE	18 14%	20 15%	60 45%	34 25%	132
	20 5%	36 9%	90 24%	236 62%	382

Chi square= 136.53 which is significant beyond the .001 level, (but lowest expected frequency did = 4.76).

cultural as well as Welsh cultural backgrounds.

The results were collapsed into three groups in order to contrast the monolingual and mixed background groups. Table Q2.1b shows that this produced a Chi Square value of 136.53, $p < .001$, (although the lowest expected frequency is 4.76, and 5 is the lowest usually acceptable). In particular, significantly more mothers in the WW group and significantly fewer mothers in the EE group wanted their children to be fluent in Welsh, significantly fewer mothers in WW and significantly more mothers in EE wanted their children to learn Welsh at school, and significantly more mothers in EE wanted their children to learn only English.

The pattern of replies in the cross language groups differed greatly from the EE group, and more nearly matched the WW group. 95% of Welsh-speaking mothers in WM and 98% of Welsh-speaking fathers in WF wanted their children to learn Welsh at school or to be fluent. Virtually all families with one or more Welsh speaking parent wanted this for their child. Rather more of the families with a non Welsh-speaking mother chose school Welsh for their child, which may relate to views about mothers being responsible for teaching the 'mother tongue' at home. The influence of parental gender on the language in the home will be discussed later.

A sizeable minority of all the Welsh speakers wanted their children to learn their Welsh from school (5% of all Welsh-speaking mothers and 18% of all Welsh-speaking fathers). It may be that parents are just choosing the easiest option, or it may reflect the lack of confidence demonstrated in the following comment; " I can use better Welsh than I use in everyday speaking." (Mother in WM group).

Reasons for Wanting Children to learn Welsh (or not)

Although respondents were asked to give reasons why they wanted, or did not want, their children to learn Welsh, not everyone did so, and some gave many reasons. The English-speaking group contributed more than any of the rest.

These reasons were originally grouped into seven categories most of them positive (Lyon & Ellis, 1991). In the light of results from the second questionnaire, they were re-examined and grouped into eight categories, largely so that comments emphasizing the importance of learning both languages could be identified. (see table Q2.2). Previously these had been included in groups 1 and 4 mostly. This 'both languages' group included general positive comments about being bilingual and comments (mostly from Welsh families) stressing the importance of learning English;

1. *"I think it's good for children to be bilingual." or again "I would like my child to speak both Welsh and English fluently."* (40 comments, 9%)

Some simply stated that it would be an advantage to be able to speak Welsh, without elaborating;

2. *"It will make them a better person."*
(67 comments, 16%)

The next group felt that Welsh-speaking would enhance their children's job prospects in the future;

3. *"Because he'll be classed as Welsh-speaking for getting a job."* (56, 13%)

The need for good communication in a second language to help children to fit into the local community were the reasons in the next group;

4. *"So that they can converse with friends who are Welsh-speaking and can understand Welsh if spoken to."* (50, 12%)

Some ignored the question as such and commented on the means of learning, or on their own language experiences;

5. "He should learn Welsh at school because children learn better with other children." (56, 13%)

Table Q2.2; Types of Reason given for Wanting (or Not Wanting) Children to learn Welsh by Language Background Group.

1989	% WW	% WM	% MM	% WF	% EE	% All
1. Both Languages Important	9	24	11	21	1	9
2. It is an Advantage.	6	10	18	14	21	16
3. Better Job Prospects.	2	10	22	10	16	13
4. Good for Communication.	6	0	12	12	18	12
5. Non-reason Comments	16	16	8	14	13	13
6. Keep back the English.	2	0	1	0	0	1
7. Irrelevant or Unnecessary	0	5	5	2	22	10
8. Welsh Identity and Heritage.	60	36	23	26	8	26
	100	100	100	100	100	100
Number of Comments	89	42	92	42	165	430
Number of Subjects	93	36	77	46	132	384

Results are from Q1, completed shortly after the children were born in 1989. (Revised 1993). Figures given are percentage scores in each group.

One small group of answers expressed anti-English feelings;

6. "Mae gormod o Seuson yn byw yn Cymru, rhaid cael madal a nhw" (There are too many English living in Wales, we must get rid of them.) (3, 1%)

There were also some who were opposed to their children

learning Welsh. Mostly it was felt to be unnecessary or irrelevant:

7. *"Welsh is a backward step." or "My husband is in the RAF and so we are only visitors here."* (45, 10%)

However, the largest group of replies related to having a Welsh identity;

8. *"It is important for her to have strong roots and an appreciation of her heritage." and "Am ein bod ni yn Gymraeg, nid Saeson." (Because we are Welsh not English.)* (113, 26%)

Thus, the set of reasons given most often by all subjects were related to a feeling of Welshness. People wrote that they were proud of their heritage, that Welsh was their mother tongue, that all of their friends and family spoke Welsh, that their child had been born in Wales and that it was important to keep the language alive;

"Gwlad neb iaith, gwlad neb galon." (Land without a language, land without a heart). (mother in WW group)

Predictably these were the reasons given by the majority of the WW group, but they were also the reasons chosen most often by the cross language groups (WM =36%; WF =26%) and by those from a mixed language background. The feeling behind many of the replies was that the answer was so obvious that it almost did not need to be written; "because we're Welsh!".

The group of comments that did not answer the question could not be analyzed further, and the anti-English and irrelevant Welsh groups require little further explanation. They came from monolingual Welsh and English groups respectively (and predictably).

Enhancement of future job prospects was a popular reason given, especially by the EE (16%) and MM (22%) groups. In Gwynedd, most posts in local government require the ability to communicate in both languages, and in many other jobs that skill is an added advantage. Parents in these two groups are either not frequent Welsh-language users, or else do not speak Welsh. They would have been made aware of the disadvantage entailed and therefore it is realistic for them to wish to ensure that their children learn Welsh.

A relatively large proportion of the replies also cited the ability to communicate and to fit into the community as reasons for learning Welsh. Again the groups less competent in Welsh chose these reasons, 12% of the MM group and 18% of the EE group. It is possible that these parents will have been made aware of communication difficulties, and have felt like outsiders. Parents in the WF group also chose these reasons, suggesting that non Welsh-speaking mothers are more aware of such problems than are non Welsh-speaking fathers. This group and the WM group most frequently cited the importance of both languages as a reason, 21% and 24% of the groups respectively. Presumably this is because cross-language partnership increases the salience of bilingualism.

The Importance of Children Learning Welsh

Parents were asked to assign an importance to their children learning the Welsh language on a four point scale from 'unimportant' to 'very important'. Table Q2.3a shows that, in the total sample, 80% felt it was quite important or very important. There were a few don't knows, but only 18% felt it was unimportant or not very important.

Examining the results by background groups, it was not surprising to find that few in the WW group (about 4%) felt that it was not very important for their children to learn

**TABLE Q2.3a; The Importance of learning Welsh for Children.
Paternal and Maternal replies by Language Background.**

	Unimportant		Not very Important		Quite Important		Very Important	
	% M	% F	% M	% F	% M	% F	% M	% F
WW	0	0	5	3	18	17	77	79
WM	0	3	3	8	17	17	81	72
MM	3	4	10	12	51	47	36	36
WF	0	0	0	0	44	33	57	67
EE	12	15	24	26	46	40	17	18
ALL	5	6	13	12	37	33	46	47

Replies shown as percentage of mothers (M) and fathers (F) in each group. There were ten 'don't knows'.

Welsh, or that 78% felt it was very important. Even more support would have been predicted.

Most of those who said it was unimportant came from the EE group, but 17% of them dissented, saying it was very important. The majority of this group, as every group in the

**TABLE Q2.3b; The Importance of learning Welsh for Children.
Maternal replies from Q1 by Language Background
(simplified)**

	Un-important	Important	TOTAL
WW	6 7%	87 93%	93
WM/MM/WF	11 7%	148 93%	159
EE	49 37%	83 63%	132
TOTAL	66 17%	318 83%	384

Chi square= 56.16 which is significant beyond the .001 level.

sample, felt that Welsh learning was either quite important or very important.

Results were collapsed into monolingual and mixed language background groups and analyzed. This produced a chi square value of 56.16, $p > .001$. In particular, significantly more mothers in EE think Welsh is unimportant and significantly fewer think Welsh is important.

Expectations for the Welsh Language

Overall, the majority expect that the Welsh language will be used about the same amount in the future as it is at present (56%). About 28% believe it will be used less than English or will be replaced by English, and 15% believe it will be used more or that it will replace English (see Table Q2.4a).

**TABLE Q2.4a; The Future of the Welsh Language;
Details of Paternal and Maternal replies from Q1 by
Language Background (in percentages)**

	Replace English		Used More		Used the Same		Used Less		Welsh Replaced	
	%M	%F	%M	%F	%M	%F	%M	%F	%M	%F
WW	5	6	20	18	50	44	21	25	2	5
WM	0	0	7	3	64	60	29	36	0	0
MM	1	3	14	10	62	59	20	23	3	4
WF	0	2	13	22	57	52	24	22	7	2
EE	2	1	11	9	62	56	22	26	4	8
ALL	2	3	14	13	58	54	22	26	3	5

Subjects were asked; "Which is closest to your opinion? Do you think that, in your child's lifetime Welsh will...." and then given the above options. Replies are shown as percentages of mothers (M) and fathers (F) in each group. There were eight 'don't knows'.

As one might expect, those believing that Welsh would be used more in the future came mainly from the WW group (25%), and also from the Welsh-speaking men in the WF group (24%), but not from the Welsh-speaking women in the WM group (only 6%).

The obverse pattern was similar, but not completely so. Those who believe Welsh will be used less comprise the non Welsh-speaking men in the WM group (36%), the non Welsh-speaking women in the WF group (31%) and men in the EE group (34%).

The categories were collapsed into three, **Optimistic** (to include those who said Welsh would be used more or would replace English), **Same**, and **Pessimistic** (to include those who said Welsh would be used less or would be replaced by English).

**TABLE Q2.4b; The Future of the Welsh Language;
Maternal replies from Q1 by Language Background
(simplified).**

	Optimistic	Same	Pessimistic	TOTAL
WW	25 27%	46 49%	22 24%	93
WM/MM/WF	23 14%	95 60%	41 26%	159
EE	16 12%	82 62%	34 26%	132
TOTAL	64 17%	223 58%	97 25%	384

Subjects were asked; Which is closest to your opinion?
Do you think that, in your child's lifetime Welsh will....
Replace English }
Be Used More } (These are included in Optimistic above)
Be Used the Same }
Be Used Less }
Be Replaced by English } (included in Pessimistic above)

Chi square= 9.683 which is significant at .046 level.
Significantly more mothers in the WW group are optimistic about the future of Welsh.

The group were again reduced to the two monolingual groups and a mixed language group. This produced significant results; chi square = 9.683, $p < .05$. In particular, significantly more women in the WW group were optimistic about the future of the Welsh language.

There is a tendency for people to expect that things will go on much the same as they have in the past, although the evidence for the decline of the Welsh language between the census of 1971 and that of 1981 does not support this optimism. Of those who think there will be change, more think that the language will be used less than think it will be used more. In particular, the non Welsh-speakers think it will diminish, if there is a change, whereas the Welsh speakers are evenly divided, (with one exception). Those that thought the Welsh language would be used more, or might even replace English in the future were largely Welsh speakers. However, Welsh-speaking women married to English speaking husbands do not fit the pattern. More English-speaking women think Welsh is on the increase than do this group. A similar relation does not appear in the responses for the fathers. Welsh-speaking men, whether married to Welsh-speaking women or not, are more likely to believe Welsh will be used more than are English-speaking men, much as one might expect. It would seem that to marry a non-Welsh speaking partner is more likely to decrease your optimism about the future of the language if you are female than if you are male.

3. RESULTS from QUESTIONNAIRE II

Language Expectations

The second questionnaire repeated the question about the amount of Welsh parents wanted their children to learn, and Table Q2.5a shows the results obtained. Again, the majority

TABLE Q2.5a Second Questionnaire, QII (n = 122)
Amount of Welsh Learning wanted for their Children by
Language Background.

	English Only		Some Welsh		School Welsh		Fluent Welsh	
	% M	% F	% M	% F	% M	% F	% M	% F
WW	0	3	0	0	0	0	100	97
WM	0	0	0	0	0	6	100	94
MM	0	0	3	3	13	10	83	90
WF	0	0	0	0	0	0	100	100
EE	8	16	31	16	28	27	33	41
ALL	3	6	9	5	12	11	76	78

Figures are percentages of Mothers (M) and Fathers (F) in each Language Background Group.

Understandably, the English speaking parents were not as whole-hearted as the rest. However, even in this group, a third of mothers and more than 40% of fathers wanted their children to become fluent Welsh speakers, and only 8% of mothers and 16% of fathers didn't want them to learn any Welsh.

of all families wanted their children to learn Welsh at school or else to be fluent in Welsh (88% overall). Virtually all parents in families with a Welsh speaking partner wanted their children to be fluent in Welsh, as did more than 80% of parents with Mixed language backgrounds.

Again the groups were collapsed as previously, and the categories reduced to two, namely 'English Only or Some Welsh' and 'School Welsh or Fluent Welsh'. This time the data was split into answers from mothers (Table Q2.5b) and fathers (Q2.5c) and then analyzed. For the mothers, this produced a Chi Square of 29.14, $p > .001$, but with expected frequencies below 5 (see table Q2.5b). Nonetheless, this suggests that significantly fewer mothers in the EE group wanted their children to be fluent in Welsh and significantly more wanted them to have only some or no Welsh.

Table Q2.5b; Second Questionnaire, QII. Amount of Welsh Learning wanted for their children; Maternal replies from QII by Language Background Group (simplified)

	English or Some Welsh	School or Fluent Welsh	TOTAL
WW	0 0%	35 100%	35
WM/MM/WF	1 2%	50 98%	51
EE	14 39%	22 61%	36
TOTAL	15 12%	107 88%	122

Chi Square = 29.14, which is significant beyond the 0.001 level. However, two cells have expected frequencies below 5 (namely 4.30 and 4.43).

The paternal data produced a Chi Square value of 22.80, $p < .001$, but again some expected frequencies were below five. However, this suggests that significantly fewer fathers in the EE group wanted their children to be fluent in Welsh, and significantly more wanted them to learn some or no Welsh.

There is more similarity than difference between these results and those obtained three years previously. About the same percentage of parents overall want their children to learn Welsh at school or to fluency (86% of mothers and 87% of fathers at QI and 88% and 89% respectively at QII). However, 14% more of both parents wanted them to be fluent on the second occasion. Maybe the parents have become more confident in their own ability to facilitate fluency, or maybe they have less faith in the schools ability to do that for them.

On the second occasion, the EE families seem to be more satisfied with children only picking up some Welsh, and the

Table Q2.5c; Second Questionnaire, QII. Amount of Welsh Learning wanted for their children; Paternal replies from QII by Language Background Group (simplified) .

	English or Some Welsh	School or Fluent Welsh	TOTAL
WW	1 3%	34 97%	35
WM/MM/WF	0 0%	51 100%	51
EE	12 32%	25 68%	37
TOTAL	13 11%	110 89%	123

Chi Square = 22.80, which is significant beyond the 0.001 level. However, two cells have expected frequencies below 5 (namely 3.59 and 3.91).

MM families seem less satisfied with this option. Perhaps they were both being more realistic about what was possible, linguistically, given their respective backgrounds. The proportion opting for English only remained virtually the same; 5% of mothers and 6% of fathers on the first occasion and 3% and 6% respectively at QII.

Thus it is clear that on both occasions the vast majority of parents wanted their children to learn Welsh.

Reasons for wanting Children to learn Welsh or not
Again not all parents added comment or gave reasons for their choice of language learning for their children, and again the EE group is proportionally more verbose than the others. Comments were organised into the eight groups described earlier, and many had a similar flavour. (Table Q2.6)

The 'Both Languages' group of reasons was more in evidence

this time;

1. " a siared Saesneg yn rhugl, dysgu Ffrangeg yn yr ysgol a codi rhywfaint ar ieithoedd Ewropiaidd eraill." (and speak English fluently, learn French in school and pick up some other European languages) and " Eventually I wish my child to be as fluent in English as he is in Welsh." (49 comments, 17%)

There were still some comments which merely stated that learning Welsh would be advantageous;

Table Q2.6; Types of Reason given for Wanting (or NOT Wanting) Children to learn Welsh by Language Background. Results from Questionnaire II, shortly after the Children were three years old in 1992. (Figures given are a percentage of the comments in each group.)

1992	% WW	% WM	% MM	% WF	% EE	% All
1. Both Languages are Important.	29	21	8	20	8	17
2. It is an Advantage.	2	3	13	0	8	6
3. Better Job Prospects.	0	9	13	10	8	7
4. Communication.	2	6	10	10	14	8
5. Non-reason Comments	19	27	29	0	24	23
6. Keep back the English.	5	0	0	0	0	2
7. Irrelevant or Unnecessary	0	3	6	20	30	11
8. Welsh Identity and Heritage.	43	30	22	40	7	26
	100	100	100	100	100	100
<i>Number of Comments</i>	98	33	63	10	86	290
<i>Number of Subjects</i>	76	30	66	10	66	248
<i>Number of Couples</i>	38	15	33	5	33	124

2. " I can see only advantages in bilingualism." and
" 'rwyf eisiau'r plant fod yn hollol ddwy-ieithog."
(I want the children to be completely bilingual)
(18 responses, 6%)

Job prospects were again mentioned, but by fewer people;

3. " Not being able to speak Welsh is a disadvantage when
it comes to getting a job etc." (19, 7%)

Communicating with neighbours and generally fitting into the
local community reappeared;

4. " To integrate into North Wales society fully she will
need to speak Welsh." (23, 8%)

Non-Answers were more in evidence, and people seemed to be
happy to comment widely on the family experience of the two
languages;

5. " The only reason for our lack of speaking Welsh is sheer
laziness I'm afraid." and
" I would find it extremely odd speaking English to a
member of my family when Welsh is the first language."
(67, 23%)

Anti-English comments remained rare but were passionately
felt;

6. " Fyddai ddim yn cyfnabod Saesneg yn iaith cyfreithlon
yn Gymru." (We'll never accept English as an official
language in Wales) and
" Tosa (nid oes) ddim fashiwn iaith a Seasneg 6 iaith
wedi rhoi yn i gilydd iw hi. Trafoddaith fo adiriad o
dros clawth Offa." (There's no such language as
English it's 6 languages put together. Send it back (?)
across Offa's dyke). (5, 2%)

There were again a number of comments arguing that Welsh was irrelevant, unnecessary or positively confusing;

7. " *Why should she have to be forced to learn a useless language when the rest of the entire world is learning ENGLISH!?*" and
" *English will take him further in the world than Welsh will.*" (33, 11%)

Finally, the strength of the Welsh Identity comments remained high;

8. " *Eisiau rhoi etifeddiaeth Cymreig iddynt.*"
(*I want to give their Welsh inheritance to them*) and
" *Cymraeg yw iaith y cartfef a'r wlad.*" (*Welsh is the language of the home and the country*) and again
" *Cymraeg yn ei fam iaith a felly fe hoffwn iddo gael ei addysg yn Gymraeg.*" (*Welsh is his mother language and so I want him to get his education in Welsh*) (76, 26%)

The greatest number of reasons were in this last category (N = 76), and comprised more than 40% of the total comments in the WW and WF groups, but also 7% of the comments from the EE group. The generally chatty, non-reason comments formed the next largest category, and were well represented in all but the WF groups. People wrote about how their children were becoming bilingual, about what they thought of the local education policy, about the differences between their children's and their own experiences and so on. Between them, these two categories covered virtually half of the total comments made.

The fewest reasons were anti-English (N = 5), and these five comments came from only two questionnaires. Job prospects, better communication and general advantage reasons made up less than ten percent of the replies each, the EE group being more keen to communicate and the MM group more often looking

to job prospects and general advantage.

The most frequent comment made by the EE group focused on the irrelevance of learning Welsh, but only the WW group produced no comments in this vein. The last category to be discussed is the one which became more evident as a theme in this second questionnaire, namely the reasons stressing the importance of both languages. They comprised more than 20% of comments in all three groups with a first language Welsh-speaker, and 17% of comments overall. This accords with a finding by Williams (1979), that, although Welsh-speaking families want their children educated through the medium of Welsh, they do not want them to lose the advantages of speaking English as well.

Table Q2.7; Types of Reason given for Wanting (or not wanting) Children to learn Welsh by sex of Parent.
*(QII, shortly after the children were 3yrs old in 1992).
 Figures given are a percentage of the comments for Mothers and Fathers.*

1992	%Mothers	%Fathers	%All Pts.
1. Both Languages are Important.	15	19	17
2. It is an Advantage.	5	8	6
3. Better Job Prospects.	8	5	7
4. Communication.	8	6	8
5. Non-reason Comments	24	22	23
6. Keep back the English.	2	1	2
7. Irrelevant or Unnecessary	11	12	11
8. Welsh Identity and Heritage.	26	26	26
	100%	100%	100%
<i>Number of Comments</i>	155	135	290
<i>Number of Subjects</i>	124	124	248

Table Q2.7 shows the differences between the two parents, and they do not diverge greatly. Fathers seem keener to emphasize the need for both languages, and this was a difference particularly evident in the WW group.

Comparisons

Data from the two questionnaires are examined in detail in Question 8, and so only broad differences will be addressed here. Questions about the importance of the Welsh language and its future were not repeated in QII, but parents were again asked about their choice concerning the amount of Welsh their children were taught (or not taught). Again the majority of parents (76%) wanted their children to become fluent Welsh speakers and only 3% wanted them to learn no Welsh (see table Q8.7). In t-tests discussed further in Question 8 (Tables Q8.5 and Q8.6), there were no significant differences between the answers given by either parent on the two occasions.

Turning to the reasons given for the above question, there is a major difference in the authorship of the comments. In QI, all comments are ascribed to mothers, although some sounded like joint efforts and opposing viewpoints were sometimes evident on one questionnaire. QII makes it possible to differentiate between the two parents, although their comments are summed for comparison with QI. Table Q2.8 shows that, apart from a greater number of general comments, the biggest increase was in comments supporting the two languages, a jump from 9% to 17% of the total. Allegiance to the Welsh culture, dislike of the English and irritation with the Welsh language remained at similar levels.

The percentage of comments about the general advantage of speaking Welsh, and its usefulness in getting a job and in

TABLE Q2.8; Types of Reason given for Wanting (or not wanting) Children to learn Welsh by Questionnaire. Figures given are the percentage of all comments on each occasion.

	% QI 1989	% QII 1992
1. Both Languages are Important.	9	17
2. It is an Advantage.	16	6
3. Better Job Prospects.	13	7
4. Communication.	12	8
5. Non-reason Comments	13	23
6. Keep back the English.	1	2
7. Irrelevant or Unnecessary	10	11
8. Welsh Identity and Heritage.	26	26
	100	100
<i>Number of Comments</i>	430	290
<i>Number of Respondents</i>	384	248
<i>Number of Couples</i>	384	124

integrating into the neighbourhood, all declined. The worsening job market could account for some of the change; if it is more apparent that there are very few vacancies, then Welsh can no longer be seen as a passport to full employment. On the other hand, anyone fluent in both English and Welsh is in the best position to take advantage of whatever opportunities arise, wherever they arise.

This information, from a large questionnaire sample, gives an overall impression of the opinions of parents about the language environment of their children. Only a limited number of questions can be asked in a postal questionnaire. Thus, although the small sample can only provide answers from ten more families, they can give more fine grained information about the attitudes and opinions they hold.

4. THE SMALL SAMPLE

Initial Interview and Informal Discussions

The Initial Interview schedule was devised to allow comparisons between those volunteering to take part in the small sample in order to match families as nearly as possible (see Appendix IIA, APP.13-15). It comprised demographic questions, questions about their aspirations for their baby, and questions about their own future plans. Incidentally, opinions about the Welsh language were noted. They were only selected if their answers accorded with their language background group membership. That is, if the WW parents planned to use Welsh at home, the EE parents planned to use English and the cross-language parents planned to use both languages.

Throughout subsequent recording sessions, discussion was encouraged about the specifics of actual language use within the family, and mothers were asked about their thoughts concerning their child's language, and about their opinions regarding the Welsh language in general. These too were noted informally. Although neither source is representative, the views recorded provide some clues about the interplay between attitude and action. All opinions and comments about bilingualism and the Welsh and English languages, both during the initial interviews and during the subsequent sessions were collated, and they are included in note form in Appendix Xa.

Inevitably there were differences amongst all ten families, and even between the two families in the same category differences existed. Marked differences of opinion are listed in Table Q2.10, and juxtaposed with the stages of language development reached by age three years. Detailed discussion of stages of language development will take place in Question 4, (tables Q4.5 and Q4.8 give further details). However, to

ensure that table Q2.9 is intelligible, a broad description of the stages can be found in the Review Chapter (Table R.1, p30).

Michael's parents (EE) did not have any Welsh aspirations for him, whereas the other EE parents wanted Llywela to be bilingual eventually and were trying to learn Welsh themselves. By the eighth session, Llywela's mother reported that her teachers at Ysgol Feithrin (similar to a Nursery School) said that she understood a lot of Welsh and was using some Welsh words and phrases. Michael's mother could not recall hearing him use any Welsh words before they left the area when he was 33 months old. Both of the WW families and Becky's WM parents wanted their children to have a Welsh future. For them all that meant living in Wales, probably marrying a Welsh speaker and being bilingual. Speaking Welsh as a first language was taken for granted, and all three said they would avoid a school that was 'too Welshy' and that they were anti-extremist. The other WM family wanted Emyr to grow up in Wales, 'but not to be stuck here'. They too wanted him to be bilingual. All four children were fluent Welsh speakers at age three, and all were said to understand some English at least and to use a few English words and phrases. There was some evidence that Iwan (WW) and Emyr (WM) were developing more systematic skills in English as well, that is, were on the way to becoming bilingual.

The WF mothers both wanted their children to be bilingual and both tried to learn Welsh. Both husbands were strongly in favour of their children learning Welsh and put in a lot of effort to that end. At age three their first language was firmly English, but both children had some Welsh words and phrases, and seemed to understand simple Welsh addressed to them.

TABLE Q2.9; Parental Opinions about Bilingualism and Subsequent Stages of Language Development by Individual Children

NAME	PARENTAL OPINIONS at Initial Interview and during Sessions	LANGUAGE DEVELOPT. at 3yrs
NERYS WW	M wants a Welsh future for her. F would not want an all Welsh school	W= Stage 4 E=Stage 1?
IWAN WW	Both want him to be bilingual. Both are anti Welsh extremism.	W= Stage 5 E= Stage 3
BECKY WM	F thinks local school 'too Welshy' M wants her to be bilingual	W= Stage 4 E=Stage 1?
EMYR WM	M wants him to go to Welsh school F wants W at home and Eng. at school	W= Stage 5 E= Stage 3
GARETH MM	Both want him to be bilingual M has reservations about Welsh	W= Stage 5 E= Stage 4
DAVID MM	F doesn't want him to go to W.school. M wants him to have the best of both	W= ? E= Stage 4
NIA WF	Both parents want her to be bilingual M found it hard to learn Welsh.	W=Stage 1? E= Stage 5
MATTHEW WF	M & F wanted him to be bilingual. M tried to learn Welsh with Matthew.	W=Stage 1? E= Stage 4
LLYWELA EE	Wanted her to be bilingual. Were both Welsh Learners.	W=Stage 1? E= Stage 6
MICHAEL EE	M felt Welsh at school would be okay. F would like to learn Welsh one day.	W= ? E= Stage 5

Two statements were chosen from each family to illustrate parental opinions about English and Welsh.

E= English W= Welsh ?= nothing known
Stage 1? indicates that the naming stage has probably been reached in that language

NB: Question 4 explores the process of language development in more detail and describes the criteria for allocation to Stages.

Appendix Xa lists the opinions of parents noted during the course of interviews and recording sessions.

The biggest differences existed between the two families with mixed language backgrounds. All four parents could use both

languages, but David's family was rarely heard to do so. His parents said they wanted him to have the best of both worlds, but did not want him to go to a Welsh school, and were afraid that learning Welsh would confuse him. He was effectively a monolingual English speaker at age three.

In contrast, Gareth's parents used both languages freely, and wanted him to be bilingual. This was despite grave reservations on the part of his mother about the Welsh language and being Welsh. She felt she was British, and she too deplored extreme nationalism. They decided to speak Welsh with Gareth as they felt it would be easier for him to learn English later, and Gareth did develop Welsh as his first language. However, by age 30 months he used English words and phrases, and by age three his mother reported that he would talk for 'a couple of hours' in English. As later sections will show, he used both languages equally during the final session, and merits the descriptor 'bilingual' however it is defined.

Thus there are indications that a positive attitude towards bilingualism can facilitate bilingual language development. The three children who showed evidence of bilingual abilities rather than simply having some words and phrases in a second language, were Gareth (MM), Iwan (WW) and Emyr (WM), (support for this rather bold statement will be found in Q4.). All three families had expressed the wish that their children become bilingual, and all three families had mothers fluent in both languages. However, many other families also said they wanted their children to be bilingual. Nerys (WW) and Becky (WM) also had mothers who were fluent in both languages, so those two factors are not sufficient to ensure bilingual development, although they may be necessary.

At the other extreme, it seems likely that a negative attitude

towards bilingualism can restrict language learning. Michael (EE) and David (MM) had parents who were not in favour of bilingualism, and those two boys appear to have learned no Welsh before age three. Somewhere in the middle come the families who would like their children to be bilingual, but who do not have mothers fluent in both languages. Llywela (EE), Matthew (WF) and Nia (WF) fall into this group, and all three had mothers who wanted to learn Welsh and felt positive about bilingual education. These three children, like Nerys (WW) and Becky (WM) had acquired some words and phrases and some understanding of a second language by the last session. Unlike Nerys and Becky who had picked up English from playmates and from television, the parents of Llywela, Matthew and Nia had had to make positive efforts to expose their children to the Welsh language.

Attitude to Child Rearing (ACR) Questionnaire

The questionnaire used was devised in the absence of an appropriate alternative at the time, and asked twenty four questions about attitudes towards bringing up children (see Appendix VII, APP.76). They were read to the mothers in the small sample at the time of the initial interview when the babies were about nine months old, and repeated just over two years later when the children were about three. As can be seen from Table Q2.10 scores ranged from 34 to 81; the lower the score the more relaxed the maternal approach to child-rearing, and the higher the score the more rigid and controlling the attitude.

Two mothers, one MM and one WM had a higher than average score on both occasions, and one WW mother had a lower than average score on both occasions. All three were mothers of boys.

Table Q2.10; Attitude to Child-Rearing Questionnaire (ACR) Questionnaire

	T1	T2	CHANGE
NERYS (WW)	56	58	+ 2
IWAN (WW)	34 [^]	41 [^]	+ 7
BECKY (WM)	42	55	+13
EMYR (WM)	68*	76*	+ 8
GARETH (MM)	51	50	- 1
DAVID (MM)	81*	73*	- 8
NIA (WF)	40	53	+13
MATTHEW (WF)	48	52	+ 4
LLYWELA (EE)	47	51	+ 4
MICHAEL (EE)	46	Moved	Away
Totals	467	509	
Means	51.9	56.6	
SDs	14.7	11.2	

*= Plus one standard deviation

[^]= Minus one Standard Deviation

Most of the mothers produced a more rigid score on the second occasion indicating, perhaps, the felt need for greater control of lively toddlers. One mother, the MM mother with the most rigid score at T1 had a less rigid score on the second occasion. These scores do not fall into any pattern associated with language background, gender, or subsequent bilingual language development. However, there may be an association with age of child. As scores tended to be more rigid on the second occasion, it is possible that mothers were modifying unstructured ideas about child-rearing in the light of experience. All the children in the small sample were first children.

At a subjective level, the relatively controlling attitudes

to childrearing expressed by David's mother (MM) were reflected in her child-management style; she expected David to play the games she had prepared for him rather than allow him to direct his own play. In contrast, Iwan's mother (WW), who has the least controlling score, was most relaxed about her son's development. She was so adept at waiting for him to lead the conversation that at one stage the writer was worried that his language was not developing at all. (As will be seen later, he is one of the children who shows evidence of bilingual language development before the age of three.)

5. SUMMARY

In both of the questionnaires, over 85% of all parents wanted their children to be fluent Welsh speakers or to learn Welsh at school. The 5% who wanted them to learn only English had dropped to around 2% on the second occasion. Thus it seems that the local policy of education through the medium of Welsh enjoys the support of the majority of parents, whatever their language background.

Seven sets of reasons were identified in the comments on the questionnaires, and an eighth category included comments that gave no ostensible reason, but simply noted matters of interest. Reasons in favour were for improved job prospects, for improved communication, for general advantage, to keep the English at bay (it was not clear if that refers to the language or the people), and to preserve and maintain the Welsh heritage. The only reasons against learning Welsh were because of its irrelevance, and some chose to affirm the need to support both languages.

The reason most frequently given for that support was associated with feelings of Welsh culture and identity, again

on both occasions. Many parents seemed surprised at the question, and wrote "because we're Welsh!" A tiny minority wanted to be rid of the English, and a larger minority, mostly EE, felt Welsh was a waste of time. The proportion of these views also remained constant. Support fell for reasons associated with getting a job, with communicating better, and with general advantage, but there was a marked increase in reasons that emphasized the need for both languages, largely from the families which included a first language Welsh-speaker, and more so from fathers than from mothers. There were few other gender differences.

In the first questionnaire, Q1, at least 80% felt that it was either very important or quite important for their children to learn Welsh, but opinions were more divided about its future. Although over half (about 55%) felt it would be used about the same amount in the future as at present, only 16% thought it would be used more.

In the small sample, having a positive attitude towards bilingualism was seen to be insufficient to ensure that a child's language developed bilingually. Having a positive attitude and a mother fluent in both languages improved the likelihood that a child would become bilingual. It was also noted that more effort was needed to ensure the beginnings of Welsh language learning than English language learning, even when attitudes were positive. Negative attitudes were associated with an absence of second language acquisition, even at the single word level.

Little could be generalized from the maternal attitude questionnaire. Although it reflected observed differences in maternal style, it did not seem to bear on the bilingual issue.

Question 3: WHAT LANGUAGE ARE A SMALL SAMPLE OF CHILDREN LEARNING?

1. INTRODUCTION

One of the first tasks was to find ways of describing the language that the children in the small sample were acquiring. Were they learning the language predicted by their background? Had the influence of English become so pervasive that they were all learning some English at least? Was it possible for a child to be a monolingual Welsh speaker, at least to age three on Ynys Mon?

A formal language system is probably the most important part of communication, but the roots of language are to be found in earlier, more primitive efforts to communicate (Clark and Clark, 1976). Therefore the development of communication per se was examined first.

The Development of Communication

First efforts to communicate are best seen in early mother-child interactions. Although mothers in the study spoke to their babies in English or Welsh (albeit an adapted version sometimes called "motherese" {see Snow, 1977a; 1977b}) the babies' early responses were largely unintelligible. It is probable that a linguist could have found evidence of future language use in these early vocalizations, but as this is a psychological study, these responses were viewed as providing evidence of communicative intent and were analyzed as such.

The Development of Conversation

Once the communication game was established within the dyads, attention was focused on issues of control; who started

conversations, who changed topics, who directed attention as well as the simpler question of who said most. It was not always easy to decide who was directing the conversation as the mothers were extremely sensitive to the child's changing interests. However, a method was found to assess who said most in gross terms (words) and who said most in terms of utterances (such as sentences). These were expressed as mother-child ratios (M/C) and indicated the changing pattern of control in the partnership.

The Dictionary

However, it was clear that the language system (Welsh, English or a mixture) used by each dyad differed and differed at each session. Half of the pairs seemed to use almost only English and half appeared to use mostly Welsh. To assess this more accurately attempts were made to define first words and then utterances as 'Welsh' or 'English', but this left many words and phrases which did not fit either category exclusively. Therefore, as described in the last chapter, words were defined as 'Welsh', 'English' or 'Common' for the purposes of this study, and subsequently utterances could be so described. Once that was established it was possible to say what percentage of each 'language' was used by any person in any session, (see Appendix V, app.67-69).

The Large Sample

Data from the second questionnaire made it possible to look at what language/s a large sample of children were using, and hence at the representativeness of the small sample. It was also possible to look for evidence of the 'one person/one language strategy' in a general, non linguistic population.

2. RESULTS

The Development of Communication

The first focus of analysis was on responses made by small children to the communicative attempts of their mothers. Any vocal response was counted, however unintelligible. It was not possible to include movement, gaze or facial expression, although their communicative function is acknowledged. Similarly, all vocal communication by mothers was counted, even simple exclamations and 'baby-talk'. In the early sessions the only intelligible conversation between mothers and babies tended to be one word utterances, and so utterances rather than words were chosen as a comparative measure. Thus responses and utterances were computed for children and mothers, and mother/child ratios were computed for both utterances and responses.

The results are shown in Table Q3.1 for the first four sessions, and are shown graphically in Graph 3.1. It can be seen that, for the first session, when the children were about 15 months old, the mean ratio for utterances was 7.38, indicating that the mothers produced over seven times as many intelligible communicative attempts as did their offspring. At 2.75, the ratio for responses was much more even-handed, with mothers working less than three times as hard as their babies. Examination of the scripts shows that the babies tended to fill the pauses in these 'proto-conversations' (Snow 1977a; 1977b) with exclamations, imitations and babbling to which mothers responded as if to intelligible comment.

For example;

M; Do you want a drink?/	C; eh!/
M; Drink?/ drink?/	C; aba aba abababa/
M; yes a drink/	
M; say drink/	C; din din din/
M; that's right, drink/	

By the fourth session the comparative ratios are almost equal at 1.25 for utterances and 1.20 for responses. Therefore responses were not calculated further. At this time the children are about two years of age and their responses are almost always intelligible utterances, (if rather short ones as will be shown later). Further it can be seen that the partners in the conversation are now much more equal; mothers are still making more utterances (and responses) than their children, but the ratio is approaching equality.

As can be seen from Table Q3.1, although there is a wide individual difference between the ten dyads, especially in the first session, this does not appear to relate to the language background of the children. Initially the children with the highest M/C response ratios are from EE, MM, and WF families (Michael, David and Nia). These mothers were having to work much harder to get any response from their children than those with the lowest response ratios, namely three from WW, WF and MM families (Nerys, Matthew and Gareth). The two with the largest M/C utterance ratios (Nerys and Michael) are from WW and EE families respectively, and those with the smallest utterance ratios are from MM and WW families (Gareth and Iwan). Utterances are included in responses, so that suggests that Iwan and Gareth were moving more quickly to utterances than were the first two. However, it should be noted that, although Nerys was slow to use utterances, she was responsive to mother's utterances and responses from the start.

By the fourth session the range of M/C ratios is much narrower for both measures. The pairs of comparative M/C ratios are all close, suggesting that all of the children are moving to intelligible utterances from simple vocal responses. There still appears to be no relationship with language background as one child from a MM background is making more than twice as many responses as his mother (M/C of 0.44) while the second

MM child is the least responsive in the group (M/C of 1.73).

TABLE Q3.1; FILLERS; Comparisons between Mother/Child ratios for Utterances (M/C-U) and for Responses (M/C-R) by first four sessions.

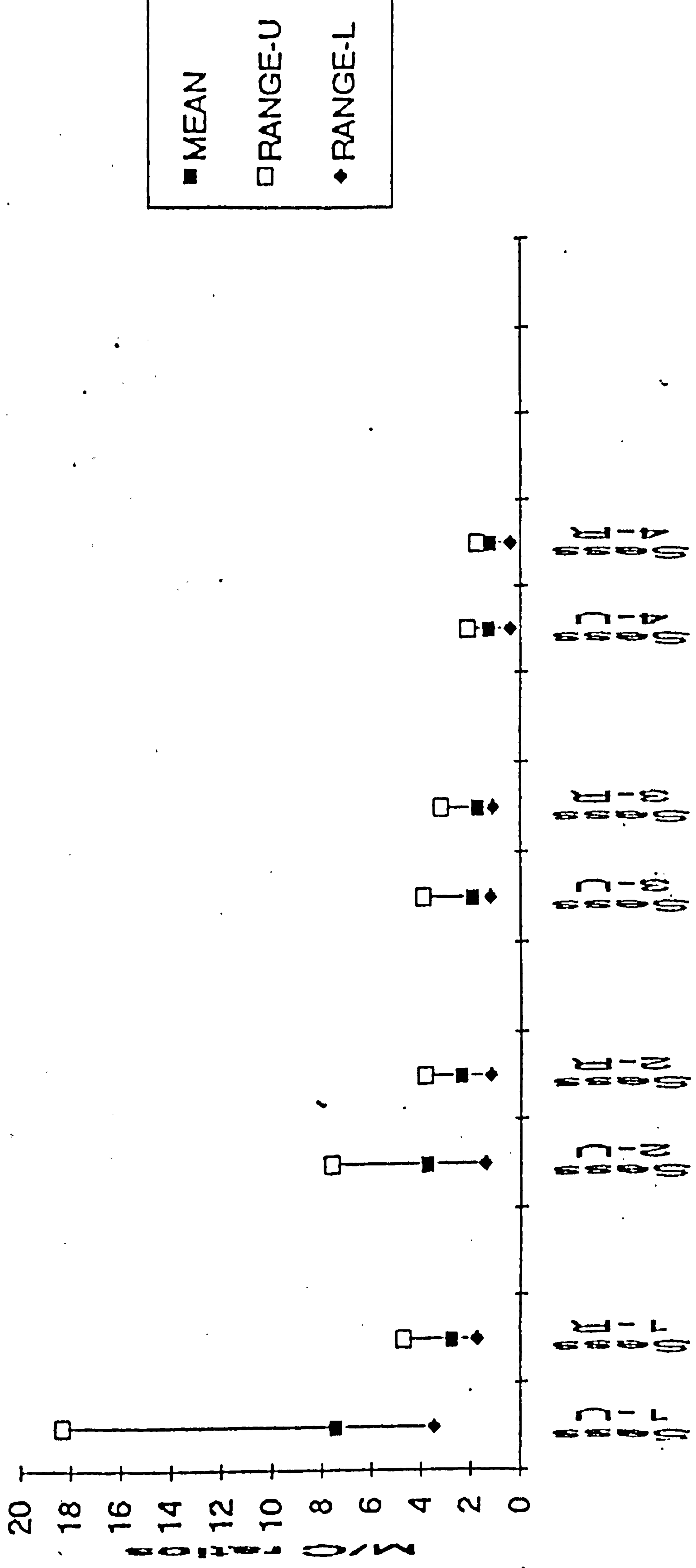
	Sess 1.		Sess 2.		Sess 3.		Sess 4.	
	M/C -U	M/C -R	M/C -U	M/C -R	M/C -U	M/C -R	M/C -U	M/C -R
NERY WW	18.33	1.73	7.54	1.55	1.68	1.51	1.71	1.69
IWAN WW	3.68	2.01	1.91	1.78	1.67	1.49	1.02	1.05
BECK WM	4.58	2.41	4.01	3.29	2.09	1.95	1.84	1.64
EMYR WM	7.52	2.62	5.23	3.27	3.89	3.17	1.32	1.28
GAR MM	3.47	1.94	---	---	1.21	1.09	0.44	0.44
DAVD MM	9.06	4.06	---	---	---	---	2.11	1.73
NIA WF	6.33	3.81	2.64	2.32	1.85	1.71	1.31	1.47
MAT WF	4.72	1.81	1.43	1.19	1.94	1.45	1.02	0.99
LLYW EE	5.01	2.42	2.29	1.77	1.21	1.18	1.01	0.96
MIC EE	11.09	4.69	4.59	3.81	1.56	1.57	0.72	0.72
MEAN	7.38	2.75	3.71	2.37	1.91	1.68	1.25	1.19
SD	4.56	1.05	2.05	0.96	0.81	0.61	0.52	0.44

Utterances are vocal Responses with all unintelligible material (such as oh!, er,) removed.

The dashes indicate that a session did not take place.

The Mother/Child ratio for Utterances approaches that for Responses as the sessions proceed and the children grow older. By the fourth session (when children are about two years old), they are so similar that further analyses of responses were not completed. Thus it can be seen that these children learned to communicate intelligibly over the nine month period, and there is support for Trevarthen's suggestion that they learn to communicate because their mothers treat them as conversational partners long before that is a reality, and

GQ3.1: FILLERS, Ratios of Mother/Child Utterances and Responses



Sessions by Utterance (U) & by Response (R)

that they grow into that role (Trevarthen, 1979; 1983). There seems to be no difference in this process between those from differing family backgrounds. Children learn to communicate whatever language is offered to them in the initial stages.

The Development of Conversation

The next query was whether some style of maternal interaction was more helpful than others in developing language and if some styles were more typical of certain language backgrounds. With this in mind, M/C ratios were computed for words and for utterances to show who was most vociferous in each session, and by comparing the two measures, to monitor the child's development of a language system. Throughout the study,

Table Q3.2; Mean Mother/Child (M/C) Ratios for Utterances and for Words by Session

	UTTERANCES		WORDS	
	Mean	SD	Mean	SD
SESSION I	7.38	4.56	15.02	8.56
SESSION II	3.71	2.05	10.12	6.10
SESSION III	1.91	0.81	3.53	2.00
SESSION IV	1.25	0.52	2.24	1.40
SESSION V	1.21	0.35	1.92	0.85
SESSION VI	1.18	0.41	1.87	1.05
SESSION VII	0.90	0.34	1.32	0.65
SESSION VIII	1.39	0.98	1.47	0.63
SESSION DAD	1.59	0.47	2.20	1.23

NB 1; Results for the eighth session may be distorted. Prior to recording the children were tested using the Reynell and part of the Weschler Preschool & Primary Scale of Intelligence (WIPPSI) and so may have been more tired than usual.

NB 2; The session with Fathers took place within the month following the eighth session and are discussed in detail in Q7.

measurements involving utterances are quoted in default, as they represent a more sophisticated use of language than do words alone. Both of these measures were examined inter and intra subjectively.

First, it can be seen from Table Q3.2 that there was a steady increase in the child's participation in the sessions, from a mean M/C for utterances of 7.38 in the first session to a mean M/C of 0.90 at the seventh session. Even more marked is the change from a mean M/C for words of 15.02 to 1.32 when the children were almost three years of age, indicating that their gross contribution to the conversations are becoming more even-handed. As the eighth session did not follow the usual format the figures for that session have not been used for comparison. This last session began with assessments using the Reynell and Weschler Preschool and Primary Scale of Intelligence (WIPPSI) so that the initial enthusiasm was lost from the recordings and the children tended to be tired. (Session Dad was a postscript session, recorded slightly differently, within the month following the eighth session. It is used for comparison with the last maternal session and will be discussed in detail later.)

Given the general trend there were again wide differences between individual children which do not correspond to differences in language background. As Table Q3.3 shows, Llywela, one of the English-speaking children has half of her scores well below the mean scores as does Gareth, a child from a Mixed language background. David, the second child from a Mixed background has scores that are consistently higher than others by more than a standard deviation. A score of one indicates an equal sharing of the conversation between mother and child. A higher score indicates that the mother's contribution is larger and a lower score indicates that the

child is talking more than the mother.

Table Q3.3; Mother/Child Ratios for Utterances and Words by Session and by Subject (last four sessions)

	SESSION V		SESSION VI		SESSION VII		SESSION VIII	
	UTTER	WORD	UTTER	WORD	UTTER	WORD	UTTER	WORD
NERY WW	1.09	1.75	1.35	* 3.04	0.80	1.17	1.27	1.85
IWAN WW	1.19	1.54	1.30	1.52	0.77	1.38	1.67	1.85
BECK WM	1.45	2.12	1.00	1.37	1.21	1.51	1.37	1.60
EMYR WM	* 1.60	2.52	1.41	1.84	0.90	1.25	1.15	1.55
GAR MM	0.95	1.20	^ 0.74	1.19	^ 0.30	^ 0.31	0.47	^ 0.55
DAVD MM	* 1.89	* 3.78	* 2.09	* 4.39	* 1.51	* 2.77	* 3.77	* 2.36
NIA WF	1.18	1.59	1.13	1.53	0.75	1.00	0.96	1.09
MAT WF	1.12	2.56	^ 0.76	1.00	1.02	1.36	1.37	1.88
LLYW EE	^ 0.74	^ 0.96	1.28	1.71	---	---	0.51	^ 0.52
MIC EE	0.93	1.18	0.80	1.12	0.83	1.20	---	---
MEAN	1.21	1.92	1.18	1.87	0.90	1.32	1.39	1.47
S.D.	0.35	0.85	0.41	1.05	0.34	0.65	1.00	0.63

* = more than one standard deviation above the mean

^ = more than one standard deviation below the mean

The contribution to communication becomes more equitable as the ratios approach unity. Greater than one indicates a greater contribution by the mother, less than one indicates a greater contribution by the child.

Dashes indicate that a recording was not made.

There seems to be no pattern related to language background, except that those from mixed language backgrounds are exceptional. One explanation lies in the style of maternal-child interaction. This was not tested or recorded formally, but subjectively it seemed that some mothers were better at allowing their children to take the lead in conversations and at following the interests of the child. Llywela's mother listened attentively to a convoluted story about a pepper pot trespassing and getting hurt (Session VIII); Iwan's mother did exactly as she was told when her son directed the building of a railway line (Session VI). On the other hand, David's mother spent a whole session trying to teach her son to attend to details on the cards of a lotto game (session VIII). Gareth's mother was especially adept at following his lead, and this included his change from Welsh to English and back to Welsh. This phenomenon will be discussed in detail later.

3. THE DICTIONARY

General Comments

Having established that these children were learning to communicate with their mothers, and that they were becoming equal conversational partners, the next question concerns the medium in which their conversations were conducted. This was not straightforward. All extraneous detail was stripped from the scripts leaving only acceptable, intelligible words and utterances. 'Oh's and 'ah's and sounds of agreement or query ('mmm' and 'mmm?') were excluded. An example of the resultant text can be seen in Appendix IV (app.48-52). It had been expected that each text could then be examined, and Welsh and English words and utterances could be calculated for each person in each session. However, it soon became clear that a third language category was necessary. Many words are common to both languages and so were called 'Common', and many

utterances were a mixture of Welsh, English and Common words and so they too were called 'Common'. Criteria for these categories have been described and Appendix V (app.67-69) shows the complete dictionary of Common words found in the texts examined.

It should be remembered that 'script' is used to refer to the original transcriptions of mother-child interactions complete with field notes. 'Text' refers to those scripts stripped of field notes and extraneous detail.

Thus the words and utterances in each text were computed and expressed as percentages of the total child or mother text. In general, mother and child scores are presented side by side. As indicated in the literature review, there is a lot of evidence that the language choice in any interaction, but especially in bilingual interactions is strongly influenced if not directly predicted by the language choice of the other person (Ervin-Tripp, 1968). It was therefore assumed that maternal speech would be one if not the important factor in predicting child speech. Details of the proportion of each language used by each child in each session can be found in Appendix IX (app. 84ff), presented by individual and by session.

Individuals

In describing the language each of the ten children acquired, averages become meaningless. They had been selected to represent differing backgrounds and so differences from one another are of greatest interest. Later some parallels are drawn between the development of some of the children, but initially it is most revealing to describe briefly the development of each child. There is a table for each child showing the percentages of language use by mother and child

for each session in Appendix IX, as mentioned above. Whereas all of this information is available for both utterances and words, only the data relating to utterances is presented in graphic form (Graphs Q3.4a to Q3.4k). It was decided that as utterances can require the use of appropriate syntactic structures as well as single words, they are a more accurate reflection of language development.

a) NERYS WW

Nerys was the first child from a primarily Welsh speaking background. No more than 6% of her mother's words were English in any session and no more than 5% of her utterances were English (see Appendix IXa and Graph Q3.4a). Apart from the third session, Nerys's language use mirrored her mother's use, and her use of Welsh grew to 83% of all her utterances and 86% of all her words by the eighth session. As is clear from the table and the graph, both she and her mother used fewer Common words and utterances as she grew older. This phenomena is observable in all of the subjects.

b) IWAN WW

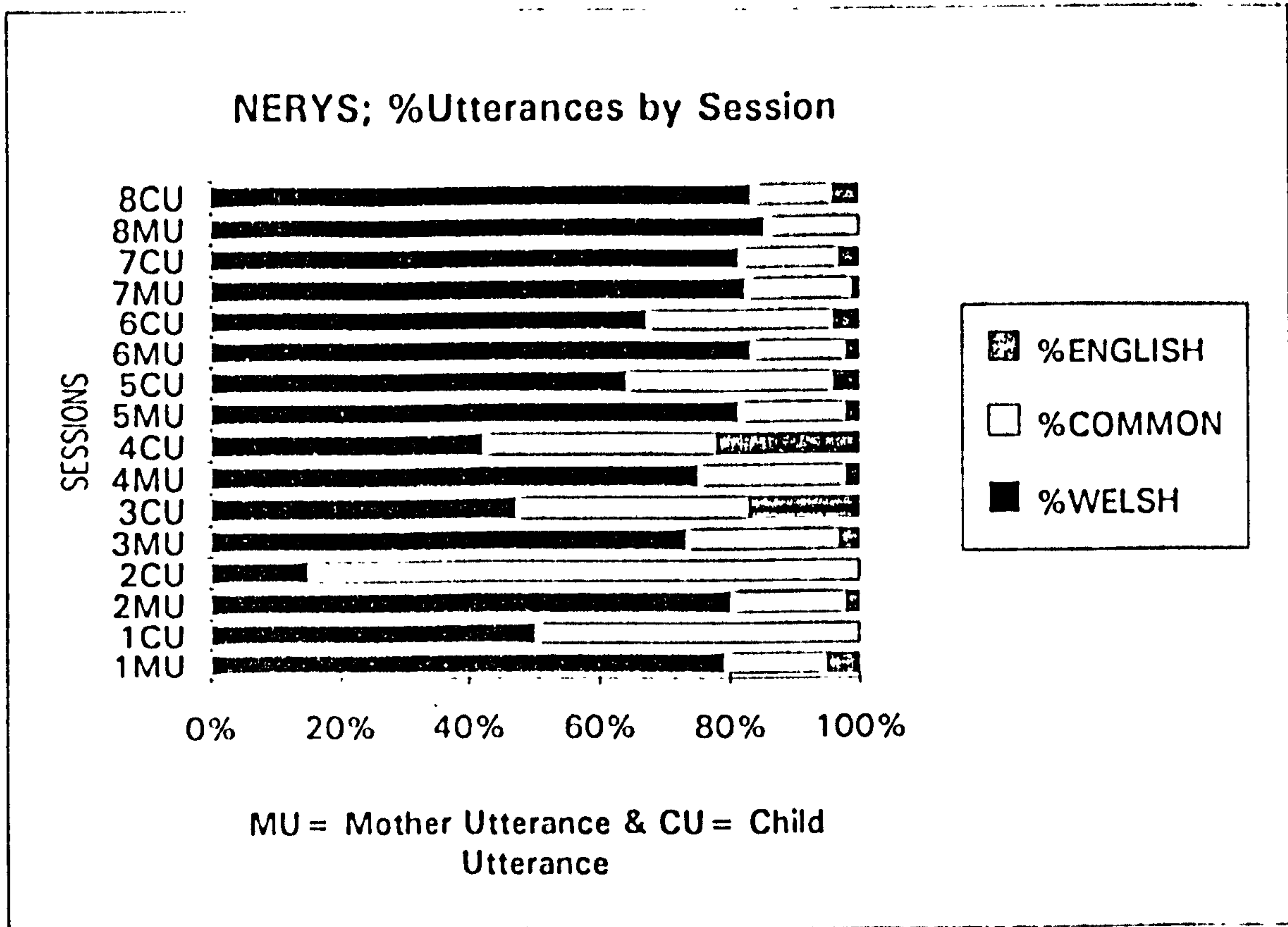
Iwan was the second Welsh speaking child. Appendix IXb and Graph Q3.4b show that his use of Welsh utterances rose to 92% and of Welsh words to 87% and that his use of English was at most 7% of his utterances. His mother used a lot of English in the second session only (12% of utterances and 15% of words) but otherwise used Welsh almost exclusively.

c) BECKY WM

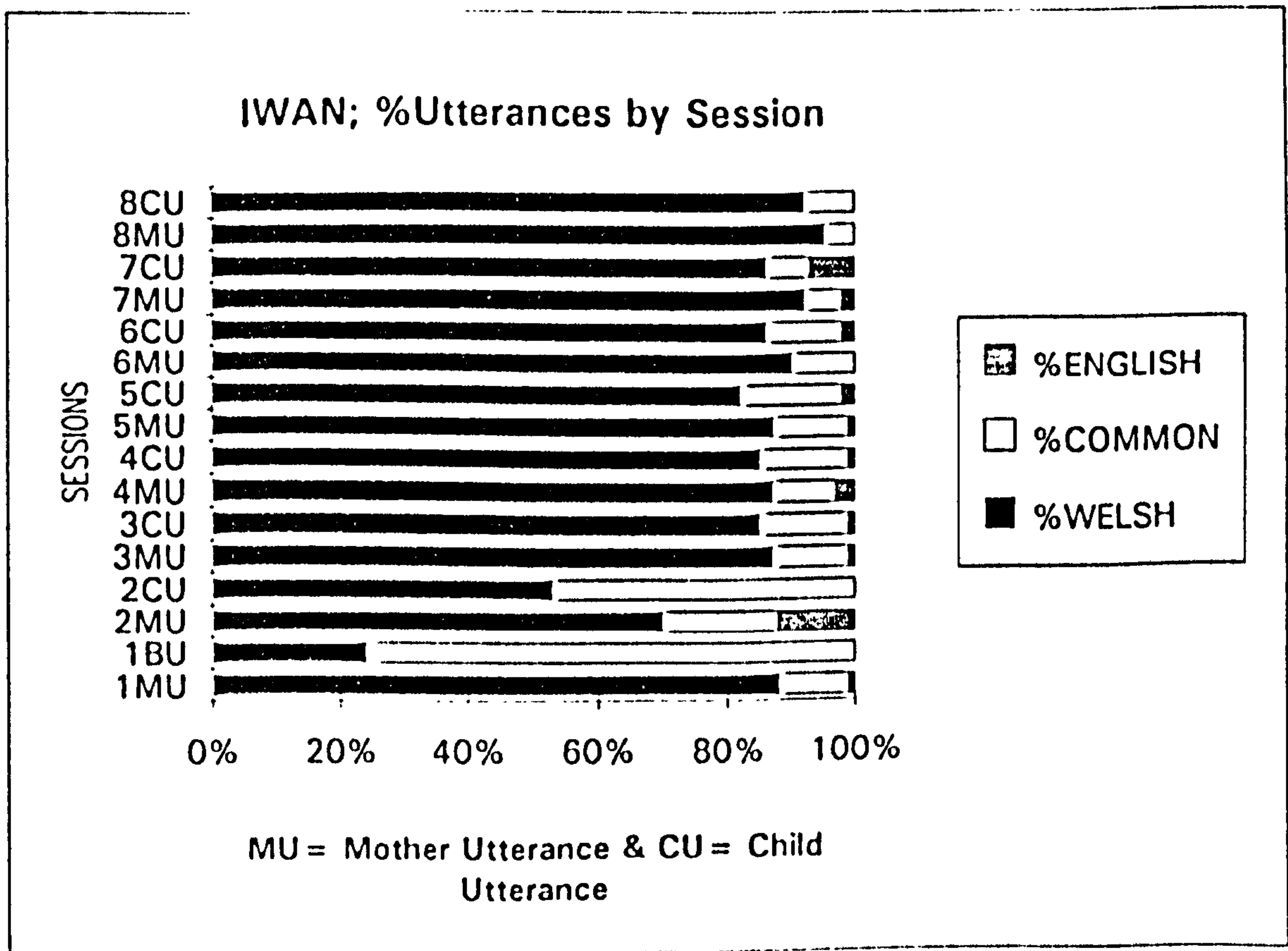
Becky's mother was primarily Welsh-speaking and her father spoke mostly English. During the sessions, Becky's Welsh usage rose to 82% for utterances and 79% for words by the last session, although her progress was uneven (Appendix IXc and GQ3.4c). This was very similar to her mother's Welsh usage, but their overall language use was not similar; Becky's mother used more English (as much as 22% for utterances and 27% for words in session II) than Becky who used more Common language

GRAPHS 3.4:

A) Nerys WW

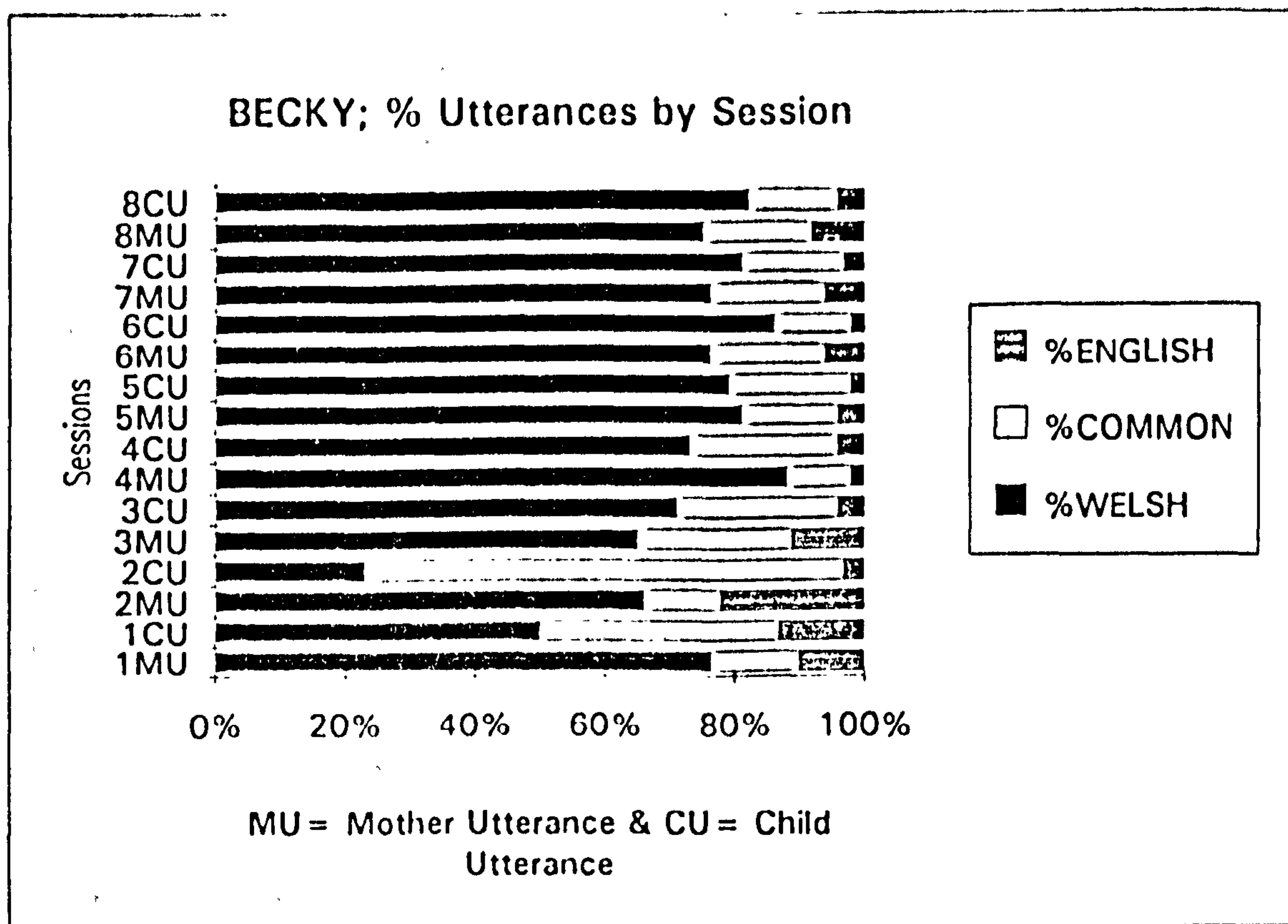


B) Iwan WW

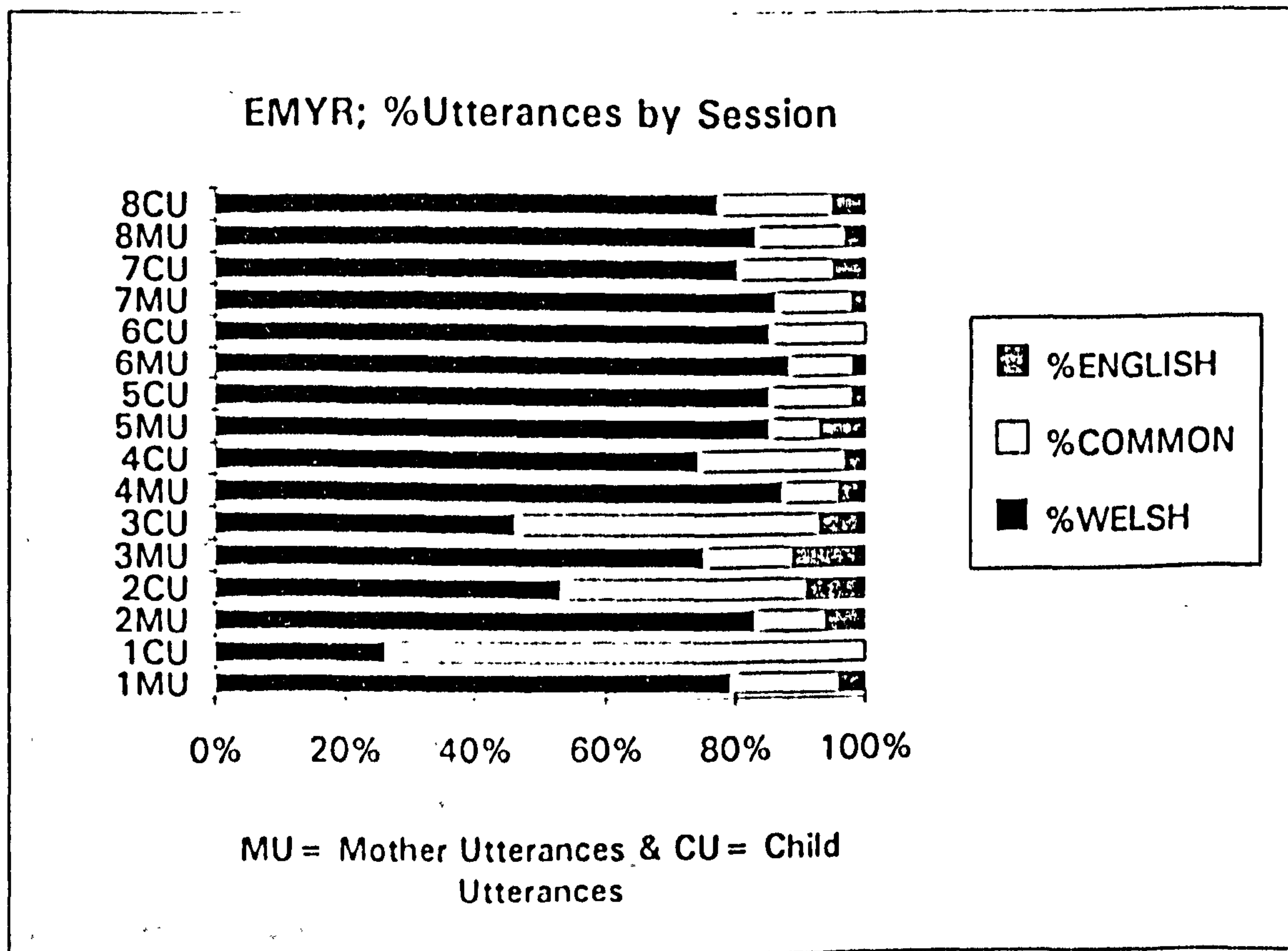


GRAPHS 3.4:

C) Becky WM



D) Emyr WM



and, as will be discussed later, objected violently when her mother tried to talk to her in Welsh.

d) EMYR WM

Emyr's mother was also Welsh-speaking. She used less English than did Becky's mother, (see Appendix IXd and GQ3.4d). Emyr achieved a 77% Welsh usage for utterances and 75% for words by the last session, although this may be an underestimate when previous sessions are considered. This reflects his mother's language use.

e) GARETH MM

Both of Gareth's parents had spoken a mixture of Welsh and English in the past. They decided to use Welsh mostly with Gareth, but they used English between themselves. His language development is the most interesting of the ten. As can be seen from Appendix IXe and Graph Q3.4e, his use of English and Welsh had become virtually equal for both utterances and words by the last session, despite his mother's greater use of Welsh.

f) DAVID MM

By contrast, David, who was the second child from a mixed language background, used virtually no Welsh after the initial session (Appendix IXf and GQ3.4f). His parents had both spoken a mixture of Welsh and English in the past, but had decided to speak English with David. The only Welsh he heard was from one set of grandparents. Although David used more Common language than did his mother, he was in effect an English-speaking child.

g) NIA WF

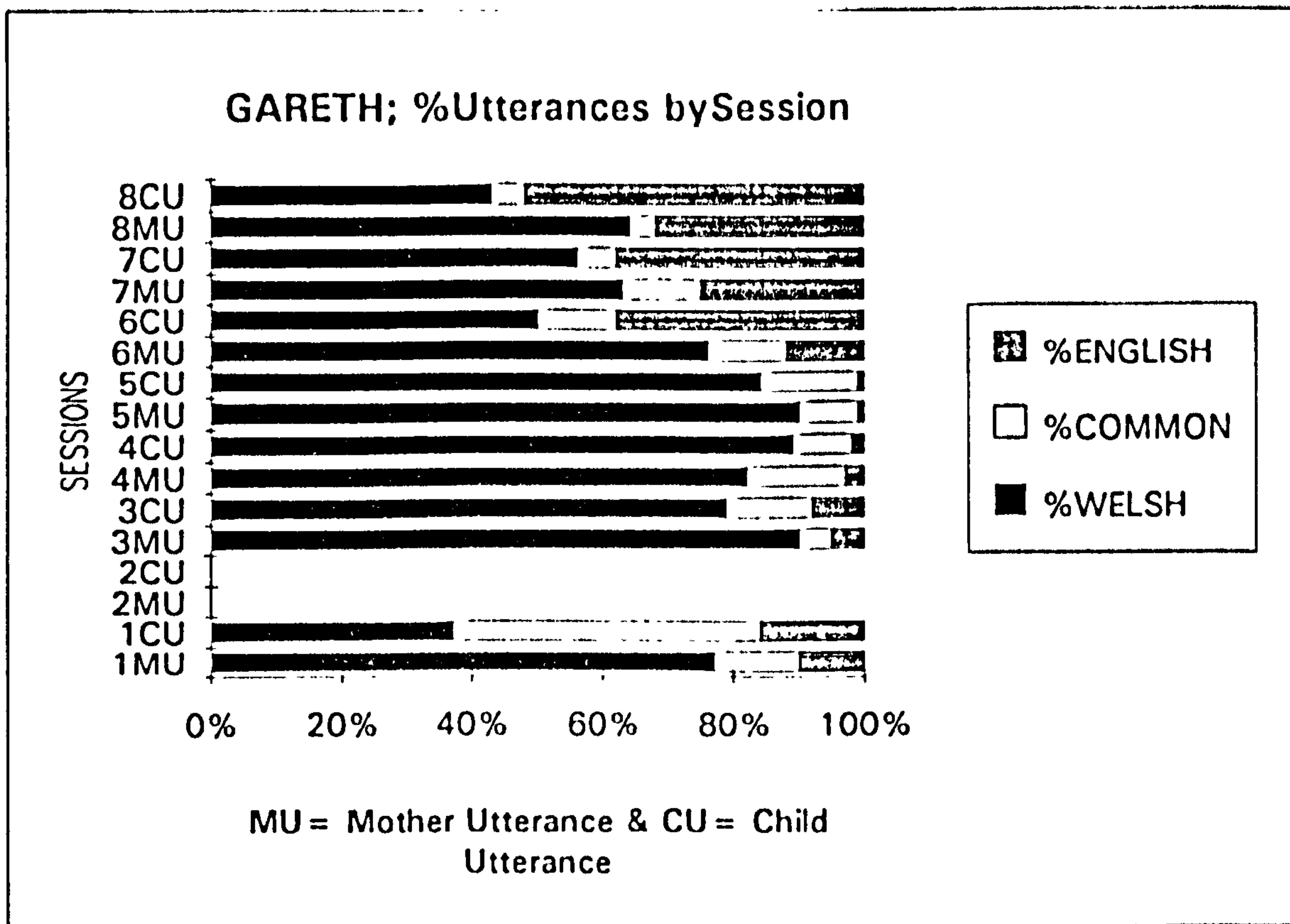
Nia's father was primarily Welsh -speaking, and although her mother tried to use Welsh with her as a baby, these efforts gradually disappeared. Nia used no Welsh after session IV, and by session VII used English for 96% of her utterances and for 90% of her words (Appendix IXg and GQ3.4g).

h) MATTHEW WF

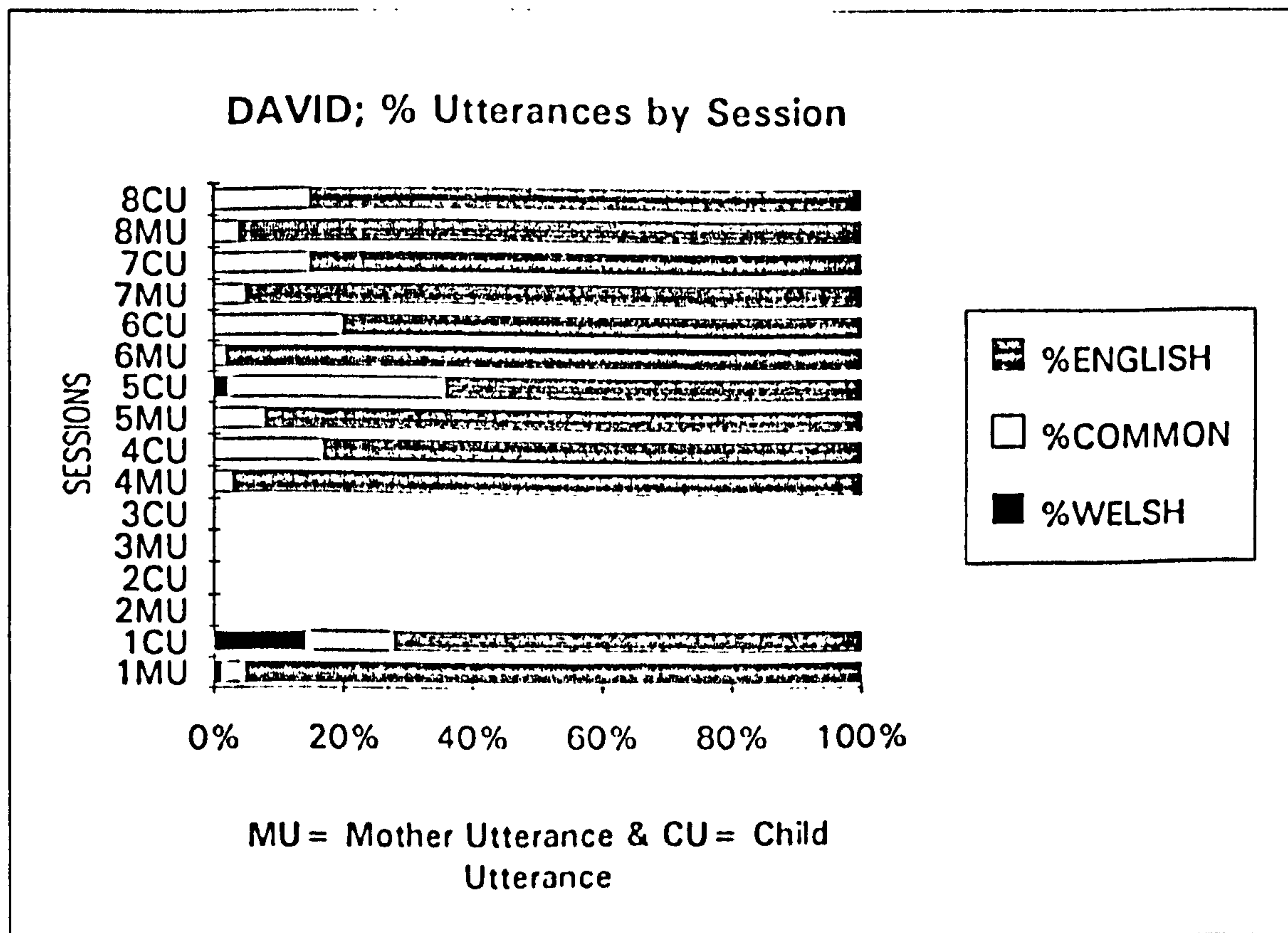
Matthew's father was also primarily Welsh-speaking and his

GRAPH 3.4;

E) Gareth MM

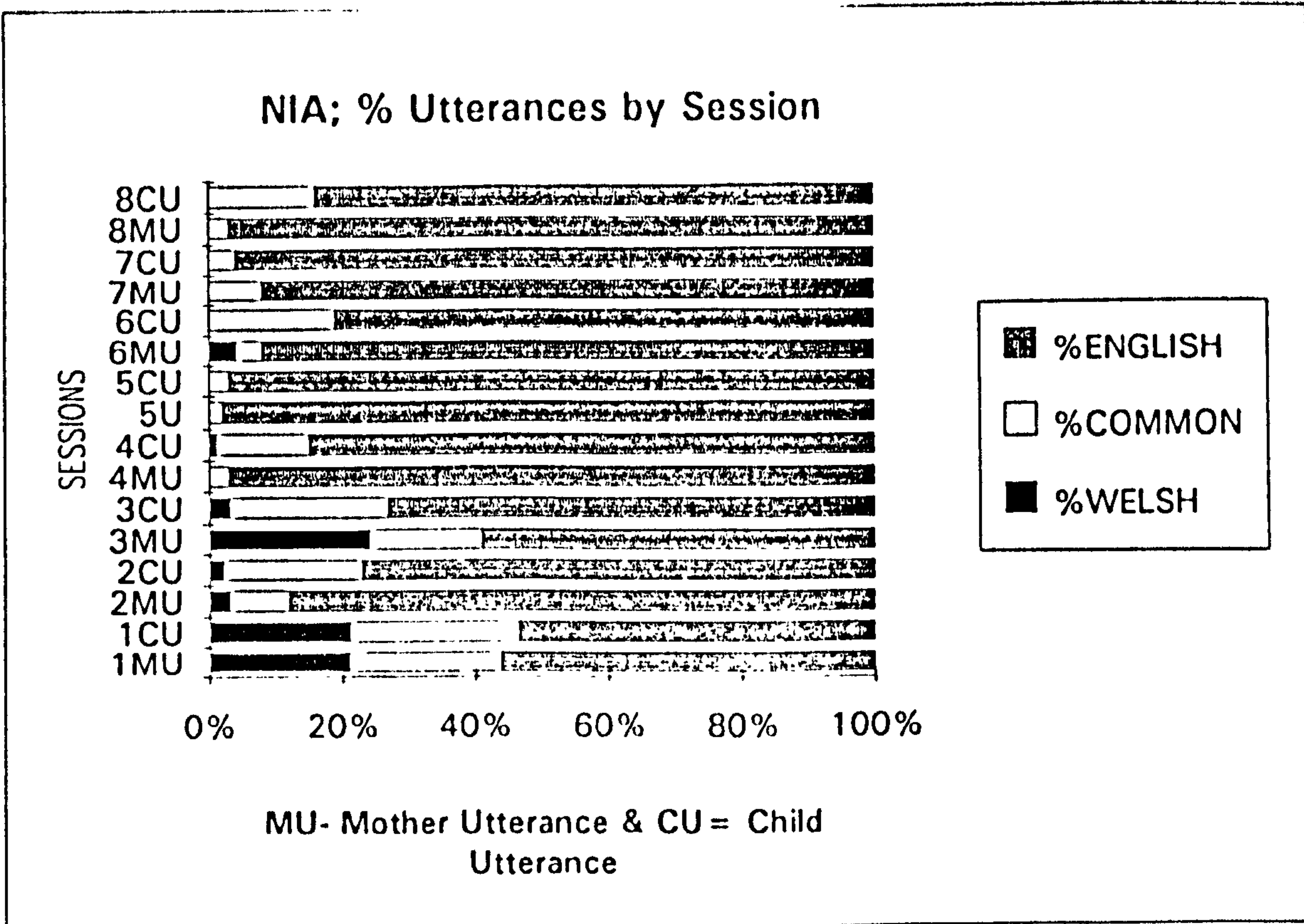


F) David MM

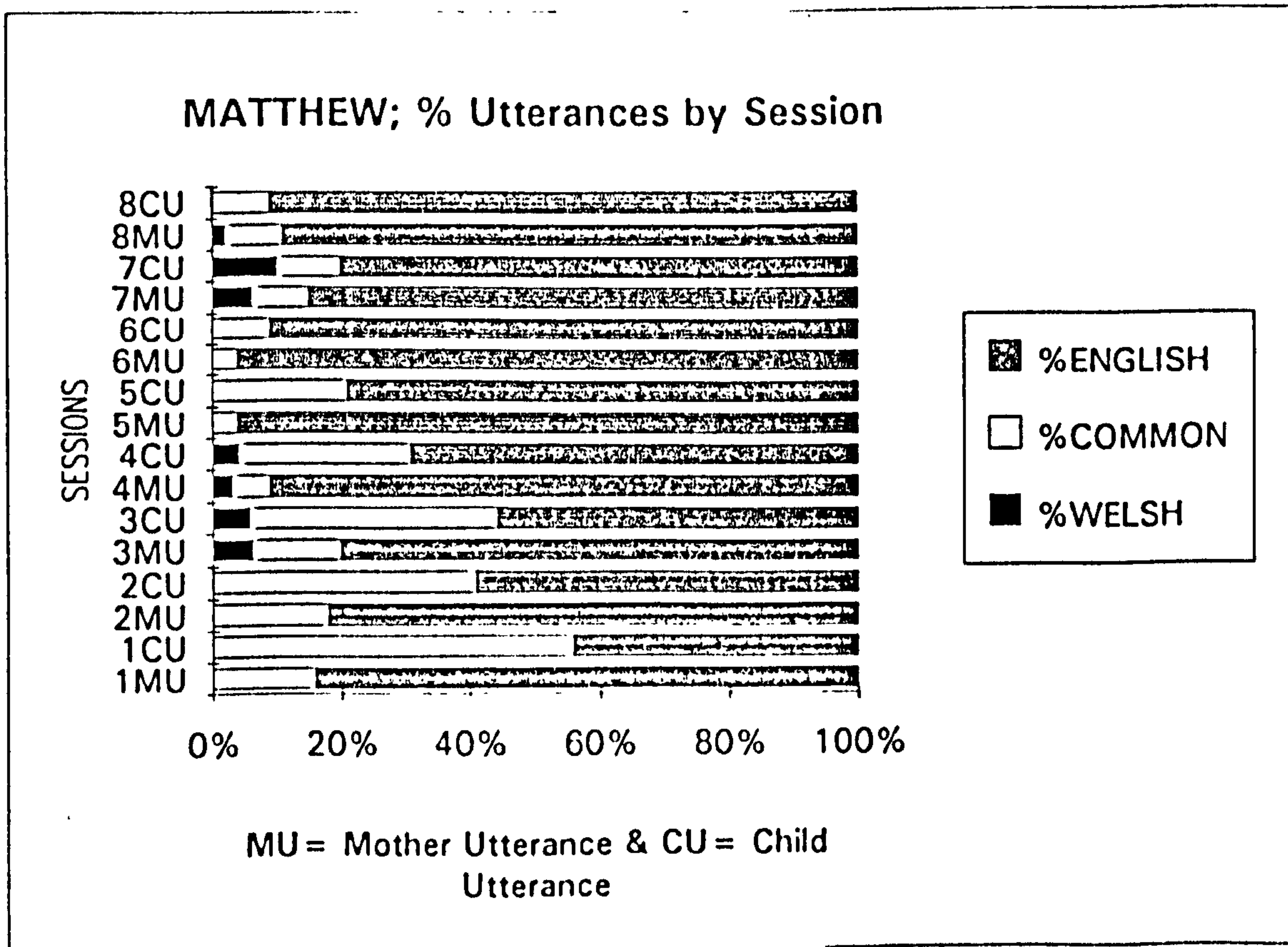


GRAPH 3.4;

G) Nia WF

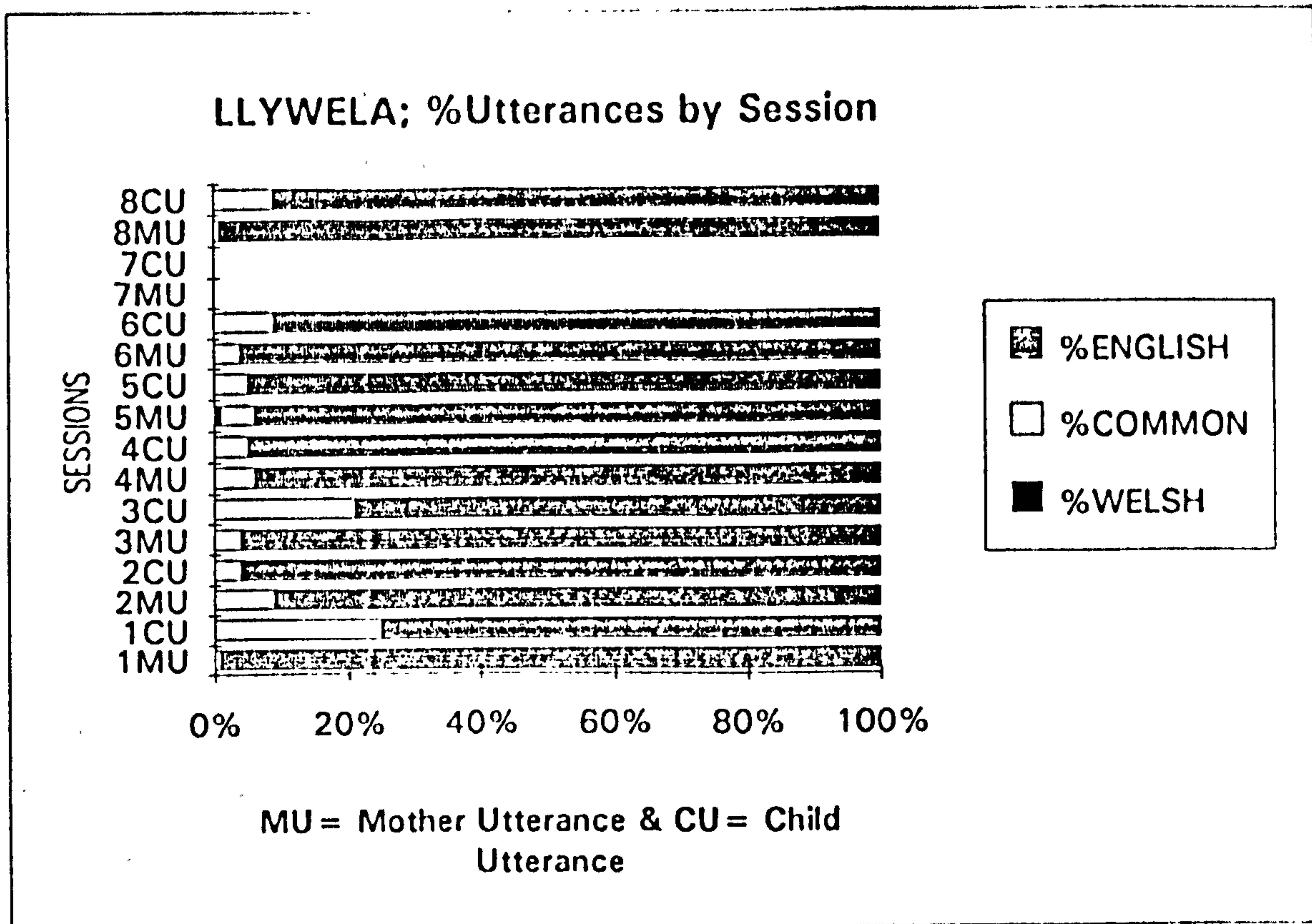


H) Matthew WF

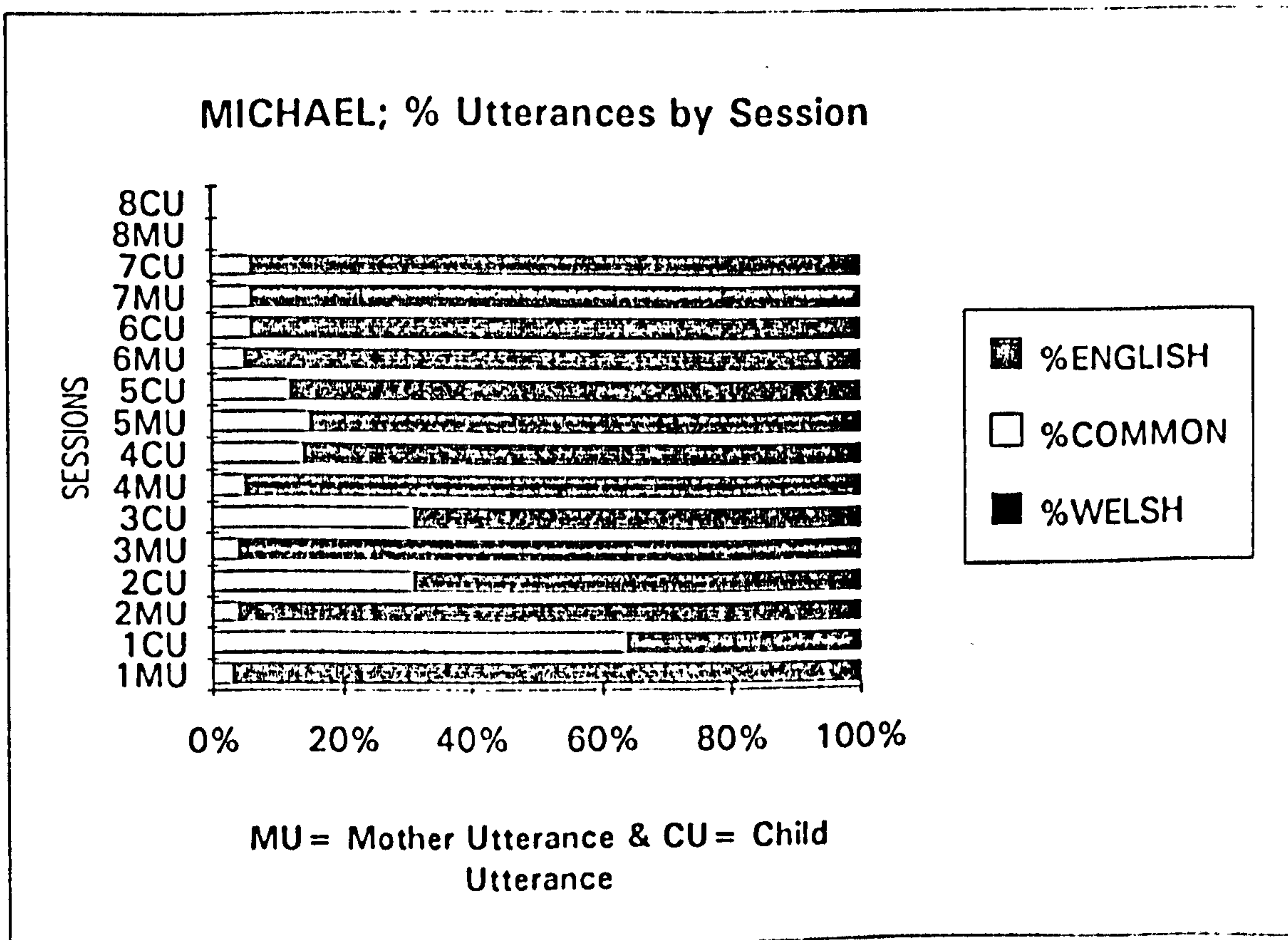


GRAPH 3.4;

J) Llywela EE



K) Michael EE



mother was a bit more persistent in her efforts to use Welsh with him (Appendix IXh and GQ3.4h). Nonetheless 89% of her words and utterances were in English at the last session, and Matthew's English usage was even higher. However, during the seventh session, he used Welsh utterances 10% of the time and Welsh words 8% of the time.

j) LLYWELA EE

Both of Llywela's parents spoke only English, although both had attempted to learn Welsh in the past. Her mother used virtually no Welsh with her and Llywela used none at all (Appendix IXj and GQ3.4j).

k) MICHAEL EE

Michael was also from an entirely English-speaking family. They moved before the last session could take place, but neither Michael nor his mother used any Welsh during the seven recordings (see Appendix IXk and Graph Q3.4k).

Sessions

To compare the progress of these children, their percentage scores and those of their mothers, (for utterances and words) are presented by session in Appendix IX as well, but Table Q3.5 gives details of the fourth session as an example. Initially the children could be divided roughly into those who spoke mostly Welsh and those who spoke mostly English. By the sixth session however, Gareth was beginning to use more English, and by the final session he was using English and Welsh equally. These trends can be seen more clearly in the graphs where only child utterance scores are used. From a mixed picture at the first and second sessions (Graph Q3.5b) the children are favouring one language more clearly by the fourth session (Graph Q3.5d) and by the last session (Graph Q3.5h) they all appear to be virtually monolingual with the exception of Gareth.

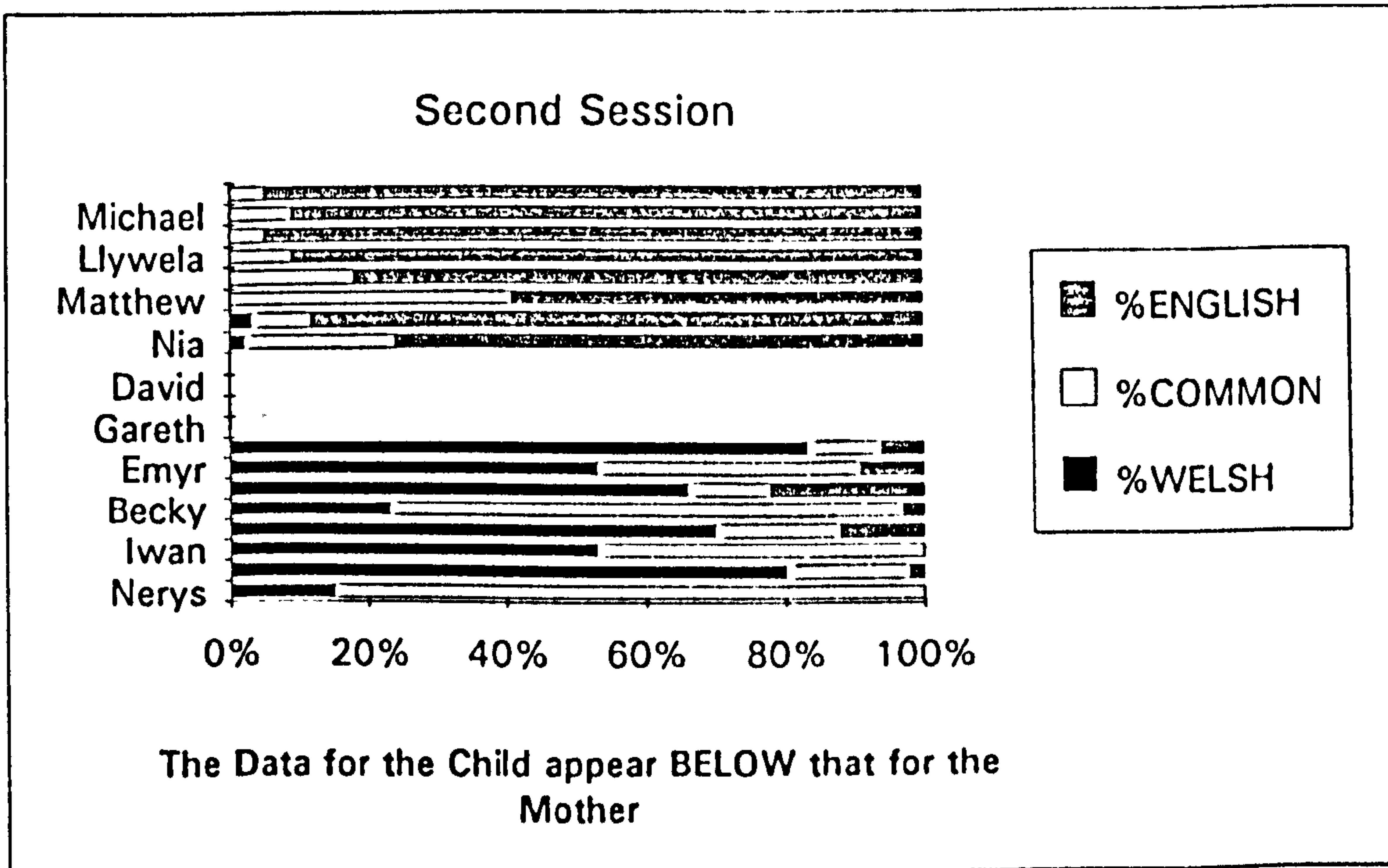
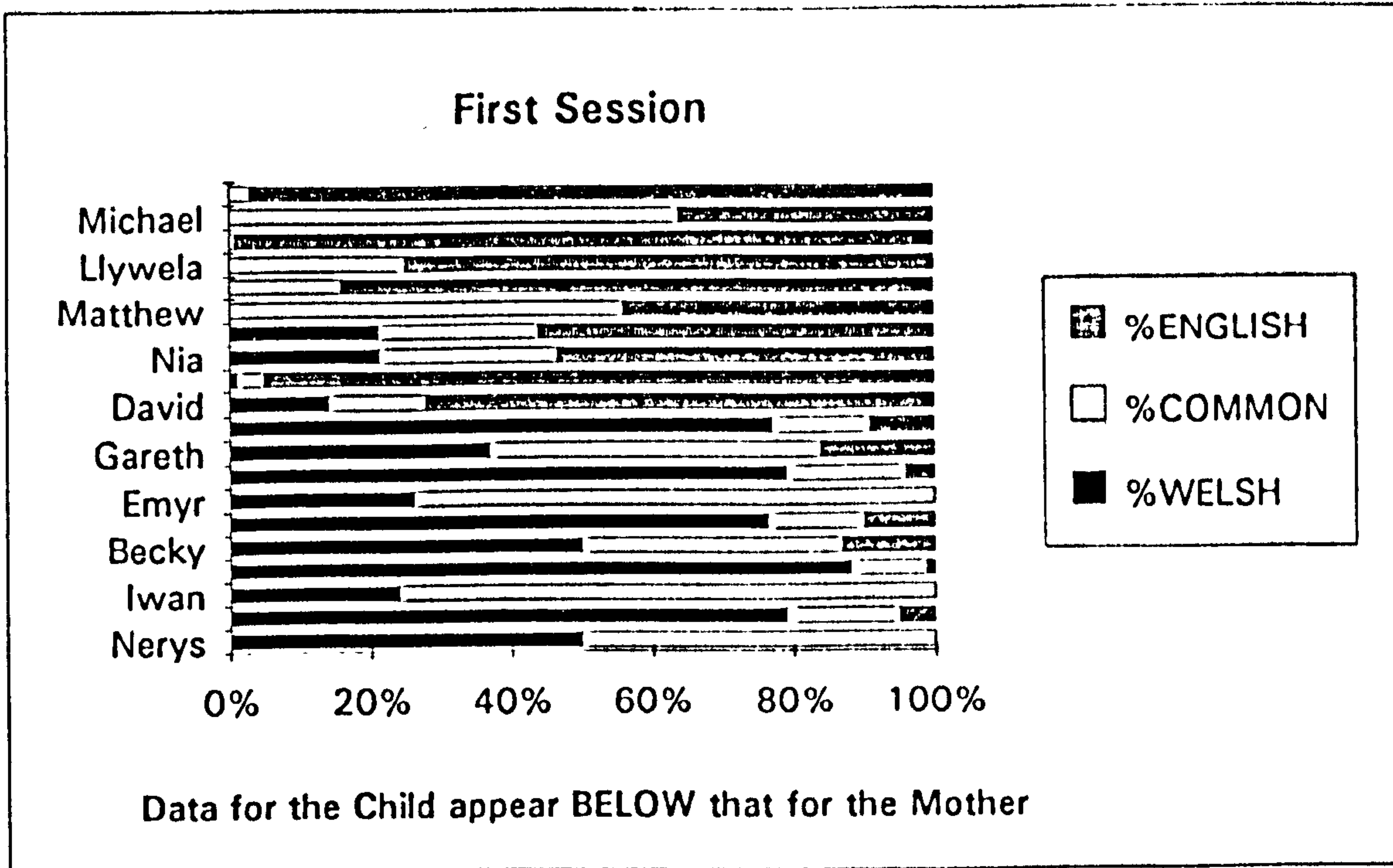
Four children, those from the WW and WM groups, all used less than 10% English and more than 70% Welsh (except for a 67% score from Nerys) from the sixth session onwards. The four children from the EE and WF groups and one of the MM children all used no more than 10% Welsh and more than 80% English over the same period. So, by age three, nine children in this small sample could reasonably be called monolingual, four in Welsh and five in English. Although the Welsh speaking children all used a little English, only those in the WF group used a little Welsh, and only Gareth (MM) could be called bilingual.

Common Language

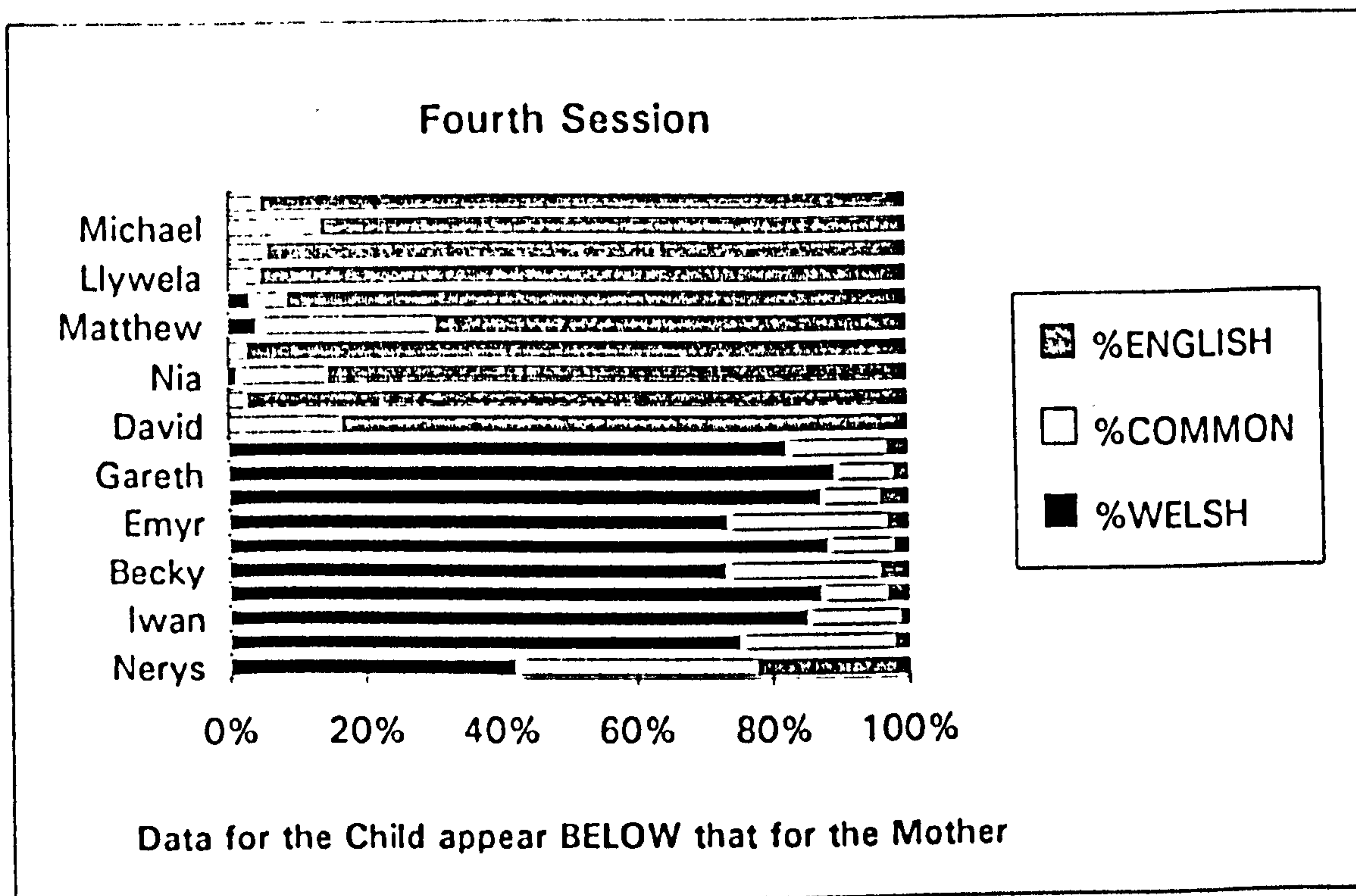
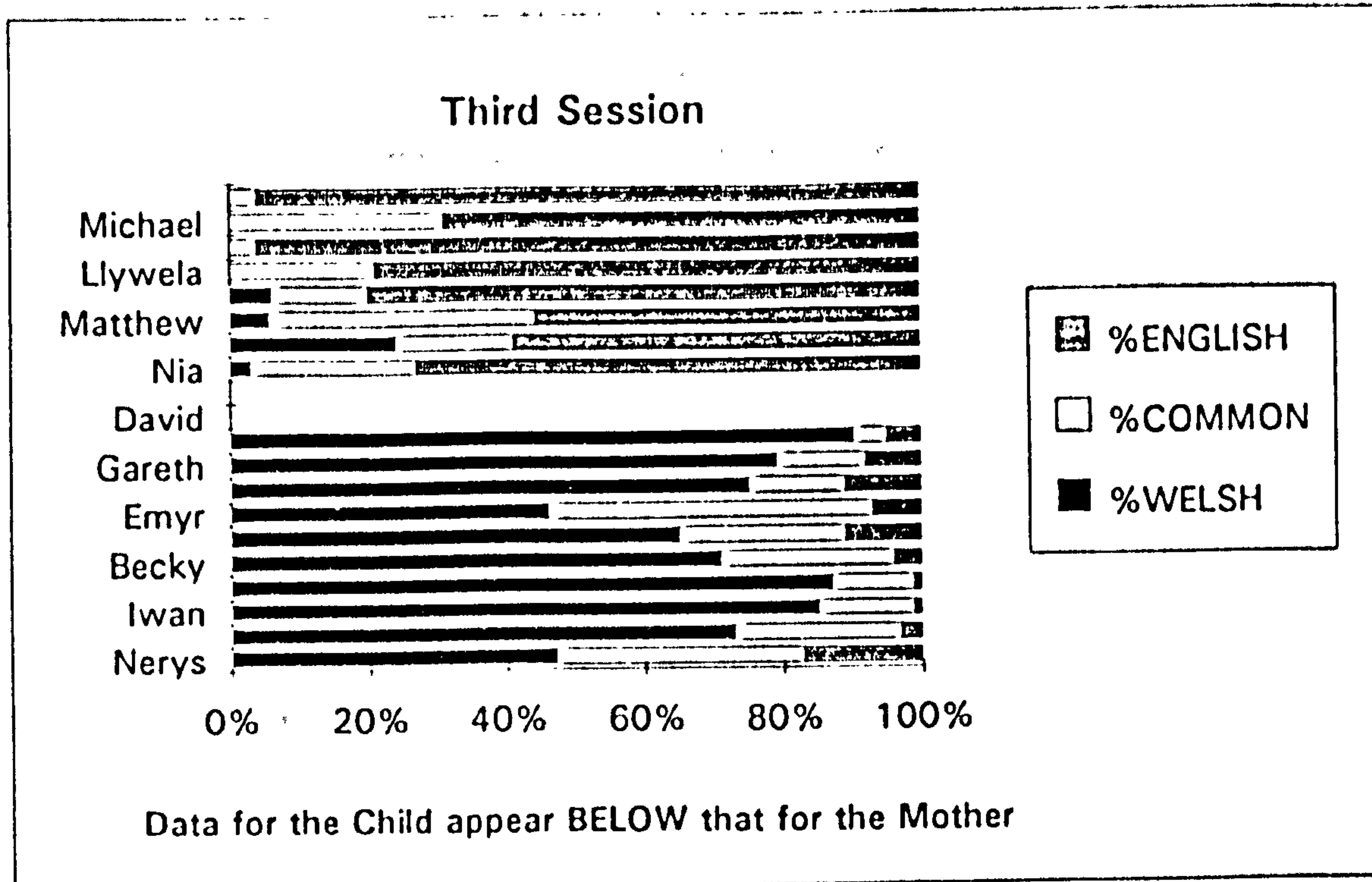
As is most clearly shown in the graphs, Common language accounts for up to 76% (Iwan) of the children's utterances and 23% (Nia) of the mother's utterances in the first session. By the fifth session it is still accounting for over 30% of utterances by David and Nerys, but has reduced to less than 5% for Nia and Llywela. By the eighth session it accounts for less than 20% of any of the children's utterances, but all of the children still use some Common language.

The function of Common language is not clear. In some ways it mirrors the "motherese" or "Baby Talk" (BT) that is so often referred to in the child language literature, (for example Newson, 1977; 1979; Furrow et al, 1979). Motherese comprises short, well-formed, often repeated utterances which, it has been argued, promotes language acquisition (Newson, 1979). However, when Newport Gleitman and Gleitman (1977) studied motherese they suggested that it mostly entailed the use of action directives and little else. In this study,

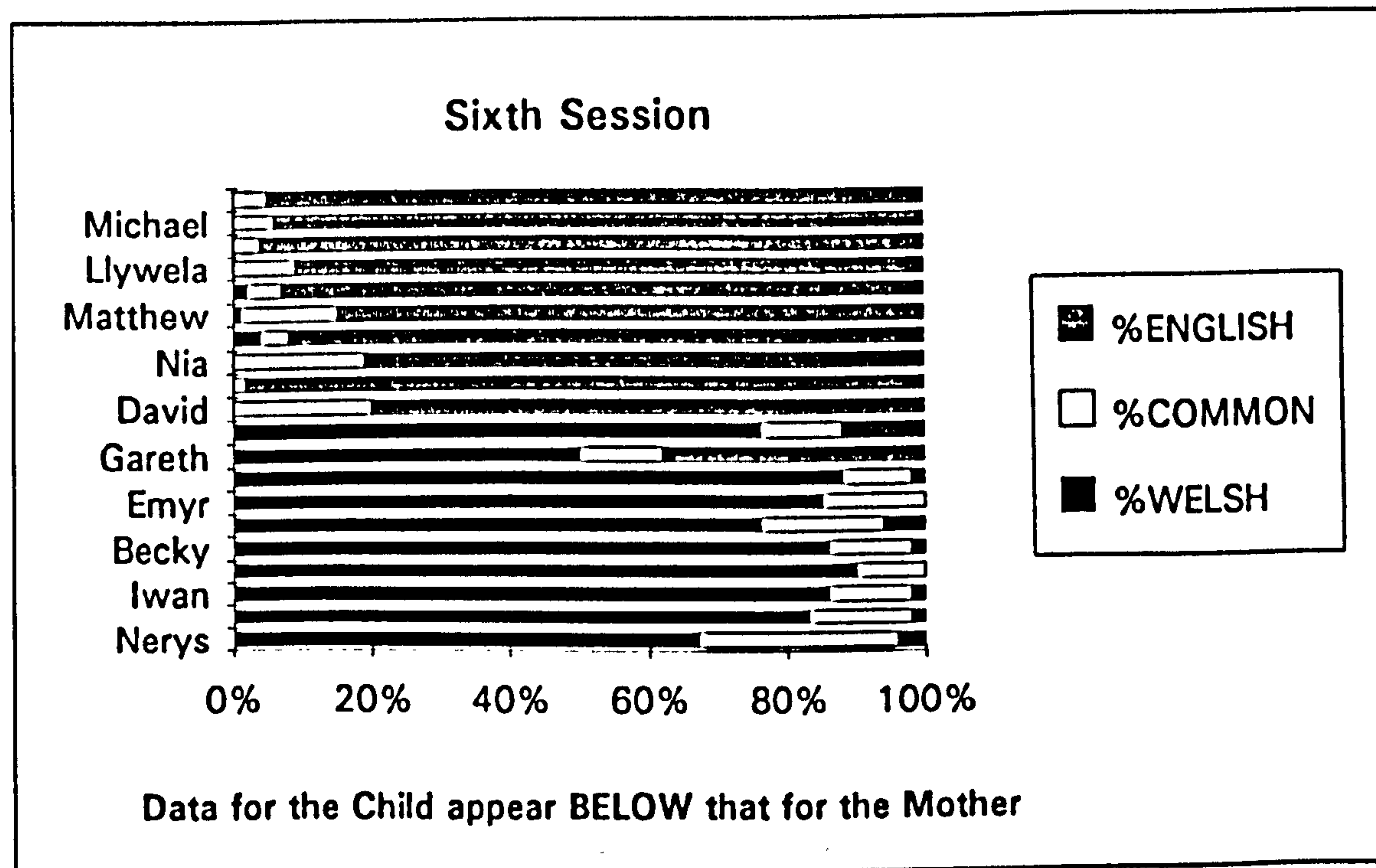
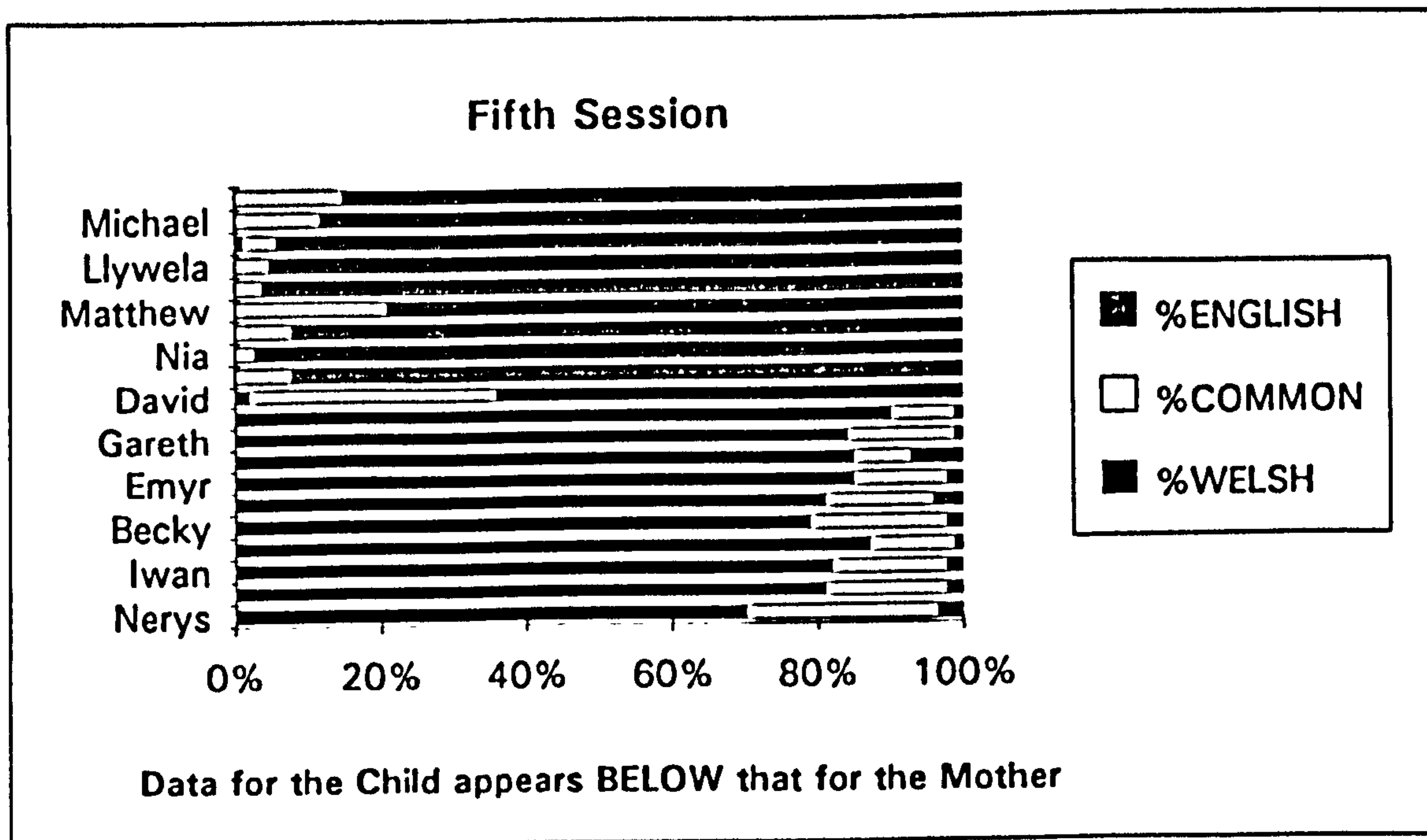
GRAPH Q3.5; % of each language used by Mothers & Children at each Session.



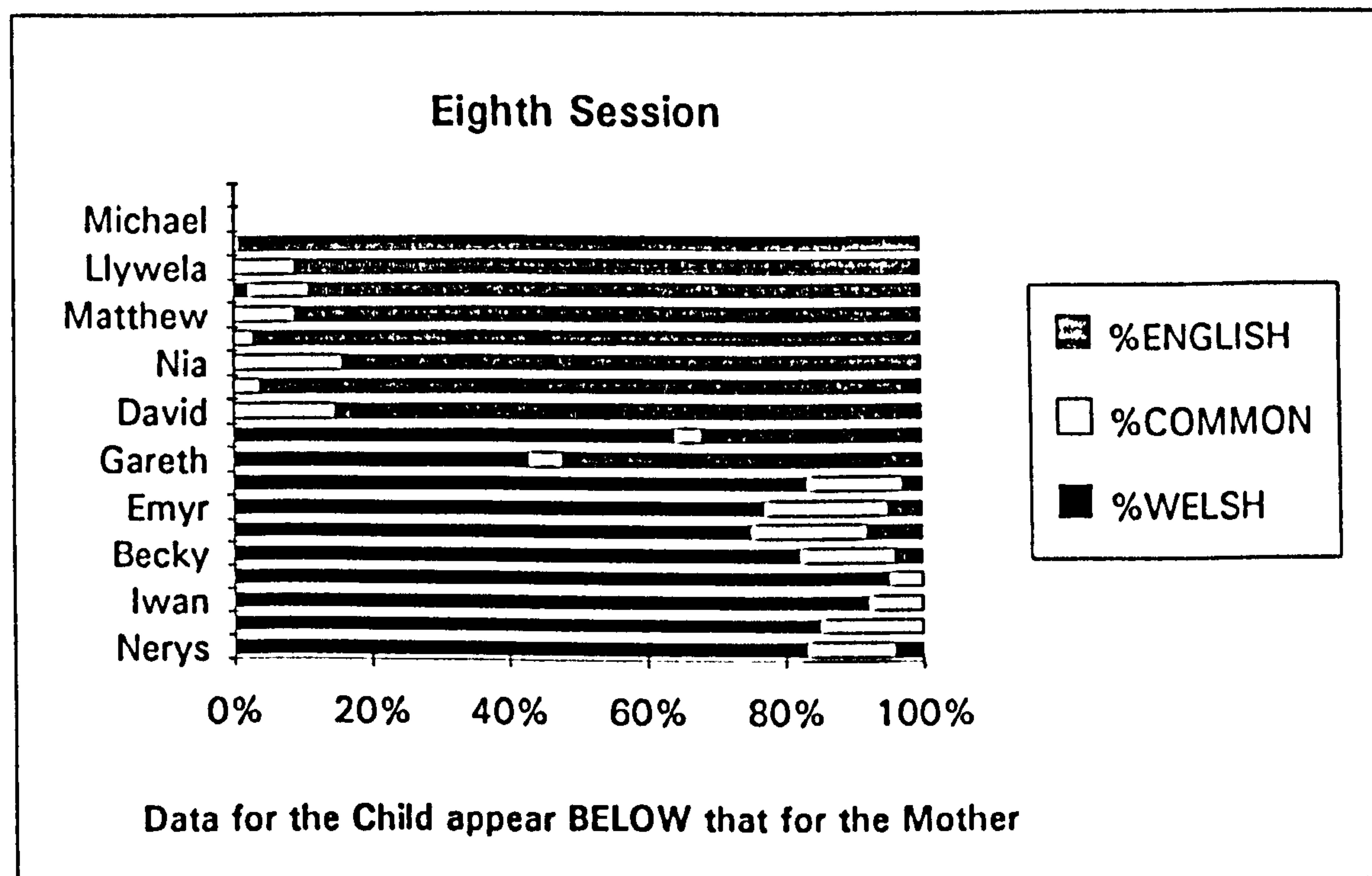
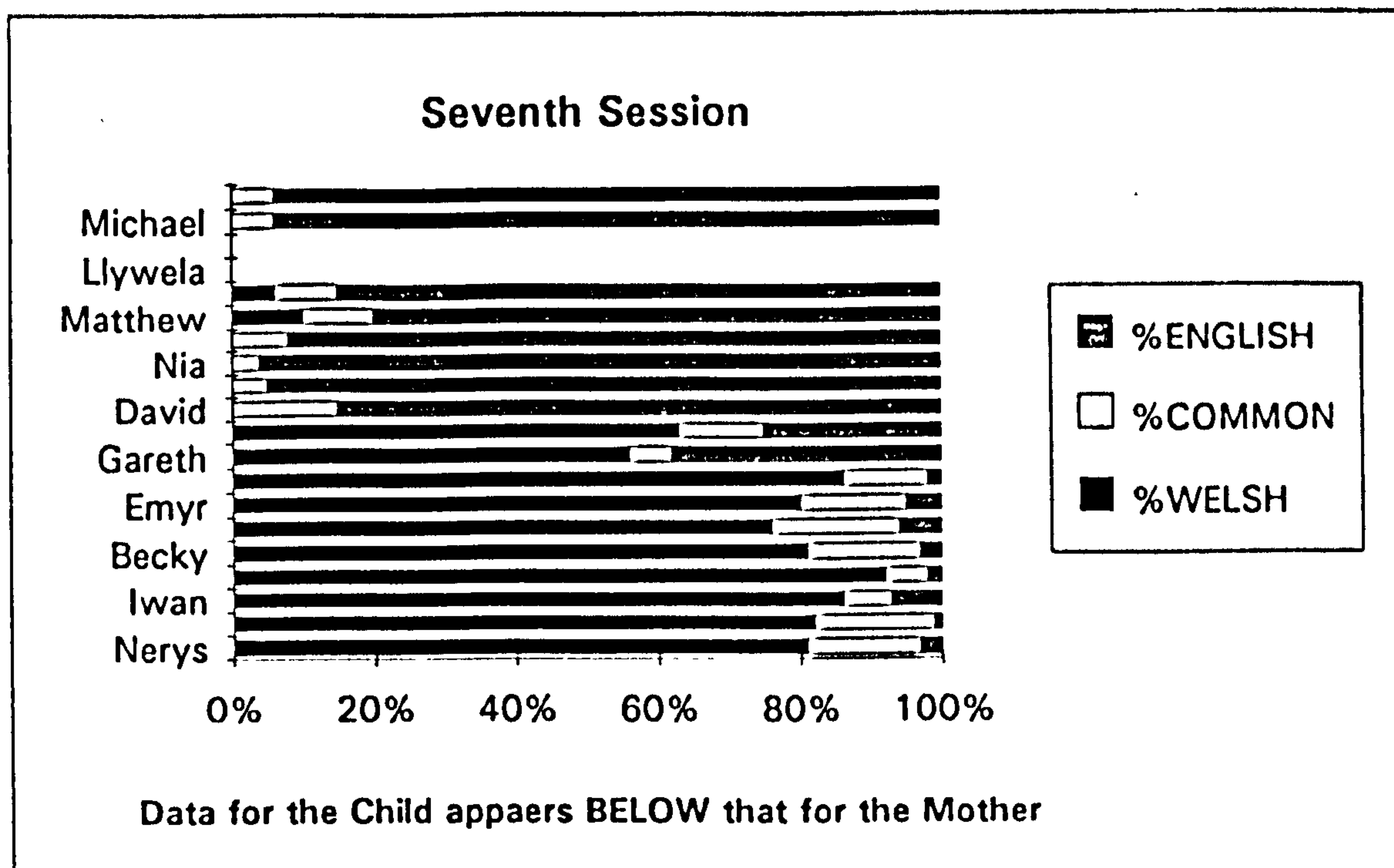
GRAPH Q3.5; % of each Language used by Mothers & Children at each Session



GRAPH Q3.5; % of each Language used by Mothers & Children at each Session



GRAPH Q3.5; % of each Language used by Mothers & Children at each Session



Common language does include the baby words encompassed in motherese, and some of the words shared by Welsh and English are simple action directives (such as *STOP*). But it also includes proper names, many non-action words that are shared, and utterances that use a mixture of Welsh and English, and so cannot be equated with motherese or BT as defined elsewhere.

In the early sessions, where naming and baby words comprised a large part of the dialogue, high Common language use was predictable. It was also predictable that, as Common language by definition includes simpler or mixed forms of syntax, children will progress beyond its use. One might expect that children from a monolingual background (WW and EE) would decrease the percentage of Common Utterances in their speech as they learned one syntactic code only. This is not clearly supported. Although Iwan (WW) and both the EE children used less than 10% Common utterances in the last two sessions, so did Gareth (MM), and each of the WF children on one of the two sessions in question, whereas the second WW child always used more than 10% Common utterances.

4. DISCUSSION

Communication

From the beginning of these recordings, the mothers were working hard to elicit response from their babies, and, from the beginning the babies were responding. This focus on communication by both partners is well documented. Bruner (1983) studied the use of referencing and requesting games in infant-mother dyads, and Halliday and Leslie (1986) followed this with evidence that both partners use imitation, modelling and reciprocity to keep the communication dialogue moving. Conti-Ramsden and Friel-Patti (1986) also showed that, in

children as young as 12-24 months, infants initiated new topics as frequently as did their mothers.

It has been possible to show here that, when responses rather than words or utterances are used as the measure, infants as young as 15 months were responding to at least a third of their mothers' attempts to communicate, and response in this context does NOT include gaze or movement or facial expression, only vocal response. By age 24 months they were responding to 80% of maternal communications (M/C of 1.25), mostly with intelligible words or utterances. Thus it can be seen that these children learned to communicate intelligibly over the nine month period, and there is support for Trevarthen's suggestion that they learn to communicate because their mothers treat them as conversational partners long before that is a reality, and that they grow into that role (1979). Bever (1982) suggests that children discover language for themselves, but if this is so, then mothers spend a lot of time structuring the environment to make that communication easy.

Conversations

As the children became older, the balance of the conversations became even-handed with the children producing almost as many utterances as their mothers. Some produced more. Mothers still produced more words than their children, but only about half as many again on average.

There seems to be no difference in this process between those from differing family backgrounds. Children learn to communicate using whatever language is offered to them in the early stages.

The Dictionary

The concept of a Common language allowed the language acquisition of these children to be described developmentally. The function of Common language is not clear, but it may be that it shares with motherese a transitional role in the acquisition of language, whether of one or of two language codes. If attention is paid only to the amounts of Welsh and English in these children's conversations, then they do appear to be acquiring the languages predicted by their language backgrounds. Those from monolingual backgrounds (WW and EE) were using 5% or less of the second language, both in words and utterances at the final session. The children from cross language backgrounds (WM and WF) were learning their mother's language primarily, and used less than 6% of their second language at that eighth session. The position of the children from mixed language backgrounds could not have been predicted. David was developing as a monolingual English speaking child whereas Gareth was arguably a "balanced bilingual". Evidence that will be presented later from the session with the subjects' fathers, broadly supports these statements. The monolingual children and one MM child used no more of the second language in that session than they did in the eighth session. Three of the cross language children used more of their second language with the parent who used that language, and Gareth used Welsh, his father's preferred language, for the bulk of his conversation with him.

Thus, English is not as pervasive as is sometimes believed, and it is possible for children to acquire only Welsh on Ynys Mon.

5. DEVELOPMENT IN THE POPULATION

Statements about language development in the population must be more guarded as they rely entirely on parental reports (which are naturally subjective and usually biased), of a limited number of aspects of Welsh and English language development. However, it was felt useful to try to obtain some indication of what was happening in the wider population.

Table Q3.6 looks at data available for all 177 children about whom questionnaires were returned. This shows the percentage of children said to use these 18 aspects of language "Often". As will be seen, virtually half of these children were said to use all nine aspects of English often, and around 70% used the simpler aspects often. At least a third of the same children were said to use all nine aspects of Welsh often, but the distribution was flatter across the various aspects.

TABLE Q3.6; Percentages of the Large Population of Children using Aspects of English and Welsh

	ENGLISH	WELSH
ASPECTS		
Single Words	71%	57%
Many Words	69%	53%
2 Words Together	71%	55%
Allgone-Wedimynd	73%	48%
Big/Little-Mawr/Bach	64%	48%
Colours	49%	47%
Sentences	66%	48%
Yesterday	49%	34%
Stories	53%	43%

NB; Every child had a score for BOTH English and Welsh aspects and so each percentage is a percentage of the total (N = 177).

Apart from the first aspect, about half used the simpler aspects often. Thus most of the population of children to whom the questionnaires refer appear to be learning English, and half of them appear to be learning Welsh. Clearly these are not separate groups; some children will be developing monolingually, but, as there is an overlap, some will be developing bilingually. It was possible to identify these children, and the Welsh and English monolingual children, and this will be described in detail in Question 9, when an attempt is made to predict language development.

In order to look at the influence of language background, only those children whose father also returned a questionnaire were included in the further analyses. This group numbered 124 families, and Tables Q3.7 and Q3.8 indicate which aspects of Welsh and English they are using respectively. It should be

**TABLE Q3;7 Aspects of Welsh by Language Background;
Mother's Reports (in percentages) N= 124**

	WW	WM	MM	WF	EE	ALL
Single Words	97	94	60	83	22	65
Many Words	89	100	60	67	11	59
2 words togeth.	94	94	60	83	11	61
Wedimynd	98	81	47	84	8	53
Mawr-Bach	91	81	50	83	5	54
Colours	91	69	47	83	16	55
Sentences	94	94	47	83	3	55
Yesterday	83	50	23	67	0	39
Stories	89	81	40	67	0	48

NB; Percentages are of children reported to use an aspect of Welsh "Often".

NB; There are fewer children reported here than in the previous table as single parent families are excluded.

noted that this is a smaller group than that represented in the previous table and so percentages are different, but similar. It seems, however, that the smaller sample includes a slightly higher percentage of children using the Welsh aspects and a slightly lower percentage using the English aspects than does the large sample. No explanation can be suggested; only maternal reports have been used on both occasions, but, as will be demonstrated in Q7, there were no significant differences between maternal and paternal responses to these questions in QII. Not even the presence of a father in the house can be suggested as many of those families returning only one questionnaire reported that the child's father lived with them. To return to Tables Q3.7 and Q3.8, it looks as if most of the WW children are not learning any English (apart from "allgone" which is probably a poor

**TABLE Q3;8 Aspects of English by Language Background;
Mother's Reports (in percentages) N= 124**

	WW	WM	MM	WF	EE	ALL
Single Words	11	75	100	50	100	69
Many Words	9	75	93	33	100	66
2 words togeth.	11	88	93	50	97	69
Allgone	27	68	90	83	100	72
Big-Little	17	44	77	67	95	61
Colours	9	25	63	33	81	47
Sentences	11	69	90	33	97	65
Yesterday	3	31	63	17	84	46
Stories	3	56	67	33	84	51

NB; Percentages are of children reported to use an aspect of English "Often".

NB; There are fewer children reported here than in the previous table as single parent families are excluded.

choice). This fits with Nerys' position at age 3, but Iwan is one of the minority. Gareth and David illustrate the MM group in this population beautifully; about half of the group are reported to use most aspects of Welsh, and that would be true of Gareth and not of David. Further, virtually all of the MM children appear to have mastered the simpler aspects of English, two thirds of them using the more complex aspects as well. This description would reasonably fit both of the two boys in this group.

More than two thirds of the WF group are said to use all aspects of Welsh, and that is at odds with the development of the two WF children in the small sample. Neither Matthew nor Nia was telling stories, talking about the past or even using sentences freely by the end of the project. Unfortunately, there were only six families in this category, and so figures for that group must be treated with caution.

Emyr and Becky more or less fit the pattern of the WM group, and Llywela, like almost a quarter of those in the EE group had some single words in Welsh. Michael left the area, but was part of the majority of children from English speaking backgrounds who use no Welsh before the age of three.

One Person-One Language

In QII, each parent was asked to say what language they preferred for reading, talking, and viewing with their children, using a five point scale. These scores were added and a mean score computed for each parent. Thus it was possible to identify those families where both parents preferred to use only the same language (Welsh or English) with their children, those who used a mixture of languages, and those of special interest where each parent preferred to use a different language with the child. Table Q3.9 shows that only in 5 of the 141 sets of parents who answered these

TABLE Q3.9; Languages Parents preferred to use with their children by Child Language Use at age three.

	Welsh Monolingual Children	Bilingual Children	English Monolingual Children	Totals
M= Welsh F= Welsh	34 100%	10 22%	0 0%	44 31%
M= English F= English	0 0%	1 2%	33 54%	34 24%
M= Welsh F= English	0 0%	4 9%	0 0%	4 3%
M= English F= Welsh	0 0%	1 2%	0 0%	1 1%
M= Both F= Both	0 0%	30 65%	28 46%	58 41%
Totals	34	46	61	141

M= Mother, F= Father.

The five sets of parents who preferred different languages for activities with their children, produced bilingual children, but they represent only 11% of all of the children who were bilingual.

These five families appear to conform to the 'One Person-One Language' strategy, but it is not known if this was a deliberate choice or not.

questions did one parent prefer to use a different language from that preferred by the second parent. In four cases the mother preferred Welsh and the father English, and in the fifth case the converse is true. All five are families whose children were bilingual at three years of age, representing 11% of all of the bilingual children. (The procedures used to classify children as Bilingual or Monolingual at age three are described in detail in Question 9.). These five families appear to conform to the one person-one language strategy, but it is not known if this was a deliberate strategy or not. It is also possible that some parents were deliberately using this strategy, and that because this put them at odds with their preferred language, that fact is not evident in the

data. It seems unlikely. Parents were invited to comment on their experience of bringing up bilingual children, and only one comment mentioned the one person-one language strategy. On this evidence, it is not a common route to bilingualism in the general population.

6. SUMMARY

The infants in the small sample were already responding to their mother's attempts to communicate with them when recording began at about 15 months. By age two years they were responding to most of their mother's utterances, even though their replies were shorter (and simpler). From then on the interactions between mother and child were much more even handed, and, although not easy to quantify, children as well as mothers were initiating conversations.

"Common" language made it possible to include language that could not be legitimately claimed by either Welsh or English. While not fitting the descriptions in the literature for "motherese", it is a language associated with young children, and decreases as children's first language becomes established.

It seems that in the wider population, most children were learning at least the simpler aspects of English AND about half were learning the simpler aspects of Welsh. Very few of the children from WW backgrounds were learning English (except "allgone!"), and, apart from single words, very few from EE backgrounds were learning any Welsh. At least half of the children from cross-language backgrounds were learning Welsh, but less than that were learning the more complex aspects of English. Most of those from Mixed language backgrounds were

learning English, and about half were learning Welsh.

The children selected for the small sample appear to be reasonably representative of the population, with the possible exception of those with a Welsh speaking father where the population group is so small that no conclusion can be reached either way.

A small group of families do seem to use a one person/ one language strategy with their children, and those children become bilingual. However, it is not known if parents deliberately restrict their language use in this way, or if the data represent nothing more than chance preferences.

Question 4: HOW ARE THE SMALL SAMPLE OF CHILDREN LEARNING LANGUAGE?

1. INTRODUCTION

There is a considerable body of research showing how children's language develops monolingually. It is not nearly so clear how children's language develops in a bilingual culture. This section will examine how the language of ten children developed, and then how language in the larger population appears to be developing. Particular questions were asked about whether the stages of language development are the same or at least similar for children learning English, Welsh or a mixture of the two. Is it possible for children to develop language bilingually? (Bilingualism as a first language). Are there qualitative differences in the way children acquire Welsh and English and if so what are they?

One factor needs to be borne in mind throughout, namely that age is not a reliable guide to level of language development. Because of time constraints, this study examined the development of ten children from about age 16 to 36 months, and not until they reached a specified level of language development.

Mean Length of Utterance

Once communication is established, there are well established methods to describe how the monolingual child's language develops. Perhaps the most popular, though not the least controversial, of these is the mean length of utterance (MLU). MLU for words was used in this study, both to monitor the growth of language use, and to facilitate stage description.

All extraneous material was stripped from the early dialogues and a mean length of utterance (MLU) calculated for each partner in each session. A further measure was employed to look at the richness of the language used. For this, not only were all words counted, but the frequency with which each word was used allowed the calculation of a type/token ratio (T/T) for each partner in each script. The higher the ratio the wider the range of vocabulary used.

Stages

Using MLU as a guide and examining the scripts, it was possible to describe the stages of language development reached by each child at each session. The stages described by both Brown (1973) and Crystal (1976) are based on English language use, and attempts were made to find equivalent stages in Welsh, following Ball (1987) but these must be treated with caution.

Development in the Population

The second questionnaire asked about the development of nine aspects of language in English and of nine similar aspects of Welsh for each child. Thus each child could be assigned a level of development in each language, according to his parents' reports. Although a less reliable measure than objective observations, they provide a guide to the level of English, Welsh and Bilingual language development in the population.

2. FIRST MEASURES

Type/Token Ratios (T/T)

The T/T was computed for both child and mother at each session. As can be seen from Table Q4.1, the children have higher scores for the first three sessions than for the remainder, while the mother's scores remain stable. A higher

Table TQ4.1; Type/Token Ratios (T/T) for Children and Mothers by session.

	II	III	IV	V	VI	VII	VIII	DAD
NERYS; C	.40	.42	.34	.42*	.58*	.35*	.47*	.50
(WW) M	.33	.41	.29	.31	.32	.34	.33	.31
IWAN; C	.28	.29^	.21^	.29	.29	.32	.35	.41
(WW) M	.48*	.25	.26	.29	.28	.39	.30	.41*
BECKY; C	.24^	.42	.43	.28	.33	.24	.33	.24^
(WM) M	.28	.45	.28	.32	.38	.28	.27	.19
EMYR; C	.36	.44	.31	.28	.22	.27	.28	.33
(WM) M	.21^	.30	.27	.30	.28	.33	.34	.28
GAR; C	---	.31	.19^	.28	.32	.25	.30	.32
(MM) M	---	.39	.39	.34	.39	.54*	.51*	.33
DAVID; C	---	---	.49	.35	.44	.37	.44	.36
(MM) M	---	---	.24^	.25^	.25^	.25^	.24^	.23
MATT; C	.48	.65*	.47	.37	.26	.30	.41	.40
(WF) M	.52*	.53*	.52*	.34	.40*	.32	.37	.25
NIA; C	.61*	.52*	.57*	.36*	.28	.27	.34	.36
(WF) M	.28	.39	.37	.33	.31	.42	.36	.32
MICH; C	.43	.48	.43	.28	.31	.31	---	---
(EE) M	.26	.38	.55*	.36	.36	.38	---	---
LLYW; C	.47	.32	.25	.26	.31	---	.23^	.30
(EE) M	.43	.27	.27	.30	.27	---	.34	.26
MEAN C	.409	.429	.368	.319	.335	.297	.347	.356
SD C	.118	.116	.128	.054	.102	.044	.077	.069
MEAN M	.347	.374	.342	.314	.324	.360	.339	.287
SD M	.113	.091	.112	.031	.053	.084	.077	.063

C = Child, M = Mother, SD = Standard Deviation.

* = more than one SD above the mean

^ = more than one SD below the mean

NB: The nearer the T/T ratio approaches unity the more varied the word (or token) use.

encourage David. Neither was noticeable during the actual sessions. There seems to be no relation to language background.

Mean Length of Utterance (MLU)

MLU is a measure of language proficiency, and will be discussed in relation to stage of development in the next section. It is examined here in relation to the mother-child dialogues. Table Q4.2 is a summary table, showing the mean MLU for children and mothers in each session, (and for child and father in the extra session). As can be seen, there is a steady progression for the children from less than two words per utterance to over three words per utterance. The mean scores for mothers show a slight increase, but stay between three and four words per utterance throughout. However, there is an anomaly. Six of the subjects achieved a lower MLU at the second session than at the first and two further subjects may have done so but were not recorded at the second session. There is no simple explanation for this. At the first session it was difficult to understand what the infants were trying to say, and in analysis it was difficult to decide what counted as a baby utterance. It may well be that too generous an interpretation was placed on those recordings, or that some other factor associated with the novelty of the first session and the inexperience of the observer contributed to an overestimate of the children's data. Therefore, that first session will be treated as a pilot session for most purposes, and where possible examination of the MLUs will start with the second session.

Predictably the children's scores (and maternal scores) conceal wide individual differences. Table Q4.3 shows that all of the children progress fairly evenly across the sessions, but the rate and level of this progress differs widely. Maternal scores remain steadier, but differ from one

TABLE Q4.2; Mean MLU for Mothers and Children by session

	CHILD		MOTHER	
	Mean	SD	Mean	SD
SESSION I	1.67	0.46	3.34	0.41
SESSION II	1.42	0.26	3.64	0.28
SESSION III	1.96	0.46	3.42	0.45
SESSION IV	2.26	0.59	3.62	0.40
SESSION V	2.44	0.57	3.61	0.46
SESSION VI	2.50	0.53	3.66	0.45
SESSION VII	2.58	0.49	3.64	0.70
SESSION VIII	3.09	0.95	3.80	0.78
SESSION DAD	2.78	0.63	3.51	0.64

NB; The session with fathers took place within the month following the eighth session. These results are discussed in detail in Question 7.

another. Becky's mother (WM) had a number of scores which were significantly lower than the average means, and Llywela's mother (EE) had three scores significantly higher than the mean of the group. Although it was clear during recordings that the latter used rather sophisticated language with her daughter, it was not obvious that the former was using especially simplified language.

Turning to the children's MLUs, Llywela's MLU was more than a standard deviation above the group on four of the six sessions shown, and it was clear at the time that she was following her mother's conversation easily. Gareth (MM) also had scores significantly above average and Nerys (WW) had scores significantly below average. It was evident during the sessions that Gareth was producing longer utterances and that Nerys was producing almost monosyllabic replies and comments. Graph Q4.2a illustrates the scores for the five children whose

first language appeared to be English, and GQ4.2b the scores for the five whose first language appeared to be Welsh. They show that Iwan (WW) made the greatest progress in the Welsh group, moving from an MLU of 1.88 at the second session to 4.53 by session VIII, and that Nerys (ww) only increased her MLU from 1.54 at session II to 2.08 (or 2.19 at best) by the end. In the English group, Llywela (EE) progressed from 1.55 to almost five words per utterance at age three whilst David (MM) only moved from 1.88 to 2.42 in that time. Again there is no evidence of a relation with language background; the greatest and the least progress was made by the two WW children.

Gareth is of special interest as he was using both languages equally by the end of the study. His MLUs are not dissimilar to the rest. His progress appeared to halt at around Session VI, just as he was beginning to use more of his second language. However, examination of the Table reveals that seven of the ten children show a similar disruption in their progress around the sixth or seventh session. There appears to be no obvious explanation for this. The mothers of six of these children were pregnant or gave birth to a second child or were distracted by a new baby at around this time, and it is possible that these events led to a degree of regression in some of the children, but this is only speculation.

TABLE Q4.3; Mean Length of Utterance (MLU) for each Child and Mother by session

	II	III	IV	V	VI	VII	VIII
NERYS; C (WW)	1.54	1.36 [^]	1.58 [^]	1.89	1.51 [^]	2.19	2.08 [^]
	M 3.99*	3.13	3.58	3.05 [^]	3.41	3.17	3.03
IWAN; C (WW)	1.88*	2.37	2.89*	2.65	3.00	2.76	4.53*
	M 3.74	3.34	3.34	3.45	3.68	4.96*	5.16*
BECKY; C (WM)	1.18	1.89	1.85	1.89	2.00	2.32	2.35
	M 3.51	2.61 [^]	3.39	2.76 [^]	2.76 [^]	2.91 [^]	2.74 [^]
EMYR; C (WM)	1.21	1.60	2.16	2.46	2.76	2.32	2.43
	M 3.50	3.44	3.31	3.93	3.61	3.22	3.28
GAR; C (MM)	--	2.53*	2.70	3.15*	2.81	3.51*	3.27
	M --	3.84	3.61	4.00	4.56*	3.74	3.82
DAVID; C (MM)	--	--	1.82	1.94	1.79 [^]	1.99 [^]	2.42
	M --	--	4.31	3.87	3.75	3.65	3.87
NIA; C (WF)	1.47	2.21	2.32	3.03	2.64	2.70	3.31
	M 3.95	3.43	3.44	4.08	3.56	3.49	3.74
MATT; C (WF)	1.48	1.47	1.79	1.61 [^]	2.82	2.30	2.77
	M 3.82	3.36	3.74	3.67	3.72	3.05	3.81
LLYW; C (EE)	1.55	2.52*	3.48*	3.12*	2.95	--	4.67*
	M 3.21 [^]	4.24*	4.30*	4.04	3.95	--	4.78*
MICH; C (EE)	1.05	1.72	2.01	2.61	2.70	3.15*	--
	M 3.42	3.41	3.15	3.32	3.64	4.55*	--
MEAN C	1.42	1.96	2.26	2.44	2.50	2.58	3.09
SD C	0.26	0.46	0.59	0.57	0.53	0.49	0.95
MEAN M	3.64	3.42	3.62	3.61	3.66	3.64	3.80
SD M	0.28	0.45	0.40	0.46	0.45	0.70	0.78

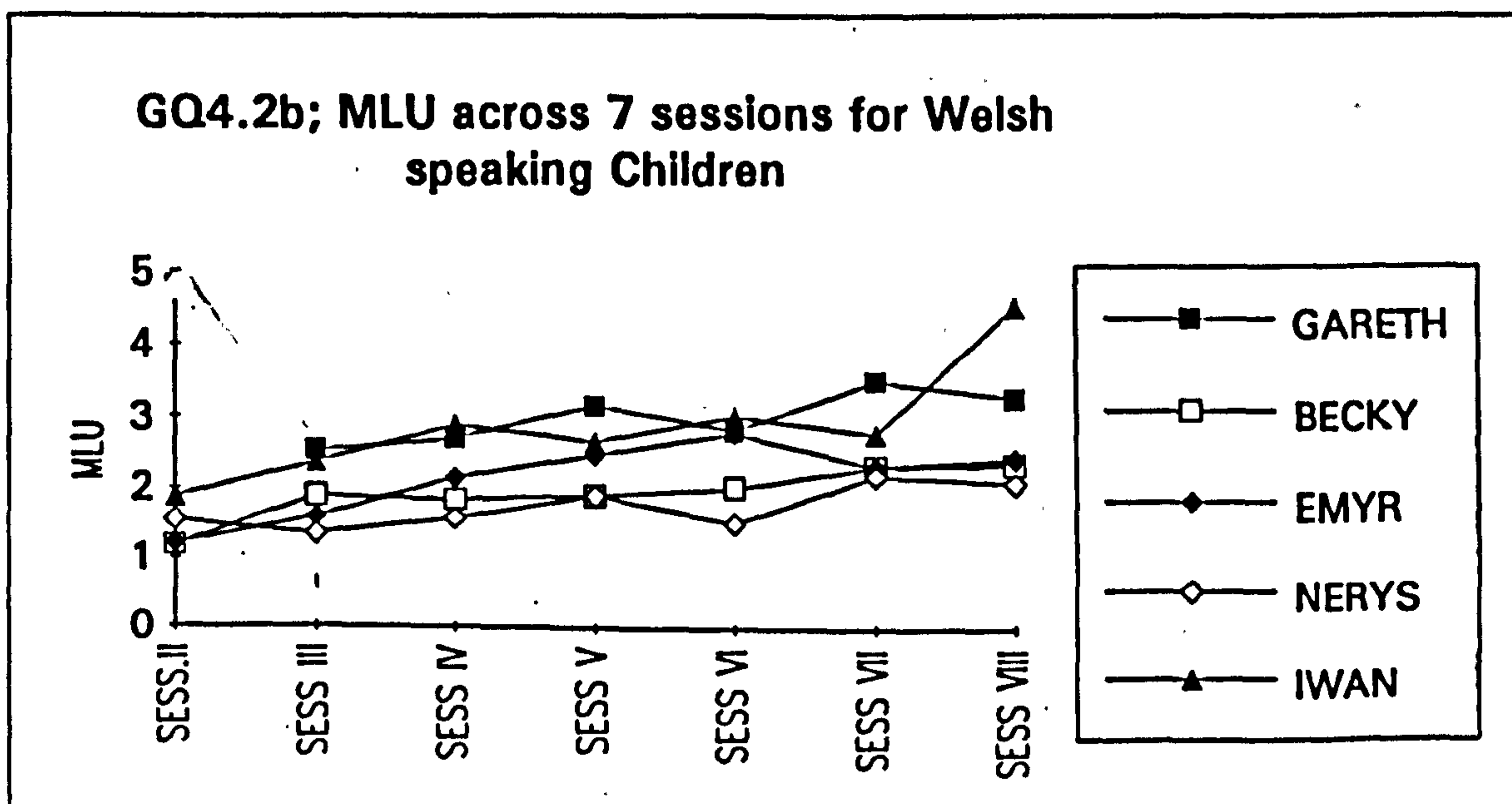
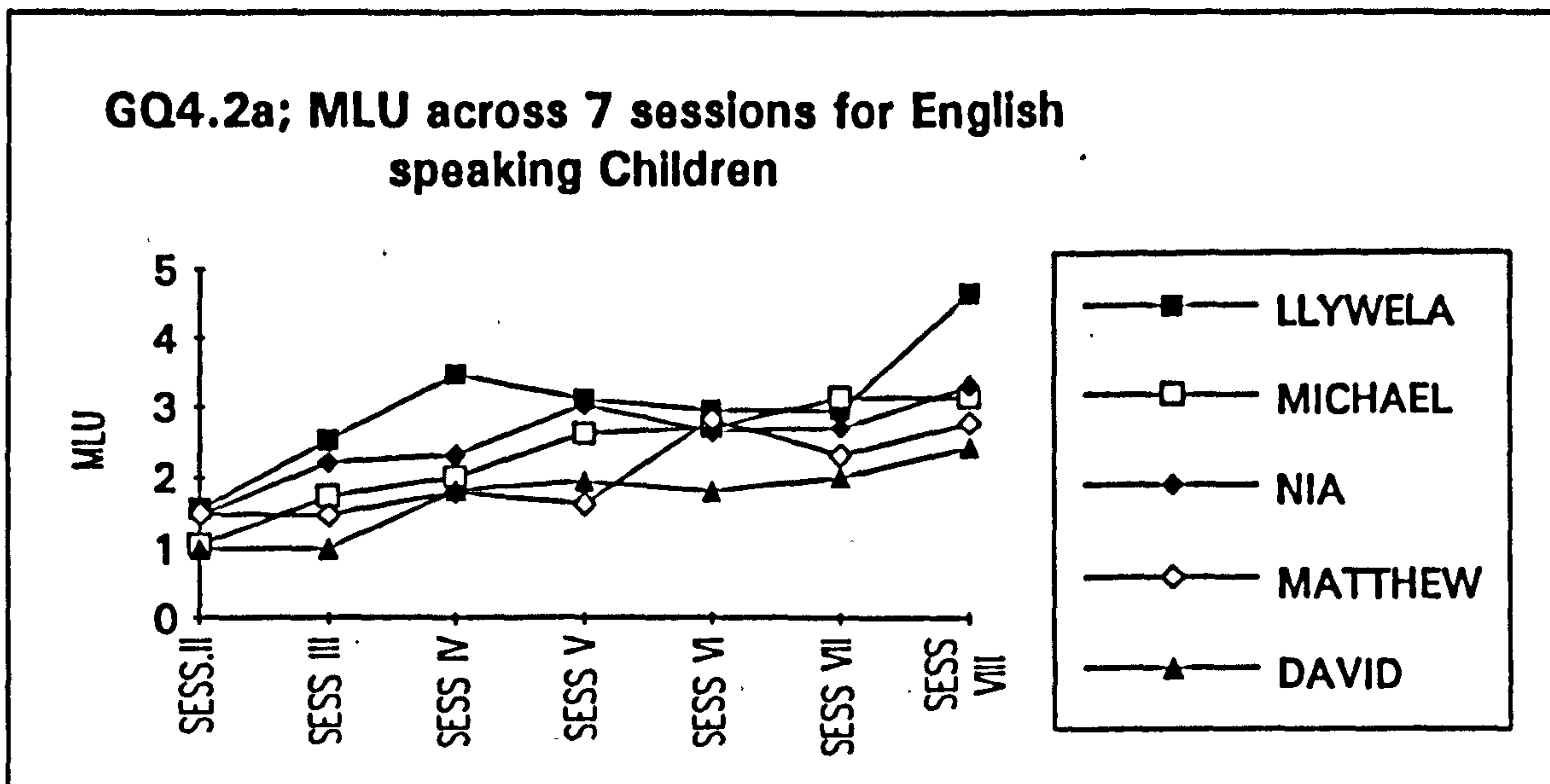
C = Child, M = Mother, SD = Standard Deviation.

* = more than one SD above the mean

[^] = more than one SD below the mean

NB; Higher MLU scores indicate more complex language use.

GRAPHS OF ENGLISH & WELSH SPEAKING CHILDREN
 COMPARED



3. STAGES

As noted elsewhere, MLU is a crude measure, and closer examination of the texts is necessary to assign stages of language development to each child at each session. A full description of stages as described by Brown (1973) and by Crystal (1976) is given in the Methodology chapter, however Table Q4.4 summarizes the key features. Although many researchers warn against equating language development with chronological age, Crystal does suggest approximate ages for stages and so these too are noted.

**TABLE Q4.4; SUMMARY OF STAGES IN LANGUAGE DEVELOPMENT;
Brown and Crystal**

BROWN			CRYSTAL	
MLU	FEATURES	STAGE	FEATURES	AGE
1.75	Content words, No functors	I	Single element	by 18m
2.25	Modulation of meaning	II	2 words together	18m - 24m
2.75	Negation, Interrogation, Imperatives	III	3 element utterance	24m - 30m
3.50	Embedding one simple sentence in another.	IV	4 or more elements, Simple sentences	by 36m
4.00	Co-ordination of sentences.	V	Clauses, Use of 'and' & 'but'	about 42m
Later	Tag questions etc.	VI	Pronouns, Auxiliary verbs, etc	about 48m onwards

Table Q4.5 shows the stage assignment of each child at each session according to criteria from both Brown (1973) and Crystal (1976). MLU scores are included for comparison, but presence of key grammatical features was given greater weight.

A child was assessed as having reached a stage when a number of examples of the use of pertinent grammatical features were found in the text. Uncertain instances were checked with the script; sometimes children at an early stage imitated complex maternal utterances perfectly. Some aspects of the Welsh language make it difficult to be confident of stage allocation, despite reference to Ball (1987). As the writer is a first language English speaker, phrases that are usually learned as single words (such as 'allgone' and 'cummon') were immediately recognised as such, unlike phrases in a second, late-learned language. Some such phrases may well have gone unnoticed. Further, the tag 'yea?' or 'ia?' is part of the style of speakers in Wales, and does not appear to have the same value as a developmental marker as stage VI tag questions and therefore was not included in the assessments. Examination of texts will be discussed individually before further comparisons are made.

NERYS (WW)

Nerys was capable of two word utterances from the fourth session onwards, with "het hen"/"Bwgan Brain hapus"/"shish arall"/ ("old hat"/ " happy scarecrow"/ "other shish [fish]"/). She was then about two years old, and was never a very communicative child. Only occasional examples of stage 3 utterances were heard before the seventh session when stage 4 utterances were also recorded. As well as the first three element sentences such as "lle mae coch?" ("where's the red?") and "dwi isio hair-dryer", The following were recorded; "rhywbeth wedi newid yn fana" ("something has changed there") "hogia bach hefo coech babi" ("little boys with a baby pram") "ti'm 'di gweld hwna" ("you didn't see that") and "fi tynnu hwn o bocs" ("I'm taking that out of the box), all stage 4 utterances. From the first session, Nerys used occasional words and phrases in English, such as "bad boy" and "no way!", and they were scattered throughout the recordings. No

progression of English usage was noted.

IWAN (WW)

Iwan was at stage 2 by the third session; "yli bont"/ "do eto"/ "pont di disgyn"/ "dau goch"/("look bridge"/"yes again"/"bridge fallen down"/and "two reds"/). He moved to stage 3 at least by the fourth session, and to stage 4 by the fifth with utterances such as "Jean rhywbeth i tren" ("Jean [take] something to the train") "dafad arall 'di mynd yn fana" ("the other sheep went in there") " a golau coch i tractor mynd" ("and the red light for the tractor to go") and "mynd i coedan arall nath hi" ("go to the other tree she did"). At the next session he had moved on to stage 5, and it is possible that he reached a further stage before the end of recording, but it becomes more difficult to assign equivalent stages in Welsh as the child's usage becomes more sophisticated. The following examples are taken from the last three sessions and judged as being stage 5, but that judgement is conservative; "lle mae ceffyl 'di dychryn Smot?" ("where's the horse which frightened Smot?") "a be di hwn yn cnocio ar coed" ("and what's that knocking on wood?") "'misio darllen llyfr i doli" (" don't want to read the book for the dolly") "un arall 'di disgyn ar ben Mam" ("another one fell on Mam's head") "bysa fo'n eista cael bici" ("he must sit [down] to get a bici") "f'isio cael hwna cyn i wydda mynd ar ol bwyta cae" ("I want to get that before the geese go back to eat the field"). He used single words and phrases in English from the second recording session, and at the seventh session a few stage 3 examples were recorded, namely "stand well there" and "will he drip?". There was no evidence of this level of usage at the final session, only single element utterances again.

TABLE Q4.5; Stages reached by individual Children by Session according to Criteria from Brown and Crystal, with MLU for each Child .

		I	II	III	IV	V	VI	VII	VIII
NER	Stg	1	1	1	2	2	2	4	4
WW	mlu	1.67	1.54	1.36	1.58	1.89	1.51	2.19	2.08
IWA	Stg-W	1	1	2	3	4	5	5	5
	Stg-E	1	1	1	1	1	1	3	(3)
WW	mlu	1.90	1.88	2.37	2.89	2.65	3.00	2.76	4.53
BEC	Stg-W	1	1	1	2	3	3	4	4
WM	mlu	1.40	1.18	1.89	1.85	1.89	2.00	2.32	2.35
EMY	Stg-W	1	1	2	2	3	4	5	5
	Stg-E	1	1	1	1	1	1	3	(3)
WM	mlu	1.30	1.21	1.60	2.16	2.46	2.76	2.32	2.43
GAR	Stg-W	1	(1)	3	3	4	4	4	5
	Stg-E	1	(1)	1	1	1	3	3	4
MM	mlu	1.61	--	2.53	2.70	3.15	2.81	3.51	3.27
DAV	Stg-E	1	(1)	(1)	1	2	3	3	4
MM	mlu	1.88	--	--	1.82	1.94	1.79	1.99	2.42
NIA	Stg-E	1	1	3	3	4	4	4	5
WF	mlu	1.07	1.47	2.21	2.32	3.03	2.64	2.70	3.31
MAT	Stg-E	1	1	1	2	2	3	3	4
WF	mlu	1.17	1.48	1.47	1.79	1.61	2.82	2.30	2.77
LLY	Stg-E	1	1	3	4	5	6	(6)	6
EE	mlu	2.50	1.55	2.52	3.48	3.12	2.95	--	4.67
MIC	Stg-E	1	1	1	2	3	4	5	(5)
EE	mlu	2.18	1.05	1.72	2.01	2.61	2.70	3.15	--

Stg-E = Stages in English
Stg-W = Stages in Welsh

Three children moved beyond stage 1 in their second language, Iwan, Emyr and Gareth. (see Graphs 4.5a, 4.5b, and 4.5c)

Where a session was not recorded the stage value for the previous session is assumed (in brackets).

BECKY (WM)

It wasn't till the fourth session that Becky reached stage 2 with utterances like "dim tatws" ("no potatoes"), "isio potel" ("want a bottle") and "mwy caws" ("more cheese"). The following session produced stage 3 examples; "ti'n tynnu sgidiau" ("you take off shoes") "moo-moo 'di bwyta bwyd" ("moo-moo ate food") and "isio sws i fo" ("want to kiss it"). By the seventh session, when she was about 34 months old, Becky was using Welsh at stage 4, with "Becky doli isio ffisig" ("Becky's dolly wants medicine") and "isio bwyd yn fana y gyd a llwy" ("want all the food over there [with] and a spoon").

From the third session or so Becky was using occasional English words and phrases, but their frequency hardly increased. By the end she was probably at stage 1 for English.

EMYR (WM)

By the third session Emyr had reached stage 2 with utterances such as "dau golau" ("two lights") and "hiya Nain". He reached stage 3 by the fifth session with "fana mae'n gweld rwan" ("he sees [from] there now") "gael chips i tea" ("get chips for tea") and "pushio fo fana fela" ("push him there like that"). There were some words and phrases in English at this session, but not enough to score beyond stage 1. At the seventh session, however, Emyr used a number of English utterances ("there allgone rwan"/ "want a pillow I said") indicating that his English was at least up to stage 3. At this time his Welsh was at stage 5 with utterances such as "mae nhw yn mynd yn ol i bye-byes" ("they are going back to bye-byes") and "tedi mynd i fana a doli mynd i bath" ("teddy goes there and dolly goes to the bath").

GARETH (MM)

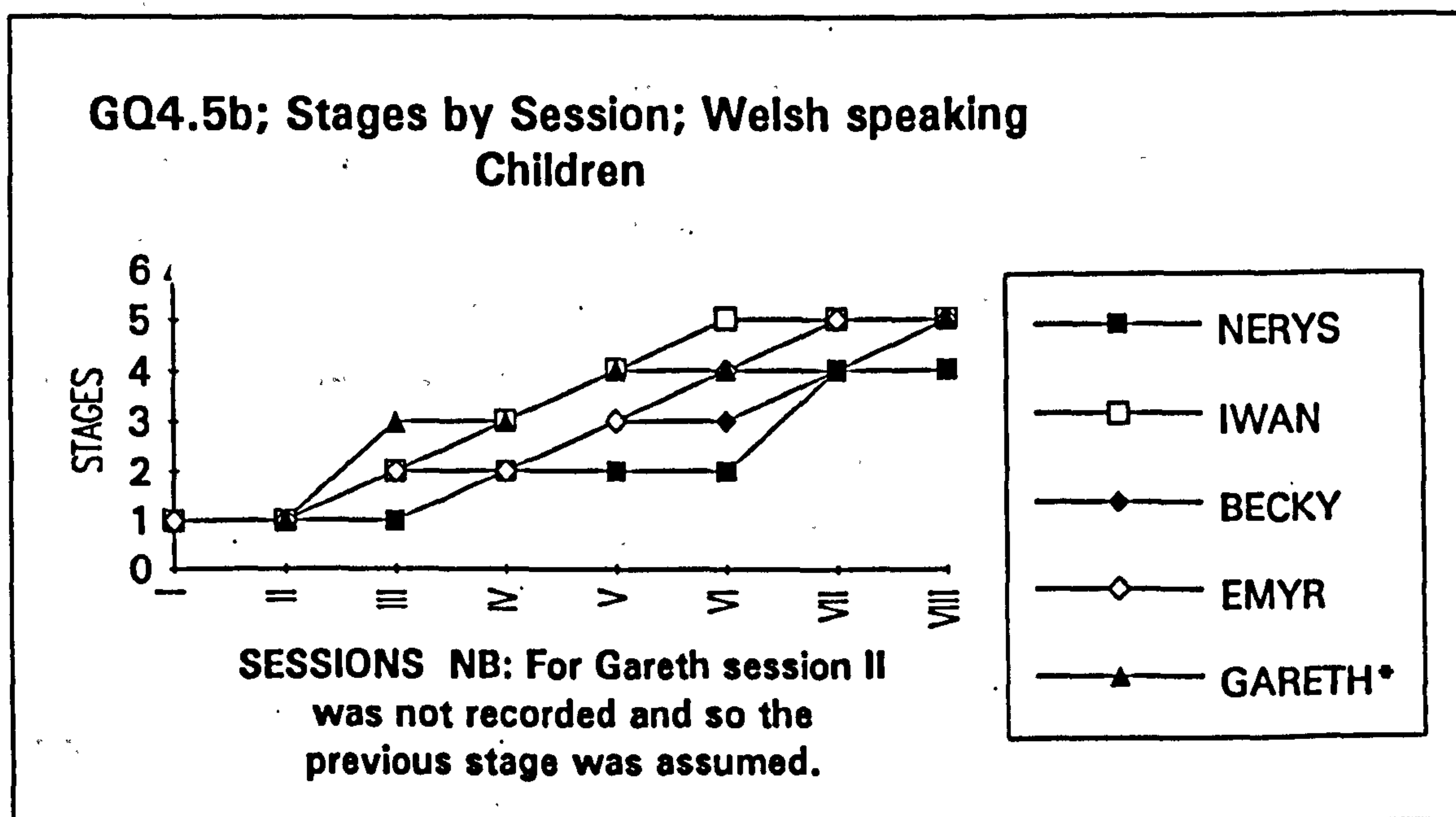
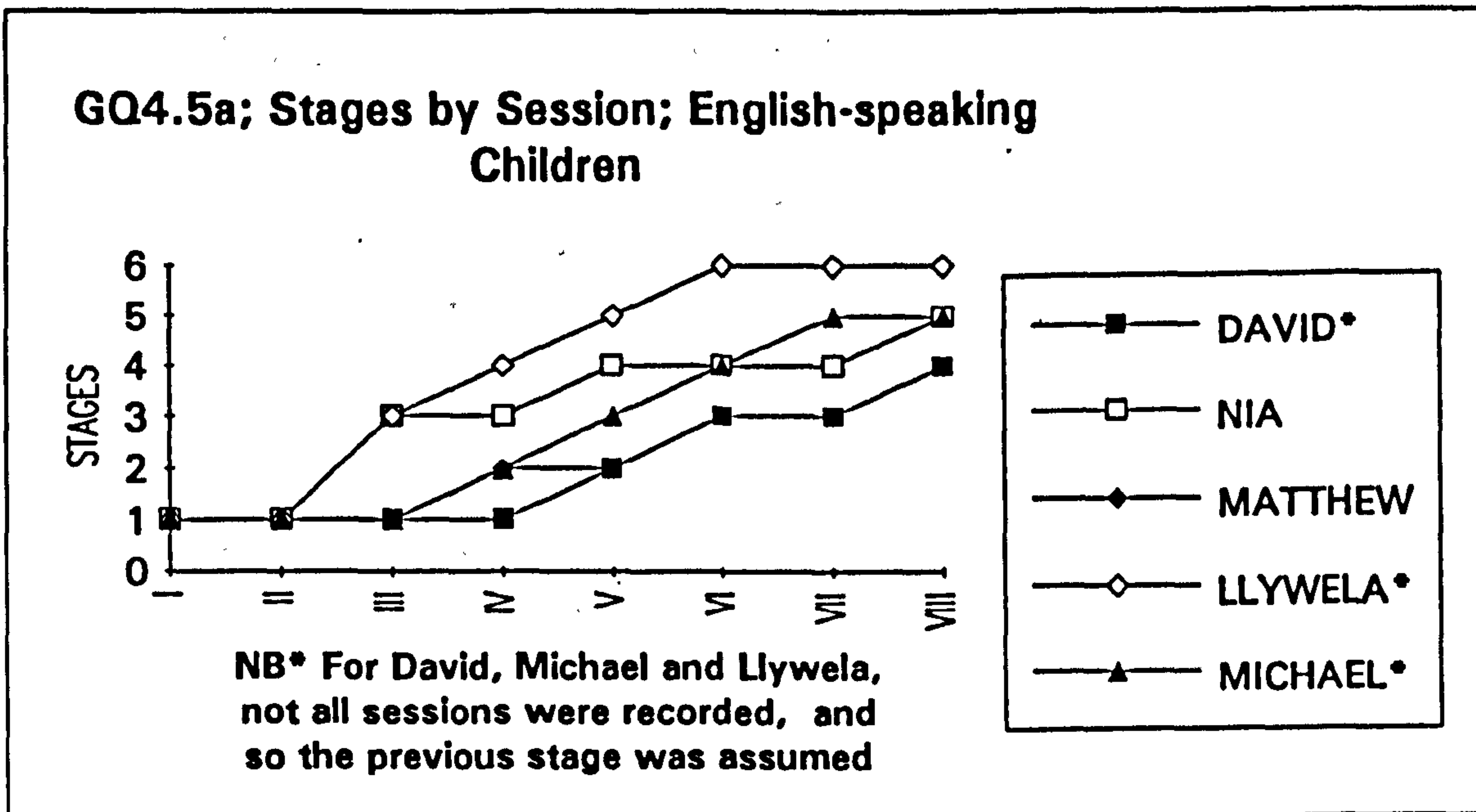
Gareth had reached stage 3 by the third recording with utterances such as "fan bach wedi disgu" ("little van fell")

and "mam neud hwnna" ("mam do that"). He was using a few English words only. By the fifth session he had reached stage 4 with at least four elements in his sentences; "dwad i codi heina'n munud ia?" ("come to pick those up in a minute yes?") and "mae tractor bach yn mynd i fana rwan" ("the little tractor is going there now"). At the next session, when he was about 30 months old, he was using English syntax for some of his utterances, at about stage 3 level. These included "I want a cup of tea"/ "I don't know"/ "that's my cwpan" (cup). Possibly stage 3 is an underestimate, but as these examples suggest, it's not clear if phrases such as 'a cup of tea' are understood as separate words. At the last session he had reached stage 4 for English with utterances such as "it's the wrong way in there" and "I put it in the trailer". For Welsh he had reached stage 5 with "mae isio mynd ffor trwy fana ag i Llangefni" ("[it] wants to go along through there and to Llangefni") and "dod allan y tractor rhoid nhw yn y trailer" ("come out of the tractor to put them in the trailer").

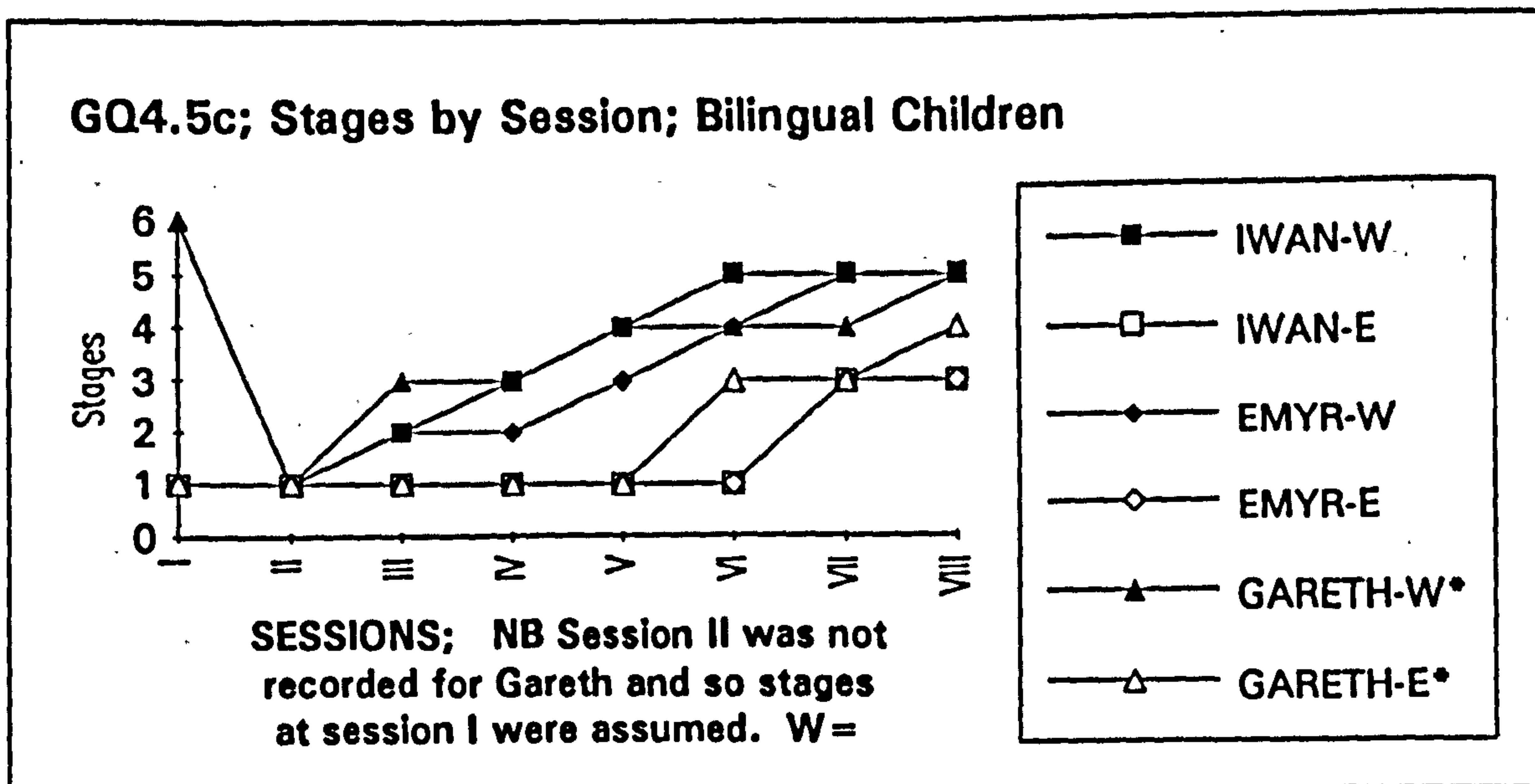
David (MM)

David's language was slow to develop, but by the fifth session he was using two word and occasionally more complex utterances ("I de (don't) like bridge"). This pattern continued. Despite occasional examples of higher stage functioning, most of David's recorded utterances were single words, even up to session VIII when he was three years old. By then he was also producing stage 4 sentences such as "I put it in the bin" and "me can't find the king" but generally he did not produce much spontaneous speech.

GRAPHS OF STAGES FOR ENGLISH & WELSH SPEAKING CHILDREN COMPARED



CHILDREN WHO WERE BECOMING BILINGUAL



NIA (WF)

Examination of the scripts suggests that Nia was at stage 3 by the third session at about age 21 months. Utterances included "I gonna take it"/ "men go in it"/ "Mummy make tan(fire)"/. By the fifth session she was using stage 4 utterances such as "I did fell on the bike" and "I had buy a ice cream". By the eighth session she told her mother " Mom you're a naughty girl knocking that over" and " I can knock them over with my hand", both examples of stage 5 functioning.

MATTHEW (WF)

Matthew's language was slow to develop, but by the fourth session he was at stage 2, using utterances such as "horsey jump" and "come on mam". By the sixth session he had progressed to stage 3 ("where's daddy gone" "I want brechdan (sandwich)"). He continued to use occasional Welsh words and phrases and at the last session, when he was about three years old. He had then moved to stage 4 with utterances such as "I don't like him" and "he doed his hair now".

LLYWELA (EE)

Llywela's language developed rapidly, and her eagerness to express herself often outpaced her accuracy. Initially she was quite difficult to understand, even for her mother. However, by the fourth session when she was just over two years old she was using embedding such as "I know where the jigsaw is"/ "where's these bits of Tommy's go?" and "I want to play with this purse" which is at least a stage 4 skill. By the sixth session she was at stage 6, with utterances with tags such as "you won't do a silly one on this page will you?" and "this house hasn't got round windows has it?" and by the last session was using conditionals and negative auxiliary verbs. Although there are still mistakes, her meaning is clear; "all the glasses of wines aren't meaning to go into the house"/"he has something what he doesn't always want to do" and "when I came back I would put him straight on the stairs."

MICHAEL (EE)

Initially Michael too had difficulty with pronunciation. He does not appear to have reached the second stage until the fourth session, but at that time, as well as many two word utterances, some three element utterances were recorded; "where's frog gone" and "dis frog do dis". By the sixth recording, when he was 30 months old, he was at stage 4, saying "the dolly can't see them"/ "her will go back to bed"/ "there's a cup on her place"/ and by the seventh session (his last) he was using clauses freely and co-ordinating sentences as in "I'd better get the teas for the party"/ "we'd better put this on for her" and "do this one and get the tea things", features of stage 5.

Stages Summarized

The above results are summarized in Table Q4.5, and shown graphically in GQ4.5a and GQ4.5b for the two groups of children, those whose first language was English and those whose first language was Welsh. A further graph, GQ4.5c charts the stages achieved in both languages by the three children, Iwan, Emyr and Gareth, who appeared to be learning Welsh and English. All ten children were at stage 1, one element utterances, at nineteen months old (session II), and had reached at least stage 4, involving simple embedding, by three years old. An English-speaking child seems to have progressed the most, to stage 6, but at least one child from each kind of background had reached stage 5. Therefore there seems to be no link between stage of language development and the language being developed. Neither do there appear to be major differences in the pattern of progress between the Welsh and English speaking children. As there were gaps of about three months between recording sessions, the data do not lend themselves to finer analyses.

Of especial interest are the three boys who gave evidence of learning two languages. Iwan (WW), Emyr (WM) and Gareth (MM) all reached stage 5 in Welsh and at least stage 3 in English by session VIII. Examination of Graph Q4.5c shows that they reached at least stage 4 in their first language before moving beyond single word utterances in their second language (which was English in each case). Also, none of these three was slow to move beyond single utterances. It is possible that any or all of the remaining children would develop their second language over the subsequent year.¹

¹ Two further children, Nia (WF) and Becky (WM) developed their second language to at least stage 3 in their fourth year.

4. DEVELOPMENT IN THE POPULATION

For the 177 families who replied to the second questionnaire, it is possible to report on some aspects of language development reached by age three. Table Q4.6 shows the percentage of children who were reported to use each of nine aspects of each language regularly. These data are presented graphically in GQ4.6. It should be noted that every child was given a score for every aspect of both languages, 18 scores in all.

Table TQ4.6; Aspects of Welsh and English by Frequency of Use; Percentages of children using each aspect of both languages by age three years. N = 177

WELSH	N	S	O	ENGLISH	N	S	O
Single Words	18%	25%	57%	Single Words	6%	23%	71%
Many Words	35%	12%	53%	Many Words	19%	12%	69%
2 words together	35%	10%	55%	2 words together	14%	15%	71%
Wedimynd	45%	7%	48%	Allgone	11%	16%	73%
Mawr/Bach	42%	10%	48%	Big/Littl	23%	13%	64%
Sentences	46%	6%	48%	Sentences	23%	11%	66%
Colours	38%	15%	47%	Colours	31%	20%	49%
Yesterday	54%	12%	54%	Yesterday	37%	14%	49%
Stories	51%	6%	43%	Stories	32%	15%	53%

N = Not yet using this
S = Sometimes uses this
O = Often uses this

NB; Every child has a score for each of the nine aspects in Welsh AND for each of the nine aspects in English.

About two thirds (66%) of the population had begun to use simple sentences in English according to their parents,

probably a stage 3 level at least, and about half were talking about yesterday and telling stories, a stage 4 or 5 level. Also, just less than half of them, (48%) were at about stage 3 in Welsh, and between 34% and 43% were at stage 4/5 in Welsh. As all parents were asked about the development of both Welsh and English, these results are influenced by monolingual speakers from both languages. An attempt to disentangle these groups is reported later in this section. As can be seen from Tables TQ4.7 and TQ4.8, the small sample mirrors these results quite well, especially in the development of English. However, the data from the small sample were taken from questionnaires, and there appear to be discrepancies; three of the mothers seem to be unaware of the amount of English being used by their Welsh speaking children, and two of the mothers of English speaking children appeared to have overstated their child's ability in Welsh. Iwan (WW) was recorded using three word utterances in English, but his mother only acknowledged single words: Nerys (WW) slipped many English words and phrases into her recorded conversations, but her mother wrote that she had virtually no English: Gareth's mother (MM) did not think he could talk about yesterday or try to tell stories in English, but he was recorded telling a long (if muddled) account of the previous day's events in English.

It's possible that there was some over-estimation as well, indicated in Table Q4.7. Neither Nia (WF) nor Matthew (WF) were heard to use Welsh beyond a single or occasional two word level, and yet their mothers claimed they often used sentences in Welsh. It is possible that these children used much less Welsh during the recorded sessions than normally, but there were no indications that there were such discrepancies in the informal discussions held with mothers at the time.

**TABLE Q4.7; Aspects of Welsh;
QUESTIONNAIRE II POPULATION and SMALL SAMPLE COMPARED**

	SW	MW	2W	W	MB	C	S	Y	St	ALL
% OF Q. POP	57	53	55	48	48	47	48	34	43	38
% n=10	80	80	70	70	70	70	70	50	50	50
IWAN	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
NERYS	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
EMYR	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
BECKY	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
GARETH	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
DAVID	S	N	N	N	N	N	N	N	N	0
NIA*	Y	Y	Y	Y	Y	Y	Y	N	N	7
MATTHEW*	Y	Y	Y	Y	Y	Y	Y	N	N	7
LLYWELA	Y	Y	N	N	N	N	N	N	N	2
MICHAEL	S	N	N	N	N	N	N	N	N	0

SW= single words
 MW= many words
 2W= two words together
 W = wedimynd
 MB= mawr-bach
 C = colours
 S = sentences
 Y = yesterday
 St= stories

Y = Yes
 S = Sometimes
 N = No

(In the small sample,
 only a Yes score was
 counted)

Percentages for the normal population AND for the small sample are of Mothers answering Yes in each category.

* From the recorded scripts, there was not always evidence to support the level of Welsh usage claimed for these children.

**Table Q4.8; Aspects of English;
QUESTIONNAIRE POPULATION and SMALL SAMPLE COMPARED**

	SW	MW	2W	A	BL	C	S	Y	St	ALL
% OF NORM	71	69	71	73	64	49	66	49	53	51
% n=10	80	70	70	70	60	50	60	30	40	30
IWAN*	Y	N	S	S	N	N	N	N	N	1
NERYS*	S	S	S	S	N	S	S	N	S	0
EMYR	Y	Y	Y	Y	N	S	S	N	S	4
BECKY	S	N	S	S	N	N	N	N	N	0
GARETH*	Y	Y	Y	Y	Y	S	Y	S	S	6
DAVID	Y	Y	Y	Y	Y	Y	Y	S	S	7
NIA	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
MATTHEW	Y	Y	Y	Y	Y	Y	Y	N	Y	8
LLYWELA	Y	Y	Y	Y	Y	Y	Y	Y	Y	9
MICHAEL	Y	Y	Y	Y	Y	Y	Y	Y	Y	9

SW= single words
 MW= many words
 2W= two words together
 W = wedimynd
 MB= mawr-bach
 C = colours
 S = sentences
 Y = yesterday
 St= stories

Y = Yes
 S = Sometimes
 N = No

(In the small sample,
 only a Yes score was
 counted)

Percentages for the normal population AND for the small sample are of Mothers answering Yes in each category.

* From the recorded scripts, there was evidence to support a higher level of English usage than claimed for these children.

It is possible that the parents of mostly Welsh speaking children don't notice how much English their children are using. They are surrounded with the English language, and do not always identify it as not-Welsh. This was the subjective impression of the author during recordings. On the other hand, both of the discrepant children in the second table were from WF families, families where the father was a Welsh speaker and mother spoke English. In these two families there was pressure on the children to use Welsh, a pressure most evident in the session with child and father alone. Possibly these mothers, having little or no Welsh themselves, were being over-optimistic about the use of that language by their children.

It does indicate that caution is necessary when examining these data. Parents are not the most objective observers of their own children, and a degree of over estimation is to be expected. If this is so, it must apply to both parents as there were no significant differences between the reports of either parent on the development of aspects of English or Welsh in their children (see Question 7).

To identify those in the population who were learning to communicate in two languages, a bilingual variable was created by subtracting each child's score in Welsh from that in English. Those with scores approaching zero were termed 'bilingual'. This was described in more detail in the methodology chapter. Table Q4.9 (illustrated in graphs GQ4.9a and 4.9b), shows that most of the group of children identified as bilingual could use simple sentences in either language by age three, probably stage 3. For each of the last six aspects, when compared with the Welsh group, fewer of the bilingual group were using Welsh aspects, but more were using English aspects, and compared with the English group, fewer were using English aspects but more were using Welsh aspects. At least

40% of this group appear to have reached about stage 4 or stage 5 in one language at least, and that percentage may be higher.

Most of the children assigned to the Welsh group in the population had no English and most of those assigned to the English group had no Welsh. Slightly fewer children in the Bilingual group had mastered the simple aspects of Welsh or English than had the monolingual groups, about 50% used complex English and about 70% used complex Welsh aspects of language. As more children in this group had mastered the simpler and more complex aspects of Welsh than of English, it is arguable that the first language of Bilingual children in this population is more likely to be Welsh.

These Bilingual children had probably reached stage 4 at least in their first language and stage 3 in their second language by age three, reflecting the results of the bilingual children in the small sample. The monolingual groups also reflect the progress of the individual monolingual children. Table Q4.9 showed that almost all of the Welsh speaking group from QII were using all of the Welsh aspects by three, and almost all of the English speaking children were using the English aspects by that time. Although finer analysis is not possible, that indicates stage 4/5 development, and the seven monolingual children from the small sample were at least at that stage by the same age.

TABLE Q4.9; Children's Language Development in the QII population; Language Groups by Aspects of Welsh and English

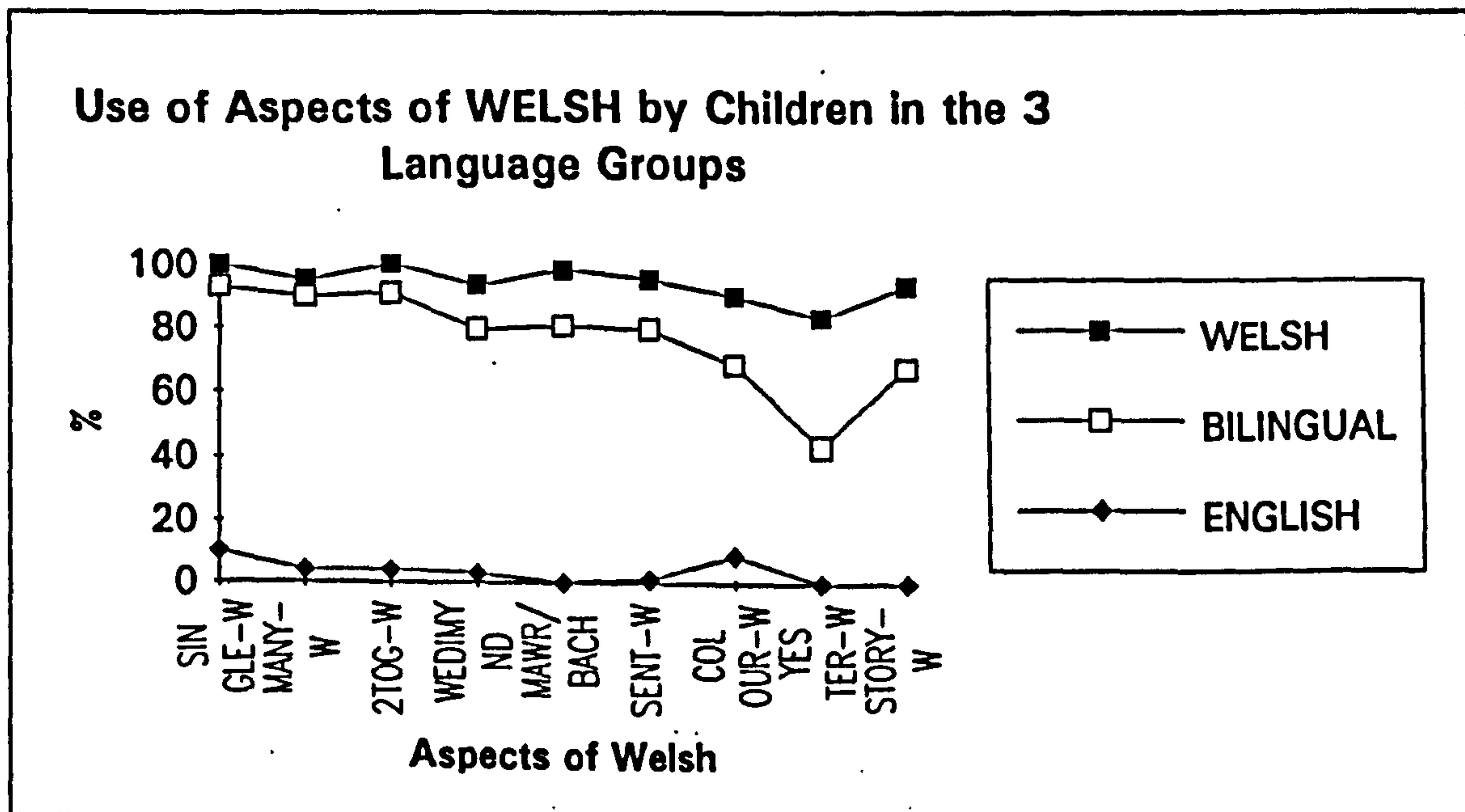
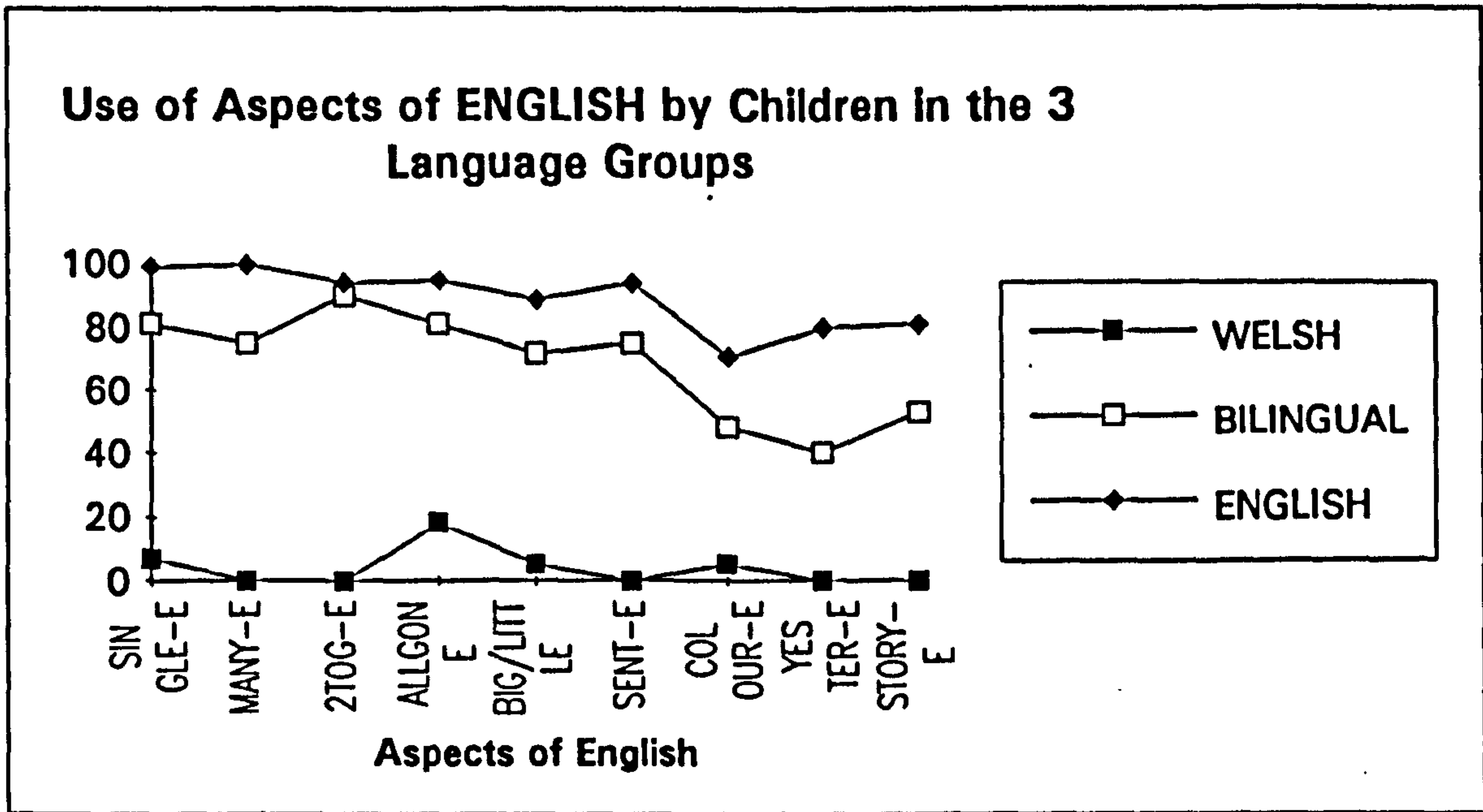
% using Aspects	WELSH N= 41		BILINGL N= 57		ENGLISH N= 79	
	in E	in W	in E	in W	in E	in W
Single Words	7%	100%	81%	93%	99%	10%
Many Words	0%	95%	75%	90%	100%	4%
2words tog.	0%	100%	90%	91%	94%	4%
Allgone/ Wedimynd	18%	93%	81%	79%	95%	3%
Big-Ltl/ Mwr-Bach	5%	98%	72%	80%	89%	0%
Sentence	0%	95%	75%	79%	94%	1%
Colours	5%	90%	48%	68%	71%	9%
Yesterdy	0%	83%	40%	43%	80%	0%
Stories	0%	93%	53%	67%	81%	0%

Percentages frequently achieving each aspect of Language according to Mother's reports. N=177

*Aspects above the dotted line are referred to as Simple Aspects
Aspects below the dotted line are referred to as Complex Aspects*

(nb Only those children reported to use an aspect of Welsh or English "Often" are included above. "Sometimes" and "Not yet" replies have been omitted.)

GRAPHS 4.9; a; Use of Aspects of ENGLISH & 4.9b; Use of Aspects of WELSH



5. SUMMARY

The type/token ratio (T/T) did not reveal a great deal about the process of language acquisition, but the MLU did. Clearly, as the children acquired more language their MLU increased. In the early sessions MLUs were around 1.5, or one and a half words per utterance. By session VIII they had increased to around three. Some children progressed further and at a faster pace than others, but this did not appear to be related to one language rather than to another, or to the presence or absence of a second language. The child who had best mastered a second language by age three had a slightly above average MLU at the end.

MLU is a crude measure of language development, and so scripts were examined in detail to identify the stage of language development each child had reached, using the work of Brown (1973), Crystal (1976), and Ball (1987). It proved more difficult to assign levels to the Welsh-speaking children, and so it is possible that these scores are conservative. However, all of the children were at stage 1 at the stage of recording and all had moved to at least stage 4 by the last session. The three who showed evidence of developing their second language did not do so until their first language was at least at stage 4, and then progressed to stage 3 in their second language by age three.

The larger sample achieved comparable results. By separating them into three groups it was possible to see that most of the bilingual group achieved stage 3 at least in both languages, and probably stage 4/5 in one language. Most of the children in the monolingual groups were using all aspects of their first language and so they too had achieved stage 4/5 by age three. There is some indication that the first language of bilingual children is more likely to be Welsh than English.

Question 5: HOW ARE THESE CHILDREN USING LANGUAGE?

1. INTRODUCTION

Learning language is not just learning words and what they mean, it is learning how to make use of language in context. It is not just learning to communicate information to other people, it is learning the shared conventions in order to make language the vehicle for a wide range of messages about thoughts and feelings, past and present, and in particular, about social relationships. It is an extremely sophisticated process. Messages can be conveyed through choice of language, of code, of word, of intonation, of timing and in many other ways. One can choose the obscure adjective in Latin, can make questions sound like imperatives and can allow silence to speak for you. The use of language in such differing ways to perform many different functions is known as pragmatics, the practice of language. It is concerned not so much with the accuracy of syntax and pronunciation, but with the function of language and how language is employed to communicate, frequently at more than one level (Dore, 1975; 1979).

Although a subtler skill than word or even syntactic learning, normally children become skilled in pragmatics even before they acquire language. Babies learn timing at the breast (Kaye, 1977), and very young infants learn to share their mother's frame of reference through looking and touching, and later through specific gestures such as pointing, waving and, in the UK, holding their arms up (to be lifted) (Bates et al., 1979). These are later accompanied by demonstrative words such as 'da', 'der', 'yli', 'look', and so forth. Atkinson, (1979) argues that the function of many early words is simply to draw the attention of another person rather than to name the object.

Later both monolingual and bilingual children are taught what to say (please and thank you), how to say it (no shouting) and when to say it (speak when you're spoken to and don't interrupt). They learn to recognise social distance and relative power in relationships and respond accordingly. Young children have been shown to address requests to fathers less directly than to mothers, and to treat siblings less politely than strangers (Ervin-Tripp 1982). In the process they also become aware of language itself, of who speaks as they do and who does not, and of how different people say things differently. In Wales, they notice that people use differing languages before they can identify them as Welsh and English. It has been argued that this is the beginnings of metalingual awareness.

Question 6 will look to the small sample for evidence of metalingual awareness, of talking about talking. This section looks at the development of other pragmatic skills. First the scripts were examined for examples of both functional and stylistic use of language across the sessions and between the subjects. Secondly, these examples were examined for evidence of a functional sequence as described later in the section. Attention was paid particularly to differences which could be associated with language background.

2. FUNCTIONAL SEQUENCE

Many researchers have noted that children learn to use the functions of language and communication in a developmental sequence. (for example, Bates, 1976; Bruner, 1977; Sugarman-Bell, 1978; Halliday 1979). Elizabeth Bates (1976) described the development of children's use of language in context from demonstratives and locatives ('that over there') through reference to participants in a dialogue, and connecting terms

('I went there and John did that') to time references and then performatives which entail an intention to ask, command, promise etc. Her viewpoint was that of the child actively constructing meaning and using language to do so. Bruner's (1977) viewpoint was that of the child-parent dyad, where communication rather than language per se is the tool. He suggested that children learn modes of communication. Initially they demand, once an expectation is established, they learn to request, and then to exchange both concrete objects and communication. Thus the child learns that language can be used to communicate and to make things happen. Halliday (1979) suggested a similar progression; that early communication begins as primarily instrumental, becomes regulatory, then inter-actional and later self expressive. Control of the environment and of the people in it would seem to be primary functions, with shared dialogue and self expression coming later.

In their book on "Child Language and Cognition", Rice and Kemper (1984) suggest that children develop communication skills and social awareness at the same time, the one process informing the other, and Macnamara (1982) proposed that children learn language just because they are already skilled at making sense of human interactions. On his reading, learning to ask rather than demand and to offer in the expectation of exchange indicates an understanding of the social context on which language learning is built. Children come to understand the social world around them, to communicate with others and, in most cases, to use language. It is doubtful if the first two are separable. For some children, the social world is a bilingual one, their communication is with speakers of two languages (in North Wales, these are usually Welsh and English), and many will learn to use two languages. The model adopted here is similar to that of Rice and Kemper, namely that children learn about

their social context as they learn to communicate. It is therefore suggested that the sequence of language functions proposed by Halliday (instrumental, regulatory, interactional, self-expressive) can be extended to include clarification or maintenance of the social situation (societal) and understanding of experience (cognitive) in these early language users.

The examples, collected from a bilingual environment as described already, were grouped under the above mentioned functional headings. By noting the session at which each event was recorded, it was possible to comment on the absence or existence of a sequence of language functions. Further, it was possible to note differences in the development of these functions between monolingual English, monolingual Welsh and Bilingual children.

3. FUNCTIONS

All of the scripts were examined for evidence of marked pragmatic language use. Table Q4.1 summarizes the results, and Appendix Xb lists the abstracted field notes from which they were obtained. Only clear examples were included, although there were often earlier indications of functional use. Little was to be found in the early scripts (before session 4 at about two years old) except single word utterances, either in reply to a maternal comment, or as a demand, or later as part of a naming game.

Some of the more noticeable examples initially were those relating to word play, bilingual development or language awareness. These will be discussed in more detail in Q6.

TABLE Q5.1 Examples of Pragmatic Language Use in the Small Sample

	INSTR	REGUL	INTER	EXPR.	SOCTL	COGNITION		
						S	L	P
NERYS WW	S3	S8	S7	S7	--	S8	--	
IWAN WW	S3	S6	S5	S6	S6	S5	S5	--
BECKY WM	S3	S5	S7	S7	S7	--	S5	--
EMYR WM	S2	S5	S7	S6	S6	S6	--	--
GAR MM (-2)	S3	S7	S4	S6	S6	S5	S7	--
DAVID MM (-2,-3)	S4	S5	S5	S5	--	S8	S8	--
NIA WF	S1	S5	S4	S4	S6	--	S5	--
MATT WF	S2	S6	S6	S6	S6	--	S6	--
LLYW EE (-7)	S2	S4	S4	S4	S5	S5	S4	S5
MICHL EE (-8)	S2	S7	S5	S5	S5	--	S6	S6
MODAL SESSION	S2	S5	S4	S5	S6	S5	S5	S5/6

The Figures refer to the Session from which there is the earliest example for that child. (Sessions missed are noted by each child's name).

The Modal Session was chosen as the earliest session by which at least three children had produced examples.

INSTR. = Instrumental

REGUL. = Regulatory

INTER. = Interactive

EXPR. = Expressive

SOCTL. = Societal

COGNITION: S = Sequencing

L = Logical Argument

P = Perspective-taking

Instrumental

Evidence was sought in the early scripts for examples of children using language to achieve concrete ends. Although it is possible that mothers could recognise and respond to

single word utterances earlier, it wasn't until sessions 2 and 3 that it became clear that children were using language successfully to demand and obtain what they wanted. Often this was by repeating a single word such as 'diod', 'drink', 'book' and 'more'. At these sessions the ages of the children ranged from 19 to 22 months. David (MM) was the oldest to be recorded using language in this way, but there did not seem to be any language background related differences under this heading.

Regulatory

There were many examples in the scripts of children trying to regulate or control the behaviour of their mothers, as well as examples of mothers trying to regulate their children. From the fourth session (about age 2 years) there are occasional indications that the children were trying to use language to placate mothers with words such as, "yea", "ia", "okay", "later", "wedy".

From about this time, all of the children were telling or asking their mothers what to do and getting compliance. Sometimes they were asking for food, sometimes for an object, sometimes for action on the part of the mother. It is possible that the presence of an observer inhibited the mother's behaviour, but rarely did the child fail in a simple request. The one recorded instance of failure involved David (MM). At session 5 he asked for television during the recording session and his mother, rather than a simple refusal said *"/ you don't want the telly on now/"*, a style of interaction which she often used subsequently and which will be discussed later.

By the fifth session, some children had become more skilled at controlling their mothers. Iwan's mother (WW) offered to

sing. Iwan looked at her, and then said *"/Just deryn bach canu/"* (just little bird sings). At the same age, Gareth (MM) asked his mother to *"/Deud a Grandma dod yn car glas."/* (Tell Grandma to come in the green car), and the following dialogue took place between Nia (WM) and her mother. Her mother had been trying to get Nia to talk about a donkey and she was clearly reluctant.

"MOTHER /a donkey isn't it?
/has she got a donkey?/
NIA /I don't like it/
/it making a .../
/it making...a sme../
MOTHER /you didn't like it?/
NIA /what's that?/
MOTHER /what's what?/
NIA /there/ [points to her bum]
MOTHER /where?/ [looking]
NIA /there/ [pointing again]
MOTHER /that's your bottom/ [Mother embarrassed]
NIA /what's that?/ [still pointing]
MOTHER /your bottom/
NIA /no it's not/
/it's poo there/
MOTHER /I don't think it is/ [looking]
/no it's not/ [very embarrassed]
/you've just got..../
/it's a bit.../
/you've been sitting on there
with the cat hair all stuck
on you/
/that's the trouble/"

With very few words, Nia had successfully distracted her mother and the donkey was forgotten. At about two and a half, Llywela was able to control her mother's behaviour using language alone. In the following,

"LLYWELA / you can do the house/
MOTHER / I can do the house can I /
LLYWELA / you're a big girl now/"

Llywela is using a statement as a directive, and flattery to clinch the argument.

By the later sessions, some of the children had become not only skilled in controlling the interaction between themselves and their mothers, but extremely persistent in their efforts. At the seventh session, Nia (WF) used 23 utterances to match her mother's 22 in a discussion about whether she needed something to eat immediately rather than at lunchtime, and Becky's persistence lasted through 158 utterances altogether (WM). During that time, when Becky's mother was trying to persuade her to get dressed, she argued that she was too warm, too hot, too cold, couldn't hear, needed a drink, wanted to see Nain, could do it herself, wanted her pyjamas, was going to draw a picture, was a dog, didn't want the teeshirt, and that the teeshirt was wet. Her mother won the day, but Becky demonstrated tremendous skill at playing the control game. Not all children demonstrated the same degree of skill, but that could be due to the arbitrary nature of the recordings. The more advanced examples were recorded from Llywela (EE), Nia (WF), Gareth (MM), Becky (WM), and Emyr (WM), almost the whole range of language backgrounds.

Interactional; Narrating

As the project was set up to record interaction between mothers and children, it was difficult to decide what might be distinctively pertinent to this stage. Many examples were found of children recounting their experiences to their mothers. Inasmuch as this use of language had no clear function (it could also be self-expressive, cognitive or even societal), it is possible to argue that their function was

interactional. The child was telling a story for the sake of the audience.

All of the children were recorded telling their mother what they could see and what was happening from age two years onwards. Emyr commented *"/ a lori mawr neis 'di tori/"* (and the nice big lorry's broken); Llywela stated *"/that's my drink/"*; Gareth reported from the window *"/wedi gorffan rwan/"* (finished now).

Almost all of them were recorded giving a running commentary on what they were doing during the early sessions. At session 4 Llywela said *"/I can't find it/ I can now/ I can't it/..."* during a game. Matthew while playing at being a dog in session 6 said *"/doggie's in bed/ doggie's asleep/ doggie's is sleep/ and the feet the feet/ he's gone to sleep/ he's quiet/ he's gone to sleep/"*; David described how to put a tape in a recorder at the sixth session as follows; *"/it go in there/ like that/and put on/ and/and plug him off/ and make it go down/and round/ and it works/ and put.../ a way right/ yea/"* (some parental interjections have been omitted).

All ten children provided examples of using language to relate stories, to provide a commentary on their own activities, and to enrich their pretend play. By the fifth session (28 months) Gareth frequently became absorbed in his play, using language to confirm what he was doing and to remind himself about what he was going to do. With some of the children (e.g. Emyr and Nerys) this came later, but that could be due to chance, given the fairly arbitrary nature of the recordings. Occasions on which children reported events in the past or unknown to their mothers were rare.

Self Expressive; the expression of Feelings

It was decided to focus on examples of expressions of feelings, rather than include attitudes, opinions or choices, all of which are suspect (if existent) at this age. Apart from demands and negations, there was not a lot of evidence that this group of children were able to express their feelings at an early age. At about two years old Llywela used feelings as an excuse ("Weya's a bit tired now Mommy") and David as a threat ("I [will] cry"). Nia was able to remember her feelings. Her mother asked her why she had cried at the gym club (baby boing club). She replied "c(r)ied boing club/ shouldn't to clap/" meaning that the clapping had upset her. At the fifth session, David said he didn't like the bridge, referring to a ride through a railway tunnel that had scared him, and at the seventh session, Nerys reflected " a dwi isio.../ be dwi isio rwan?/" (and I want.../ what do I want now?/).

The most interesting recorded example is one illustrating how difficult it can be to express feelings at this age, or to use language to escape from a difficult situation. Michael, at age 33 months had taken a book to his mother for her to read it.

MOTHER /you know this story/
/you can tell me this story can't you?/
MICHAEL /I can't/
MOTHER /you can/
MICHAEL /I can't/
/you read it to me/
MOTHER /okay/
/we'll both read it shall we?/
MICHAEL /yea/
MOTHER /once upon a/ [pauses expectantly]
MICHAEL /..time/
/there was a.../

/I can't/
 MOTHER /you../
 MICHAEL /I can't/
 MOTHER /okay/
 /there were three little.../ [pauses]
 MICHAEL /I can't/
 MOTHER /goats/
 MICHAEL /no/
 /three little pigs/
 /you twit/
 MOTHER /you/
 /don't call me a twit/

The conversation continues like this for 14 more utterances during which Michael is getting agitated and his mother doesn't appear to notice. The dialogue continues (with the mother still reading and pausing),

MOTHER /but take care that the.../ [pauses]
 /wolf doesn't../ [pauses]
 MICHAEL /don't be horrible/ [agitated]
 MOTHER /I'm not being horrible/
 MICHAEL /don't be horrible/
 MOTHER /just watch it !/
 MICHAEL /just watch it you/
 /don't be horrible/
 MOTHER /right/
 /well d'you want the rest of this story?/
 MICHAEL /no/
 MOTHER /no/
 /right/
 /fine/
 MICHAEL /I.../
 /I want my dummy/

Michael was aware that he was not getting what he'd asked for (the reading of a story) and that he was being pressured to do what he said he couldn't do (fill in the gaps), but he

didn't know how to comment on the situation and ended by being rude.

Astington and Gopnick (1988) suggest that children can talk about their internal states from about age two, but do not indicate with what frequency this happens. The recordings took place at three monthly intervals and therefore only sampled rather than monitored the development of each child. It may be that as these sessions included a visitor, occasions (and therefore expressions) of anger and unhappiness were carefully avoided by the mothers. That does not account for the paucity of examples of positive feeling statements.

Societal; Pretence

By pretending, children are able to separate language from immediate experience, and so to use it as a tool for exploring and assimilating their environment. Through play with toys they can clarify and practice roles and relationships, and test what might happen if they break the rules they are learning. Consequently, apart from a brief look at examples of early politeness, most of the examples of social awareness will be ones involving pretence.

All of the children had learned to say "please" by the fourth session (about age 2 years), even the Welsh speaking children. Similarly there are examples in all the session 4 scripts of children using socially approved phrases such as "diolch", "thankyou", "bye", "hiya". Mothers model the phrases on appropriate occasions, and prompt the children as necessary.

Turning to pretence, at age 28 months Michael told a long involved make-believe story about an imaginary pond in the living room. He and his mother spent ages avoiding the water, capturing sandhoppers and rescuing frogs. At 28 months

Llywela was pretending that her doll was real;

" / This wants watch the wheely bin lorries/
/ I think you will sit there and wait/ (to doll)
/ I think she will sit on the window/" (to Mum)

Emyr, Michael, Matthew, Gareth, Becky and Nia all pretended the doll and teddy were real at about 30 months, and Iwan even pretended he knew what she wanted. His mother wanted him to read a book. He replied;

" / doli 'misio/ (to Mum)
/ doli isio jcb/
/ spia doli spia/ (to doll)
/ spia jcb yn fana/
/ 'misio darllen llyfr i doli/" (to Mum)

(/dolly doesn't want it/ dolly wants the jcb/ look dolly look/
look the jcb there/ don't want to read the book to dolly/)

Pretence is a first step towards the creative use of language. Lying too is a creative use of language, though perhaps it would be better to call it making false or pretence statements. There were a few examples in the scripts of children saying things that were not true. Nia at session 6 was embarrassed when she spilled her drink and said "/I spilled a lot/" (Mum said 'oh dear') /I haven't spilled a lot/". The societal function of her language is clearly evident. More interesting was Iwan's use of pretence to make a difficult situation better. In the course of the sixth session he broke a wooden doll's table. He went very quiet, looked at his mother. She asked him what he had done and he said he'd broken it, then that he'd fix it. He then propped it up and said it was fine. When his mother laughed, he added,

"IWAN /wedi neud bont bach/
MUM /ti 'di neud bont bach ond dim pont bach di o fod/
/naci/

/bwrdd 'di o fod ynte?/
 IWAN /pont bach bwrdd/
 /pont y bwrdd di hwna/"
 (IWAN /made a little bridge/
 MUM /you've made a little bridge but it's not a little
 bridge/ no/ it's a table isn't it?/
 IWAN /a table little bridge /
 /a table bridge it is /)

Both then laughed (as did the observer) and Iwan was relieved. Such creative use of language implies a decoupling of thought from reality.

Cognitive

The field of cognitive development is large and it is not appropriate to explore far in the present work. However, some examples of pragmatic language use illustrate the beginnings of logical argument, sequencing and perspective taking in this small sample.

1) Logical Argument

At two years old Llywela was the youngest to be recorded trying to give reasons, but failing. She said she was a bit tired and would have a rest. When her Mother suggested going to bed she countered with;

"/no/ it/ it's tired cos I have a rest/"

However, at 28 months Nia was very clear.

"/Aron hit me acos I on the bike./"

Llywela was especially adept at argument and when, at about thirty months old, her Mother didn't draw the house she wanted the following dialogue ensued;

"LLYWELA /that's a funny house anyway/

MOTHER /why is that a funny house?/

LLYWELA /cos this/

/a round window/

MOTHER /a round window?/

/can't a house have a round window?/

/yes it can/

LLYWELA /look!/ (GOING TO THE WINDOW)

/this house hasn't got round windows has it?/

MOTHER /no/"

Mother drew another house without round windows.

By this age, session 6, Michael, Becky, Matthew and Iwan had all given examples of good argument. With Nerys, David and Gareth examples were recorded later.

ii) Sequencing

Although both Gareth and Iwan were recorded talking of a sequence of intended actions, the clearest example recorded was from Llywela. At 28 months she said "/When I've finished I'll put them back on the tray/" and at 31 months she said (whilst completing a jigsaw) "/and and I'll do one first and then you/ and then I gonna do this one before that one/"

iii) Perspective-taking

Michael, at 31 months, gave the only clear example of taking the perspective of another. In a tea-party game he hid the teapot and then the cups from the doll saying;

"/ the doll can't see that/
/ I put the kettle out there/
/ I put the teapot there/
/ one up there and one up there/
/ and one up there/
/ the dolly can't see them/
/ okay/"

Llywela also seemed able to take the perspective of another in play, at session 5, aged about 28 months.

4. SEQUENCE

As stated earlier, apart from demands (instrumental function), there was no evidence of pragmatic language use as the terms have been defined here before the fourth session when the children were about two years old. Table Q5.1 shows the sessions at which clear examples of functional language use were first recorded. As the recordings were so infrequent, the earliest session at which a language use seems common (at least three subjects recorded) has been taken as the modal session. The instrumental function was evident at around age 19 months (session 2), and the regulatory at around age 28 months. However, the interactive function, at least as described here, was evident earlier than that, at about two years old. For most children there were no recorded examples of expressive function until about session 6, the same time as the societal function was evident. There were very few examples of cognitive functions of any sort, but those that were recorded were at around age 28 to 31 months. Thus the evidence for a sequence is ambiguous. It does seem, however, that between the ages of 25 and 31 months, children begin to learn a number of pragmatic skills.

There are no obvious differences in the rate or number of skills used by children from monolingual compared with bilingual backgrounds.

5. SUMMARY

Pragmatics is a difficult concept, and trying to identify the roots of pragmatic skills in the early development of children's language is not easy, especially if one wants to avoid linguistic definitions.

The scripts from the small sample provided examples of the ways in which this group of children were beginning to use language itself as a tool. They were ordered into six categories of language function; instrumental, regulatory, interactional, self-expressive, societal and cognitive. This enabled them to be compared and contrasted. In particular, differences which could be ascribed to language background were looked for but not found.

The functions of language described and used to categorise the examples were supposed to form a sequence. The evidence was ambivalent. The instrumental function was shown to appear earlier than the rest, at about 19 to 22 months. The other functions all appeared at between 24 and 30 months, or thereabouts, and it was not possible to suggest an order. There were no differences identifiable by language background. Given the smallness of the sample and the particular definitions adopted here, no general statements can be made. However, some children at least are able to use language pragmatically in at least the ways described by about 28 months of age.

Question 6:

WHEN DO CHILDREN BECOME AWARE OF
LANGUAGE PER SE?

1. INTRODUCTION

The difference between using language and being aware that you are using language was outlined at the beginning of this work, as were the arguments about what counts as metalingual awareness. The results that can be discussed here are thin; the scripts of the sessions with the small sample were scrutinized for any indications that the child was aware of language per se, or of the existence of two language systems.

There is sometimes confusion about what is meant by metalingual and metapragmatics. For the purpose of this study, metalingual is seen as knowledge ABOUT language and linguistic rules. To use language appropriately according to circumstance is not necessarily evidence of awareness. It is only when children notice language and use of language and then begin to comment on it, that one can talk of the beginning of metalinguistic ability, the ability "to think about language in addition to being able to think through language." (Bialystock, 1992, p504). Pragmatics is using language for differing purposes according to context. The content of a sentence is not the same as its use. Metapragmatics is knowing ABOUT achieving different goals using language. It is possible to describe some metalinguistic events as pragmatic, or even as metapragmatic, but the focus of the first is on language and of the second is on context.

Elizabeth Bates (1976) uses the term 'Metapragmatics' to describe early language awareness and showed that, between the

ages of 18 and 42 months, children referred to participants in a speech act, to its place and time and, by using connective terms, tied it into a narrative. Her arguments are persuasive, but she acknowledged that talking about talking was the clearest evidence of "metapragmatics". Although a different term, namely metalinguistics, is used here, talking about talking is still the clearest indication of children's growing language awareness.

Code switching needs a further comment. In conversation people make choices constantly regarding the appropriate code to adopt. The most obvious choice of code is between formal and informal; "hiya" to a friend and "good morning" to the bank manager. As adults we all use and can become aware of a wealth of covert rules governing how we speak and in what circumstances. Grice (1968) outlined some of the features of this knowledge which is shared by members of a language community, and of particular interest here is the use of polite forms. To ask someone if you can have a loaf is the polite form of a demand. It is also an indirect request, but not many examples of that code were recorded or reported.

The question about the link between metalingual ability and bilingualism arose following a suggestion by Vihman and McLaughlin (1982) that metalingual awareness might be greater in people who were bilingual. Although no evidence supported the original suggestion, it made sense in Vygotskian terms. Vygotsky (1962) had argued that as bilingual children learn to see their first language as one system amongst many, so they become aware of linguistic usage. More recently Bialystock (1991b; 1992) has summarized research in this area (see Chapter Two; Review, p99 onwards). She reports both her own work and that of others which show that bilingual children consistently perform better on a number of metalingual tasks, especially those requiring selective attention.

Consequently, this section looks first at any indications of general metalingual ability in the scripts. It then turns to occurrences within the language development of those children who subsequently developed skills in both languages in an attempt to trace the beginnings of bilingualism. If connections between the two themes are apparent, they too will be discussed.

2. LANGUAGE AWARENESS

Creativity and Word Play

The first indications that children were becoming aware of language came through examples of word play. They appeared to notice the sounds of a word or phrase and similarity with other words or phrases during play. At about 28 months Iwan said "no na not/" in reply to a question and laughed, looking at both the observer and his mother, and repeated the joke with delight. ('Na' is the colloquial Welsh 'no'). Nerys at 33 months seemed fascinated with repetition, listing;

the little boys with the puss,
the little boys with the baby chair,
the little boys with the motor bike,
the little boys with the skateboard,
the little boys with the ball, before she lost interest.

Matthew at 31 months old when he was putting a teddy to bed in a dog's basket said;

*"/he's gone to basket/ he's gone to biscuit/...../teddy's
biscuit/...../I get a biscuit/"*

and promptly charged off to the kitchen to do so. The 'basket' was substituted for the 'bed' implied in the game, and then replaced by 'biscuit', of which he was very fond.

Verbal jokes require an awareness of language and often of the mismatch between words, or between the ideas they represent.

Whether the joke is created by the child or remembered and copied, the child needs to be aware of the words involved and their meanings. Nerys (session 7) described herself as "*colli balance/.../wedi meddwi/*" (lost balance/ drunk/). David (session 8) told his mother he wanted sweetcorn for lunch. And snakes. He knew the word was 'prawns' and looked for his mother's reaction.

Iwan's creativity in the sixth session has already been mentioned when he re-named the broken table "*pont y bwrdd*". The same table provided Gareth with ideas in the seventh session when he described it as an elephant, indicating which was its head and which the legs. The final example of creative language use comes from Llywela in the last session. She used "*some glass of wine*", "*the pizza*", "*the bottle*" and "*the coffee*" as characters in a long story.

Sometimes it was not clear how knowing the child actually was. In the sixth session, Nia's mother had been discussing her pregnancy and the birth of a friend's baby. Nia asked (about the baby) "*has it comed out yet?/*" and when her mother said yes, added "*to play?/*". Later in the conversation her mother asked Nia what the baby was bringing her and she answered "*a present/*" and when asked what sort, added "*a baby one/*". In both instances the adults laughed at the ambiguity of the rider, but it wasn't clear whether Nia's response had been intentionally playful.

Intonation and Pretend Play

Children use pretend play from about age two onwards, and the children in the small sample were no exception. This was discussed in Question 5. Nia was heard using 'a baby voice' shortly after the birth of her brother when she was about 28 months old, and some of the other children were reported to do so occasionally. However, pretend play was the usual

context in which children were recorded choosing a different intonation from their normal speech. By age three Nia was able to use a baby voice only with her dolls in play. At the same age, Iwan was recorded using a special voice for the train in his play, as did Llywela in the story of the bottle.

Talking about talking

Llywela was recorded talking about talking in the fifth session. She told her mother *"she says that's a bath/"* and during the sixth, said *"I said I can't go/ these are broked/"* (referring to stepping stones). At the same session she confronted the observer with the statement *"I can speak properly/"*. It transpired that she had asked her father about the purpose of the sessions and he had replied that they were to see how well she was speaking.

During the fifth session, Gareth also commented about talking, saying to his mother *"a deud a Grandma i dod yn car glas/"* (and tell Grandma to come in the blue car). He, Iwan and Llywela were all heard to talk about what people said in their stories. During his session with his father Gareth said *"kangaroo yn deud wrth y dyn 'lle mae o?'"* (the kangaroo said to the man 'where is it?'). In the last session, Iwan wanted the people to tell the little children what time to come on the train, (and needed a clock to help them). During the story of the bottle, Llywela said *"they said' why are you crying bottle?'"*.

There was a further group of examples of children's awareness of language, in this case, of how things are said. All of the children had baby words for things early on, words such as doggie, gee-gee, and ta. As they grew older they adopted the conventional words instead, but only a few were recorded commenting on the process. As early as session 6, at about 31 months, Gareth said *"oen bach dim mee-meas di nhw/"* (little

lambs are not mee-meese), but it wasn't till the last session (with his father) that he said "mae Taid yn deud mee-meese a defaid/.../a defaid dwi'n deud/" (Grandad says mee-meese for sheep/ and I say sheep/). The earlier observation about language has become an observation about language use. He also commented that he says 'excuse me' in school ("excuse me' dwi'n deud yn yr ysgol/"), a comment that is metapragmatic as well as metalingual.

Code switching and Speech Acts

In conversation people make choices constantly regarding the appropriate code to adopt. Children learn to do this too, but there were few examples in the scripts, and those which were evident came towards the end of the study. From an early age all the children in the study, Welsh and English were taught that 'please' was the magic word for getting goodies. The following example from Nia's penultimate script demonstrates an ability to do more than parrot the key word. Nia re-forms her wish from a demand into a polite request;

	<i>"N that drawing's in the way/</i>
<i>M your drawings?/</i>	<i>N yea/</i>
	<i>N get it out of the way/</i>
<i>M what d'you say?/</i>	<i>N please can you put on the</i>
	<i>table?/"</i>

Llywela was adept at switching codes. In the last session she clearly shifted from fantasy to reality when she told her mother, who was holding a cat and looking at a book;

	<i>"L I think he wants one of those</i>
	<i>words/</i>
<i>M he wants one of those</i>	
<i>words?/ which one d'you</i>	
<i>think he wants?/</i>	<i>L he wants all of them/</i>
<i>M that says good food/</i>	<i>L he can't eat them/</i>

it's only on a picture/"

Becky was good at switching codes. In the scene already quoted when she used twenty arguments to prevent her mother dressing her (see Question 4), she shifted from 'little girl lost' to 'assertive show-off' to 'sweet reasonableness' and back again to 'poor me'. All the examples of code switching have come from girls in the study, but from different language backgrounds.

Conclusion

Appendix Xb includes the abstracted field notes on language awareness on which these examples were based. It will be seen that, although some of the instances quoted are clear examples of language awareness, they are few in number. Thus it is difficult to decide whether children exposed to two languages in the home are more aware of language per se than are those in monolingual homes. Gareth (MM) was especially aware of language and language differences, and he was bilingual by age three. However, examples of language awareness of one sort or another, were recorded from all of the children, irrespective of language background.

3. BECOMING BILINGUAL

It would be useful to be able to describe in detail how young children become bilingual. As the results of the second questionnaire highlight (Table Q2.6, p186), most parents on Anglesey want their children to be bilingual and, although many will rely on the education system to do that for them, it has been shown that the school environment is not sufficient to ensure that that happens (Baker, in press).

What follows is an attempt to trace events in the language development of some of the children monitored which seem to have been associated with the development towards bilingualism. Some of the information is gleaned from data presented in previous sections and that will be referenced, and much more comes from the scripts from the recording sessions (see Appendix Xb). However, in the early stages of language acquisition, children resist invitations and exhortations to demonstrate their skills, and so mothers reports had to be solicited.

One meaning of code-switching has been described, but it is also used to mean switching between languages.¹ Grosjean (1982), Nelde (1989) and many others have detailed the circumstances in which bilinguals switch from one language to the other, the most frequent occasion being the arrival of a non-language speaker into a conversation. Some examples from both mothers and children were found in the scripts from the small sample. Also found were many examples of borrowing from one language, which appeared to be largely unnoticed by either party, and some examples of awareness of the difference between the two language systems noticed by the child.

The scripts examined were those of the three children who showed clear evidence of bilingual development by age three (Gareth, Iwan and Emyr), and from four who have done so since (Nia, Becky, Nerys and Matthew). It is notable that all of these families have at least one parent who is a first language Welsh speaker.

Table Q6.1 summarises the examples discussed below.

¹ Swain would argue that these two uses are the same in essence, (1972).

Single Words; borrowing

Initially, single words are used from the second language, often unnoticed by the child or parent. Words included in the Dictionary of Common words will not be used in examples, as they have an unclear provenance.

By two years the children whose first language was Welsh were using single words such as 'stuck', 'jumps', 'chips', and 'just' in their ordinary conversation, and phrases such as 'naughty girl', 'cup of coffee' and 'never mind' shortly thereafter. Some of the children acquiring English first also used Welsh words in speech. Nia and Matthew, both with a Welsh father, slipped words such as 'tan' (fire), 'coedan' (tree), 'brechdan' (sandwich) and 'pechod' (what a pity) into their conversations from about the same time. This can be seen in many of the early scripts and is particularly clear in Graphs GQ3.5a to GQ3.5h which were referred to in the section devoted to Question 3 (pp 213-224).

Peers

Between sessions 4 and 7, children were reported to use their second language with peers for whom it is the first language. Whether this was actually so is unclear. There is stronger evidence that they had developed some understanding of the second language. Not only did mothers report this phenomenon, but the writer experienced Becky (WM), Iwan (WW), Nerys (WW) and Emyr (WM) accurately responding in Welsh to her comment in English.

Translations

At about the same time translations occurred, first by the parent (Nia's mother said "make tan?/ yes that's right/ make fire/") and then by the child. At session 4 Nia said "it's a tree/", her mother queried her and she replied "yea/ it's a coedan/". At the sixth session Matthew said of his father

TABLE Q6.1; ELEMENTS of BILINGUAL LANGUAGE DEVELOPMENT

NAME	SESS	EXAMPLES
NERYS WW	S3 S5 S6 S7 S8	Has a few E words/plays with E friend/E TV Created 'slipio'/ E phrases such as 'go to sleep'/ Upset if doesn't understand E children/ Answers E questions in W/
IWAN WW	S4 S7 S8	Some E words/plays with E friend/ Uses W with E word in correct place/ Answered E question in W/ Laughed at Mother addressing him in E/
BECKY WM	S6 S7 S8	Understands E from Dad/ Won't accept E from mother/Parents use E together/ Uses E intonation in 'pretend E'play/ Answered E question in W/ Very upset if 'wrong' language used/ Asked Dad questions in E/
EMYR WM	S4 S5 S7 S8	Parents use E together/ Won't let Mother use E with him/ Replied in W to E question/ Asked questions of Dad in E/
GARETH MM	S5 S6 S7 S8	Uses some E words and phrases/ Speaks E by using W with E intonation/ Responds to E conversations/Practices E/ Speaks E to E speakers/ Seems to understand E/Different intonation for W word if in E/ Follows Mother's code switch / Switches easily from W to E and back/ Aware that he does so/ Can speak for hours in E/ Spoke only W with Dad/
NIA WF	S4 S6 S8	Uses some W words/ Occasionally translates/ Mother uses W phrases/ Dad speaks W to her/Parents use E together/ Doesn't like mother to use W/ Using W at Nursery/ Understands half of Dad's W/ Asked Dad questions in W/
MATTHEW WF	S5 S6 S8	Picking up W words/Mother uses some W words Occasionally translates/ Understands some of Father's W/

W = Welsh and E = English

*The children were seen at about three month intervals from about 15 months to three years. Approximate ages for the sessions are as follows, but children could be up to a month older than the age stated; S4 = 24 months S5 = 27 months
S6 = 30 months S7 = 33 months
S8 = 36 months*

"he's gone to work/ he's gone to gwaith/". Finally, at the session 6, (age 31 months), Gareth switched from Welsh to say "want a cadair/ want a chair/".

Intonation

Children notice intonation developmentally (Karniol, 1990). In this group, both Becky and Gareth were reported to speak 'pretend English' by using Welsh with English intonation, at 33 and 30 months respectively. Gareth was heard to play with the intonation of his English conversation, and to practise phrases until they were more correct. His mother noticed that he pronounced 'tren-train' appropriately according to context by the last session. Finally, by the time he was 3 years old, Matthew's intonation was decidedly Welsh some of the time, but it did not vary reliably.

The Wrong Language

A number of the children objected when parents used the 'wrong' language. At 31 months, although Becky (WM) would listen to her father talking to her in English, she made a big fuss if her mother spoke to her in English. Examples of this event were recorded at the sixth and eighth sessions. Emyr, the other WM child was reported to object if his mother used English to him, and Nia (WF) refused to acknowledge that she understood her mother's Welsh in session 6;

M; "what's this?/"	N; "dolly's hair/"
M; "yn Gymraig?/"	
(in Welsh?/)	N; "what is it?/"
M; "gwallt/"	
(hair/)	N; "no!/ what's that?/"
M; "that's hair/ gwallt/"	N; "it's not/ it's a hair/"

She had translated single words to Welsh in session 4, and was reported to use Welsh as well as English in conversation with her father. She understood what her mother was offering her (an alternative name in a different language), but she was pretending that she did not.

Allied to this is the idea of the 'RIGHT' language. Although not on tape, Matthew's mother reported that he used "thank you" to her and "diolch" to her husband (they mean the same thing). Gareth was reported to differentiate between Welsh and English speakers by session 7, and Iwan's reaction was to laugh when his mother tried to talk to him in English. He looked at her and at the writer (whom he later addressed in English) and simply laughed and refused to answer. This was in the final session when he was three.

Creativity

A number of the Welsh speakers use made-up words that are sometimes called 'Wenglish'. Adults may use 'swimio' (to swim) instead of nofio and pushio (to push) instead of gwthio for example, and so some of the made-up words recorded could have been copied. Others however, may well have been creative inventions of the child. One created word was captured. During the fifth recording session Nerys repeated "slipio", a word her mother did not understand at first, until she repeated it in the context of "doli wedi slipio/" (the dolly has slipped).

As with other features of bilingual development, that there is only one clear example does not invalidate the observation.

Recordings were made once every three months, and covered just over an hour of the child's conversation. It is possible that some of the commonplace Wenglish words were unique to the child heard using them. It is probable that many more

instances of word creation occurred with most of the seven children, but unfortunately, not when the tape recorder was running.

Distress

There were a few occasions when the presence of two language systems appeared to cause distress to these children. Nerys was said to become very upset when she did not understand the English used by children in the Nursery. The other occasions were when attempts to encourage them to use their second language were pressed too hard. Reference has already been made to Becky's distress when her mother tried to get her to reply in English. Once it ended in a tantrum. The two other examples on tape are when Welsh fathers tried to get Matthew and Nia to speak to them in Welsh only. Matthew changed the subject or ran out of the room when he did not understand, but Nia became quite upset when she did not understand more than about half of what her father was saying to her. On all three occasions the parent changed back to the language with which the child was more familiar.

Chunking

When children began to use their second language spontaneously, it often became evident with the use of chunks of the second language. These started with phrases that could almost be one word such as Nerys' "go-to-sleep" at age 31 months and Matthew's "ban-ti-ni" (off we go) at the same age. Later larger chunks were used. Becky, Nia and Emyr used questions such as 'where's it gone?/' 'be di hwnna?/' (what is it?) and 'where is picnic?/' at and around three years old. Nerys appeared to understand the chunks of the English story she repeated back to her mother, and at the same age, Emyr and Nia used simple sentences in their second language with their fathers. Gareth was using sentences in English at 31 months.

Bilingual before Three.

Finally mention must be made of the one child in the group who appeared to be a relatively balanced bilingual by the time of his last session at three years old. Gareth had parents with a mixed language background and, although both his parents wanted his first language to be Welsh and used Welsh primarily, his mother preferred the English language and used it frequently. By 28 months he was using English intonation to pretend to be speaking English, using many English words, and his mother was using both languages with him. At 31 months he was using sentences in English with some Welsh words and sentences in Welsh with some English words see (Graph GQ3.4e), and by the seventh session he was following his mother's switch of code with no indication that he was aware of the change, but dropping easily back into Welsh if he could not find the right expression in English. This often happened mid-sentence.

By the last session Gareth was leading the code switch from one language to the other, and refusing to use Welsh (or English) at his mother's request if he did not feel so inclined;

<i>M ti am siarad Gymraeg rwan?/</i>	<i>G na/</i>
<i>M pam?/</i>	<i>G yn Saesneg/</i>
<i>M yn Saesneg?/</i>	<i>G oh/ ah all this rubbish/</i>
<i>M tyd ochr yma ta i siarad</i>	
<i>efo fi/</i>	<i>G oh look all this rubbish/</i>
	<i>cos this in my ways/</i>
<i>(M are you going to speak</i>	
<i>Welsh now?/</i>	<i>G No/</i>
<i>M how?/</i>	<i>G in English/</i>
<i>M in English?/</i>	<i>G oh/ ah all this rubbish/</i>
<i>M come to the side here to</i>	
<i>talk with me/</i>	<i>G oh look all this rubbish/</i>
	<i>cos this in my ways/)</i>

He was aware of the language code he was using, if only by recognition. The choice of Welsh-English could still have been automatic. In a recording made within a few weeks of this last session, he spoke no English at all with his Welsh speaking father. This nicely illustrates the limitation of this study; had the language use of his two parents been reversed, it would not have been apparent that his second language was developing so strongly. Indeed, given the differing roles that parental language seems to play, his second language might not have developed so strongly, (see Question 9).

4. CONNECTIONS

There are three possible relationships between metalingual abilities and the development of bilingualism, (that is excluding no relationship at all). Bilingual development could lead to enhanced metalingual awareness, metalingual awareness could lead to enhanced bilingual development, or the two might interact, enhancing (or delaying) the development of each other.

Gareth, the boy whose bilingual abilities were the most strongly developed, was aware of language from an early age, and of a number of aspects of language. On the other hand, Llywela, who was arguably the most able child metalinguistically, appeared to have made little or no progress bilingually. Their development supports the first proposition, namely that bilingualism enhances metalingual development. Furthermore, the children whose bilingualism developed later, Iwan (WW) and Emyr (WF), both gave evidence of some metalingual ability, and so no counter examples were recorded (that is, bilingual children who did not develop metalingually). However, the third proposition, that there

exists a supportive interaction, could still be true, and might better describe all three cases. In young children where both abilities are developing, it is difficult to imagine how the interactive proposition could be invalidated. Possibly it could be tested with later developing bilinguals.

Llywela is clear evidence that metalingual ability is not dependent upon bilingualism.

Again it must be stressed that the recordings only sample the language of the target children; many of their metalinguistic skills may not be represented on tape. They may also have bilingual abilities which are not evident.

5. SUMMARY

Arguments about when children develop a metalingual awareness were discussed in Chapter Two; Review. The rather meagre clues from the scripts seem to indicate that, with some children at least, metalingual skills can develop before age three. There was evidence of creativity with words and word play, and of deliberate use of intonation differences. Children were beginning to talk about talking, noticing what words other people used and what they themselves said. They were also showing the start of code switching.

Looking for factors in the development of bilingualism, it was noted that children use words from a second language, try to understand peers using a second language, copy the intonation of a second language and also learn to translate. They may learn the second language in chunks, can use it creatively, but can be distressed by their inadequate understanding. Many have strong feelings of who should use which language;

contextual correlates of learning are strong. Finally, an attempt was made to trace the history of a boy who became bilingual before he was three years old.

The connections between these two themes are not easy to disentangle; a monolingual child developed good metalinguistic abilities compared with most of her bilingual peers. Nonetheless it does seem that children who develop bilingual skills early may also develop metalingual skills early. Learning to translate infers an awareness of the existence of more than one language system, and metalingual skills may focus the attention of children in a way that makes it easier to learn a second language. However, the opportunities to use a second language (with a parent for example) are probably at least as important as metalingual skills for those who want their children to become bilingual.

Question 7: WHICH PARENT HAS MORE INFLUENCE ON
LANGUAGE OF THE HOME?

1. INTRODUCTION

It is usually assumed that mothers have more influence than fathers on the language development of their children; the first language learned is often referred to as the "mother tongue". On the face of it this is a reasonable assumption as, in most cultures, mothers are the regular caretakers of children and so the idiosyncratic language used by the mother is the one most frequently heard by the child. However, some research has suggested that the language of the father is influential in a different rather than lesser manner (Blank-Greif, 1980; McLaughlin et al., 1983; Rondal, 1980; Tomasello, Conti-Ramsden & Ewert, 1990). This will be addressed again in Question 9.

In the bilingual field, there are indications that the father's language influences choice of home language in cross-language marriages (Harrison, Bellin & Piette, 1981; Lyon, 1991). It is to the question of language influence in the home that this section is addressed, that is the language environment in which the children in the base population and in the small sample are developing.

The evidence of parental influence in cross-language marriages will be examined from the 1988-89 survey of parents. Excluding single parent families from this group left a total of 384, containing from one to six children. For this first questionnaire, mothers reported the language use of their partners. Approximately two thirds of the group used a second language to some degree.

Data from the second questionnaires are then examined and maternal and paternal questionnaires are compared. Excluding those families who returned only one second questionnaire, this involves 177 families. As well as examining the comparative influence of mothers and fathers, it was possible to identify any changes in influence over time.

2. PARENTAL INFLUENCE IN THE 1988-89 SAMPLE

LANGUAGE HEARD AT HOME

The first questionnaire asked about the language used by each parent in a number of situations. The replies were organised into five groups of couples to try to identify the influence of one partner on the language use of the other and on the language use in the home. It was assumed that the language learned by the child would be that or those heard within the child's home. As described previously, the groups were Welsh-speaking parents (WW), English-speaking parents (EE), families with a Welsh-speaking mother and a non Welsh-speaking father (WM), families with a Welsh-speaking father and a non Welsh-speaking mother (WF) and finally, a mixed group (MM). The phrase 'Welsh-speaking' is used to mean someone whose first language is Welsh and who has been defined as a primary Welsh user on the basis of replies to the first questionnaire. It is rare in North Wales for a Welsh-speaker to be unable to speak English. The phrase 'English-speaking' is used for someone whose first language is English and who has been defined as using virtually no Welsh on the basis of replies to the first questionnaire. There are many people in North Wales who do not knowingly speak a word of Welsh.

In Question 1, table Q1.2 (p160) showed that only with the Welsh-speaking couples is Welsh used regularly at home; more than 70% of the mothers in the WM group use mostly Welsh with

their parents and with other children, but less than 70% of the fathers in the WF group do so. Only the EE couples use English almost all the time with everyone at home. More than 70% of the wives of Welsh-speaking men (WF) use mostly English with their parents and friends, and more than 70% of the husbands of Welsh-speaking women (WM) use mostly English with parents, friends and neighbours. That is, if both partners have the same first language, that language is virtually the only language heard at home in virtually all of these homes.

In cross-language marriages just under half of the Welsh-speaking parents use Welsh all the time, and over half of the English-speaking parents use English all the time. More than two thirds of parents with a mixed language background use English all the time at home. It is only when the minorities are examined that there is any hint of a change from predictable results. Table Q7.1 shows the results for these groups which have been abstracted from Table Q1.2 (p160). The interesting comparisons are between the non Welsh-speaking partners in cross language marriages. Amongst the non Welsh speaking women, 21% use mostly Welsh with the children (compared with 17% of the non Welsh speaking men), 20% do so with neighbours (9% of men) and 17% use Welsh with friends compared with 12% of men. In other words, more female partners of Welsh speakers use Welsh than do male partners.

Percentages which refer to these adults talking to their own parents fit this pattern, but perhaps need an extra comment. Couples were assigned to group on the basis of the mean language use of each partner. Thus the WF (Welsh Father) group comprises men who achieved a high Welsh use score, with wives who did not. In other words, women in the WF group may have high English use scores, or may have scores in the mixed range, that is high on neither extreme; women with a Welsh

Table Q7.1 ; Language Use by Mothers (M) and Fathers (F) from Cross-Language partnerships in different Situations. (in percentages)

		Almost or Welsh		Always Mostly		Half & Half		Almost or English		Always Mostly	
		M %	F %	M %	F %	M %	F %	M %	F %	M %	F %
PARENT	WM	97	8	3	6	0	86				
	WF	11	64	11	12	78	5				
FRIEND	WM	56	12	39	9	6	80				
	WF	17	65	11	33	72	2				
NEIGHS	WM	47	9	31	9	20	83				
	WF	20	62	13	27	67	11				
SHOPS	WM	36	3	53	11	11	86				
	WF	4	46	20	39	76	16				
WORK	WM	66	3	28	12	7	85				
	WF	3	68	33	29	63	2				
CHURCH	WM	81	9	19	5	0	86				
	WF	23	79	27	18	50	4				
CHILDN	WM	72	17	22	22	6	61				
	WF	21	46	26	46	54	8				

WM = Couples where the Mother is Welsh speaking and the Father is not.

WF = Couples where the Father is Welsh speaking and the Mother is not.

Eg; More Welsh speaking Mothers in WM (or WM-M) use Welsh always or almost always with their children (72%) than Welsh speaking Fathers in WF (WF-F = 46%), and more non-Welsh speaking Mothers in WF (WF-M) use Welsh always or almost always in church or chapel (23%) than non-Welsh speaking Fathers in WM (WM-F = 9%).

speaking parent or parents who currently use Welsh in very few situations could be included. The measure is of language USE not ABILITY.

Looking at the partners of English-speaking spouses, there is less discrepancy. Amongst the women, although 20% use mostly English with neighbours, only 6% do so with friends or with the children. Of the men only 11% use mainly English with neighbours, 2% with friends and 8% with the children.

That is, cross-language marriage appears to increase the major use of Welsh marginally more than the major use of English in the 'other language' partners of either sex. However there is a decline overall in the percentage of both men and women using their first language primarily, with one minor exception. Understandably the trend is for partners to use both languages equally.

Language Used for Talking to One Another

Table Q7.2 looks at the language partners choose to use with one another. (This is a re-working of data presented in Table Q1.7, p167). In same-language marriages, virtually all couples use only their main language. In cross-language marriages there is a general decrease in the number of couples using one language mainly, and there are gender differences in the amount of decrease.

The first comparison is between the women in the WM group and those in the WW group. Both sets of women are first language Welsh speakers, but the latter have partners who are primarily Welsh-speaking whereas the former do not. Virtually all of the WW women use mainly Welsh with their partners, but only 19% of the WM group do so. Instead, 75% of them use mainly English.

Complementary groups are the Welsh-speaking men in the WW and WF groups. Again, virtually all of the men use mainly Welsh in the WW group but this drops to 30% in the WF group, 57% of whom use mostly English with their partners. That is, more

Welsh speaking men continue to use Welsh in cross-language marriages than do Welsh speaking women and fewer change to using English.

The next comparison is between the women who are not primarily Welsh-speaking in the EE and WF groups. In the EE group they all use English with their partners. In the WF group only 61% do so and 27% use mostly Welsh. The men who are not primarily Welsh-speaking all use English in the EE group. In the WM group, this drops to 81% using English and 17% of them use mostly Welsh. Again there is more change by the female partners. 20% fewer English-speaking women speak only English and 10% more speak mostly Welsh than do English-speaking male partners in cross-language marriages. As can be seen in calculations beneath Table Q7.2, accommodation is to the English language and the male partner.

In the group of couples where each has a mixed language background, the gender effect is not evident. Nearly ninety percent of fathers spoke to their partner in English almost

Table Q7.2; Present Language Use by Couples by Language Background Group

		Almost Always or Mostly Welsh	Half & Half	Almost Always or Mostly English
MOTHER to FATHER	WW	99.0%	1.1%	0.0%
	WM	19.4%	5.6%	75.0%
	WF	27.3%	11.4%	61.4%
	EE	0.0%	0.0%	100.0%
FATHER to MOTHER	WW	99.0%	1.0%	0.0%
	WM	16.7%	2.8%	80.6%
	WF	29.5%	13.6%	56.8%
	EE	0.0%	0.0%	100.0%

Calculations based on Table Q7.2

	WELSH	ENGLISH
A) W Mothers to W fathers (WW)	99%	0%
W Mothers to E fathers (WM)	19%	75%
ie decrease in % using W= and increase in % using E=	<u>80%</u>	<u>75%</u>
B) W Fathers to W mothers (WW)	99%	0%
W Fathers to E mothers (WF)	30%	57%
ie decrease in % using W= and increase in % using E=	<u>69%</u>	<u>57%</u>
C) E mothers to E fathers (EE)	0%	100%
E mothers to W fathers (WF)	27%	61%
ie increase in % using W= and decrease in % using E=	<u>27%</u>	<u>39%</u>
D) E Fathers to E mothers (EE)	0%	100%
E fathers to W mothers (WM)	17%	81%
ie increase in % using W= and decrease in % using E=	<u>17%</u>	<u>19%</u>

SO; From (A) and (B), if mother is W in the cross language partnership, then fewer Welsh-speakers use mostly W, and more use mostly E (80% and 75%) than if father is W and mother is E (69% and 57%).

AND

From (C) and (D), if mother is E in the cross-language partnership, then fewer English-speakers use mostly E, and more use mostly W (39% and 27%) than if father is E and mother is W (19% and 17%).

all of the time and almost ninety percent of mothers spoke to their partner in English most of the time (see Table Q1.5).

Returning to TQ7.2, a comparison can be made between those who use at least half Welsh and those who use virtually only English. Looked at this way, 43% of Welsh-speaking men continue to use Welsh for a considerable part of communication in their cross-language partnership, (and 38% of them are responded to in this way). Only 25% of Welsh speaking women report using this amount of Welsh in these relationships, and

only 20% get a similar response. That is, almost two fifths of English-speaking women use a substantial amount of Welsh with their Welsh-speaking partners, whereas only one fifth of English-speaking men communicate similarly in Welsh with their Welsh-speaking partners. As stated earlier, 81% of English-speaking men and 61% of English-speaking women continue to use almost entirely English in cross-language partnerships and are spoken to in English in 75% and 57% of cases respectively. The women who completed this questionnaire emerge as more likely to accommodate their partner's main language than he is to accommodate theirs.

It is possible that women are better at learning a second language than are men (Ellis, 1985). It is also possible that men retain a more powerful position in most families and so decide the medium of discourse. However, caution is necessary in interpreting these results as they are based on answers given by female respondents regarding both their own and their partners' language behaviour. These answers correlated highly with those given by male partners directly in the second questionnaire, (see TQ8.5 in next section), but the numbers responding were smaller and there was an interval of three years.

Finally in this section, the main effect should not be overlooked. The language itself appears to have a greater influence than gender, especially on the language partners use together. Table Q7.2 in particular shows that whereas 75% of Welsh-speaking women and 57% of Welsh-speaking men use mostly English with their partners in cross-language marriages, only 27% of primarily English-speaking women and 17% of the men use mostly Welsh.

Differences in the Opinions of Parents

The general opinions of parents were reported in Question 2. This section looks at differences between the opinions of mothers and fathers. Some of the data presented in this section was discussed in Question 2.

When asked how important they thought the Welsh language was, (Table Q7.3a) 5% of all mothers and 6% of all fathers thought it was unimportant, and 46% of mothers and 49% of fathers thought it was important. There was similar proximity between parents in some groups, but not the two cross-language groups. In the Welsh Mother (WM) group, 3% of non Welsh-speaking fathers thought Welsh was unimportant whilst none of the Welsh mothers held that opinion, and 72% of these men felt Welsh was important compared with 81% of the Welsh-speaking women in this group. In the other cross language group (WF), 10% more of the Welsh-speaking men thought Welsh was important than did the women, but neither thought Welsh was unimportant.

Table Q7.3a; Importance of the Welsh Language for Mothers and Fathers by Language Background Group.

	MOTHERS				FATHERS			
	Un- Imp. %	Not very Imp. %	Quite Imp. %	Imp. %	Un- Imp. %	Not very Imp. %	Quite Imp. %	Imp. %
WW	0	5	17	78	0	3	17	80
WM	0	3	17	81	3	8	17	72
MM	3	10	52	35	4	11	48	37
WF	0	0	43	57	0	0	33	67
EE	12	25	45	18	15	25	41	18
Tot	5	12	37	46	6	12	33	49

Imp.= Important

NB; Scores are percentages of parents from QI (N=384)

Clearly in cross-language marriages, Welsh-speaking partners

valued their language more than did their partners, but the non Welsh-speaking women were less likely to devalue Welsh than non Welsh-speaking men.

It is interesting to compare Welsh-speaking women and men who married Welsh speakers with those who did not. The Welsh-speaking women in the WW and WM groups responded very similarly. The Welsh-speaking men in the WW and WF groups did not. Although few devalued Welsh, those in cross-language partnerships were less likely to think Welsh was important (67% compared with 80%). It would seem that female Welsh speakers are less influenced by their partnership than are male Welsh-speakers. There was less discrepancy between the female and male non Welsh-speakers in cross-language partnerships. People of either gender who married Welsh speakers were more likely to think Welsh was important than those who married English speakers, (72% of fathers in WM

TABLE Q7.3b; Analysis of Variance. Importance of Welsh by Gender of Parent and Language Background

	Sum of Sq	DF	Mean Sq	F	Sig. F
Main Effects	157.858	5	31.572	50.572	0.001
Mother/Father	.047	1	.047	.075	0.785
WSpeakC	157.811	4	39.453	62.731	0.001
2-way Interaction	1.234	4	.308	.490	0.743
Moth-Fath/WSpeakC	1.234	4	.308	.490	0.743
Explained	159.092	9	17.677	28.107	0.001
Residual	476.720	758	.629		

WSpeakC= Language Background, ie WW, WM, MM, WF, EE

There is a significant difference (p< 0.001) between the Language 2 Background groups in the Importance they assign to Welsh. There are no significant differences according to gender and no significant interaction between gender and Language Background Group.

compared with 18% of fathers in EE and 57% of mothers in WF compared with 18% of mothers in EE). The results indicate that the men are more influenced than the women by their relationships. In Table Q7.3b, parents' judgements of the importance of Welsh were analyzed as a two factor analysis of variance (parent (Mother/ Father) by ALL language backgrounds (WW, WM, MM, WF, EE)) There was a non significant effect of parent ($F= 0.075$, $df 1, 758$, NS), and a significant effect of language background ($F= 62.73$, $df 4, 758$, $p < .001$). The two-way interaction was insignificant ($F= 0.49$, $df 4, 758$, NS).

There was cross gender agreement regarding the language parents wanted their children to learn. Table Q7.4a shows that 62% or 64% wanted them to be fluent and 24% or 23% wanted them to learn Welsh at school. However, there were differences between parents when the results were analyzed by group; more Welsh-speaking fathers (83%) and Welsh-speaking mothers (92%) wanted their children to be fluent in Welsh than their cross language partners (76% and 86%) respectively. And

Table Q7.4a; Language Parents wanted their Children to Learn by Language Background.

	MOTHERS				FATHERS			
	Only Engl %	Some Wel. %	Schl. Welsh %	Fluent Welsh %	Only Engl %	Some Wel. %	Schl. Welsh %	Fluent Welsh %
WW	0	0	2	98	0	0	2	98
WM	0	6	3	92	0	6	8	86
MM	3	16	23	58	3	9	22	66
WF	0	4	20	76	0	2	15	83
EE	14	15	46	26	15	13	45	26
Tot	5	9	24	62	6	7	23	64

Engl.= English Wel.= Welsh Schl.= School

NB; Scores are percentages of parents from QI (N=379)

8% more fathers than mothers wanted their children to be fluent in the mixed (MM) group. Again it can be seen that the Welsh-speaking women in WM more nearly approximated those in WW than did the two groups of male Welsh-speakers, although the differences were less marked than in the previous table. More than 95% of all parents in the cross-language groups (and in WW) wanted their children to learn Welsh, either at school or fluently. The higher percentage of women in WF (20%) opting for 'school Welsh' rather than 'fluent' when compared with the men in WM (8%) may reflect a perception that fluent language use is learned in the home.

In Table Q7.4b, parental choice about the amount of Welsh they wished their children to learn was analyzed as a two factor analysis of variance (parent (Mother/ Father) by language backgrounds (WW, WM, MM, WF, EE)). There was a non significant effect of parent ($F= 0.10$, $df 1, 758$, NS), and a significant effect of language background ($F= 66.13$, $df 4, 758$, $p < .001$).

TABLE Q7.4b; Analysis of Variance. Language Parents wanted their Children to Learn by Gender of Parent and Language Background

	Sum of Sq	DF	Mean Sq	F	Sig. F
Main Effects	166.407	5	33.281	52.922	0.001
Mother/Father	.064	1	.064	.101	0.750
WSpeakC	166.343	4	41.586	66.127	0.001
2-way Interaction	.706	4	.177	.281	0.891
Moth-Fath/WSpeakC	.706	4	.177	.281	0.891
Explained	167.113	9	18.568	29.526	0.001
Residual	476.688	758	.629		

WSpeakC= Language Background, ie WW, WM, MM, WF, EE

There is a significant difference ($p < 0.001$) between the Language Background groups and the Amount of Welsh they want their Children to Learn. There are no significant differences according to gender and no significant interaction between gender and Language Background Group.

The two-way interaction was insignificant ($F= 0.29$, $df 4, 758$, NS). Again Language Background is significant, but there is no significant interaction with parental gender.

Regarding the future of the Welsh language, there was a tendency for fathers to be more pessimistic than mothers (see Table Q7.5a). The exception appears to be fathers in the WF group. They were more likely to believe that Welsh would be used more in the future than were the mothers (22% compared with 13%) and less likely to believe that Welsh would be replaced by English (2% compared with 7%).

Table Q7.5a; Parental Opinions about the Future of Welsh by Language Background (N= 384)

	MOTHERS					FATHERS				
	Repl Engl %	+	=	-	Wel Repl %	Repl Engl %	+	=	-	Wel Repl %
WW	2	21	50	22	2	7	18	45	25	5
WM	0	6	64	29	0	0	3	60	37	0
MM	2	14	61	20	3	3	10	59	24	4
WF	0	13	57	24	7	2	22	52	22	2
EE	2	11	62	22	4	1	9	56	26	8
Tot	2	14	59	22	3	3	13	53	26	5

Repl Engl = Welsh will Replace English
 + = Welsh will be used more
 = = Welsh will be used the same amount
 - = Welsh will be used less
 Wel Repl = Welsh will be Replaced by English

NB; Scores are percentages of parents from QI (N=379)

In the other cross-language group (WM) a complementary trend is observable, with 37% of the non Welsh-speaking fathers believing Welsh will be used less compared with 29% of the women.

Welsh-speaking women who marry non Welsh speakers are less optimistic than their sisters; 15% fewer think the use of Welsh will increase and none think it will replace English. Welsh-speaking men who marry non Welsh-speakers don't seem to differ from their brothers; although fewer think Welsh will replace English, more think its use will increase. Non Welsh speakers in cross-language marriages responded similarly to other non Welsh speakers. There was a slight trend for this group to be less optimistic about Welsh than people in the EE groups. It seems that the language factor is more significant than gender for this question.

Table Q7.5b shows the results of an analysis of parental opinion about the future of Welsh as a two factor analysis of variance (parent by language backgrounds (WW, WM, MM, WF, EE). There was a non significant effect of parent ($F= 1.36$, $df 1, 758$, NS), and a significant effect of language background ($F= 2.69$, $df 4, 758$, $p < .05$).

TABLE Q7.5b; Analysis of Variance. Parental Opinions about the Future of Welsh by Gender of Parent and Language Background

	Sum of Sq	DF	Mean Sq	F	Sig. F
Main Effects	8.478	5	1.696	2.423	0.034
Mother/Father	.949	1	.949	1.356	0.245
WSpeakC	7.529	4	1.882	2.690	0.030
2-way Interaction	2.686	4	.671	.959	0.429
Moth-Fath/WSpeakC	2.686	4	.671	.959	0.429
Explained	11.164	9	1.240	1.773	0.070
Residual	530.429	758	.700		

WSpeakC= Language Background, ie WW, WM, MM, WF, EE

There is a significant difference ($p= 0.030$) between the Language Background groups and Parental Opinion about the Future of Welsh. There are no significant differences according to gender and no significant interaction between gender and Language Background Group.

The two-way interaction was insignificant ($F= 0.96$, $df 4 758$, NS).

The last question in this section asked who parents hoped their children would marry, a Welsh-speaker, a non Welsh-speaker, or either. Again there was general agreement between the mothers and fathers with the great majority (85% or 86%) saying they could marry either. The one notable difference was in the WM group where 19% of the Welsh-speaking mothers would prefer their children to marry Welsh speakers. None of their partners made this choice (see table Q7.6).

Welsh speakers who married non Welsh speakers appear to have been influenced away from their peers. Only 11% of men in cross-language marriages wanted their children to marry Welsh speakers compared with 42% in WW, and only 19% of women made a similar choice, compared with 42% of WW. Choices of non Welsh speakers remain more similar to those made by women and men in EE. Thus again it seems that language background is a more influential factor than gender.

Table Q7.6; Parental Preference for Child to Marry by Language Background (N= 380)

	MOTHERS			FATHERS		
	Welsh %	Not Welsh %	Either %	Welsh %	Not Welsh %	Either %
WW	42	0	58	42	1	57
WM	19	0	81	0	0	100
MM	4	1	95	4	1	95
WF	7	0	93	11	0	89
EE	2	2	96	42	1	57
Tot	14	1	85	12	2	86

NB Scores are percentages of parents from QI (N= 376)

3. QUESTIONNAIRE TWO

Whereas 384 complete families returned the first questionnaire, 177 families returned the second. Of these, both parents completed separate questionnaires in 124 families. It is these 124 families that are used for comparisons in this section.

As detailed in the next section, although about 82% of couples were categorized in the same language background group on both occasions, the greatest attrition was from the WF (Welsh-speaking father) group. Those so categorized on the first occasion tended to drift into the MM category (see Table Q8.4). That is, Welsh-speaking fathers tended to use less Welsh on the second occasion than on the first.

When all of the QII replies were considered, more fathers of monolingual English speaking children omitted to complete a questionnaire than did fathers from the other two groups.

Table Q7.7; Three year old Children by Current Language Use and by QII returned by one or both parents.

	Welsh Monolingual	Bilingual	English Monolingual	N
Both Parents	34 23%	42 34%	48 39%	124
One Parent	5 12%	11 26%	26 62%	42
	39 23%	53 32%	74 45%	166

Chi square = 7.905, df=2, p<0.05

NB 41 of the 42 one parent returns were from mothers.

Significantly more fathers of English monolingual children failed to return QII.

This was significant (chi square= 7.905, p< 0.05) as Table

Q7.7 shows. It is not important in itself, and cannot bear too much weight, however, it adds to the picture of fathers as less involved in language issues and more accepting of the ubiquity of English than are mothers.

Maternal and Paternal Answers Compared

Table Q7.8 reports correlations and t-tests between parental reports (Maternal/Paternal) on questions from QII. 'Language Heard from Siblings', 'Language Heard from Peers', 'Language Child Uses', 'Language Understood by Child', 'Language for Reading-Self' and 'Language for Reading-Child' all have a five point scale (1= Welsh to 5= English). The 'Child Development' question is binary (Yes/No), and the last question, on amount of Welsh learning chosen for their child, is on a four point scale (1= Only English to 4= Fluent Welsh).

This table shows there were no significant differences between maternal and paternal reports of the language heard by their children from peers ($p= 0.21$) or from siblings ($p= 0.11$), of the language used by their children ($p= 0.36$), or with the amount of Welsh they want their children to learn ($p= 0.71$), and there was perfect agreement in their satisfaction with their children's development. However, there was a significant difference regarding 'Child Understand ($p= 0.028$). More mothers thought their children understood some Welsh than did fathers. There were also marginally significant differences in the language chosen for personal reading ($p= 0.044$) and in the language chosen to read to their children ($p= 0.047$). Mothers chose less English than fathers when reading (means of 4.05 and 4.24 respectively) and less still when reading to their children, (Means of 3.34 and 3.53 respectively). This tendency supports findings in Question 8 that maternal language

Table Q7.8; Differences between Paternal and Maternal responses to general questions from QII

	N	Mean	SD	SE	Corr	T	Prob	Sig
Hear-Sibs; Maternal	105	2.57	1.83	0.18				
Paternal	105	2.70	1.83	0.18	0.85	1.27	0.21	NS
Hear-Peers; Maternal	124	2.83	1.35	0.12				
Paternal	124	2.94	1.42	0.13	0.84	1.62	0.11	NS
Child-Use Maternal	124	3.13	1.40	0.13				
Paternal	124	3.17	1.40	0.13	0.94	0.93	0.36	NS
Child-Under Maternal	119	3.04	1.36	0.12				
Paternal	119	3.14	1.34	0.12	0.93	2.23	0.03	sig
Child-Devlp Maternal	124	0.98	0.13	0.01				
Paternal	124	0.98	0.13	0.01	1.00	0.00	1.00	NS
Read-Self Maternal	122	4.05	1.25	0.11				
Paternal	122	4.24	1.08	0.10	0.62	2.04	0.04	sig
Read-Child Maternal	123	3.34	1.58	0.14				
Paternal	123	3.53	1.54	0.14	0.78	2.00	0.05	sig
Child-Lang Maternal	121	3.61	0.77	0.70				
Paternal	121	3.64	0.80	0.72	0.59	0.37	0.71	NS

Scales used are as follows;

- the language children Hear from their Siblings}
- the language children Hear from their Peers } used a 5pt
- the language the Children Use } scale with
- the language the Children Understand } 1= Welsh
- the language they prefer for Reading } 5= English
- the language they prefer to Read to their Child}

- satisfaction with Children's Language Development} Yes/No

- the choice of Child Welsh Language Learning } = 4pt scale

choice for reading changes over time (see TQ8.6).

Tables Q7.9 and Q7.10 report correlations and T-tests between parental responses to questions about the development of nine aspects of Welsh and nine aspects of English on a three point scale (1= not yet, to 3= often). They were largely in agreement. Marginally significant differences exist between the parents concerning the language they prefer to read and prefer to read to their children and the language their children understand.

The exceptions related to single word use in Welsh, ($p=0.023$), many word use in English ($p=0.034$) and stories in English ($p=0.034$). All significance levels were marginal, but mothers were more likely to say that their children used single words in Welsh, (mean of 2.50 compared with paternal mean of 2.40), used many words in English, (mean= 2.44, paternal mean= 2.35), and tried to tell stories in English (mean= 2.18, paternal mean= 2.07). Thus it seems that mothers tend to attribute more language skills to their offspring than do fathers.

Table Q7.9; Differences between Paternal and Maternal responses to questions from QII about the development of Aspects of English

ENGLISH	N	Mean	SD	SE	Corr	T	Prob	Sig
Single Word Maternal	124	2.64	0.59	0.05				
Paternal	124	2.64	0.83	0.08	0.66	0.00	1.00	NS
Many Words Maternal	122	2.44	0.82	0.08				
Paternal	122	2.35	0.86	0.08	0.85	2.15	0.03	sig
2 words tog Maternal	122	2.54	0.73	0.07				
Paternal	122	2.51	0.74	0.07	0.91	0.47	0.64	NS
Allgone Maternal	121	2.62	0.66	0.06				
Paternal	121	2.55	0.71	0.06	0.71	1.58	0.12	NS
Big/Little Maternal	122	2.32	0.88	0.08				
Paternal	122	2.33	0.90	0.08	0.81	0.16	0.87	NS
Colours Maternal	121	2.15	0.87	0.08				
Paternal	121	2.21	0.88	0.08	0.86	1.35	0.18	NS
Sentences Maternal	122	2.39	0.87	0.08				
Paternal	122	2.35	0.90	0.08	0.87	0.82	0.42	NS
Yesterday Maternal	122	2.06	0.92	0.08				
Paternal	122	2.08	0.93	0.08	0.86	0.56	0.58	NS
Stories Maternal	122	2.18	0.90	0.08				
Paternal	122	2.07	0.93	0.08	0.79	2.14	0.03	sig

All questions used a 3 point scale from 1 (not yet) to 3 (often).

There are marginally significant differences between paternal and maternal responses to questions about children's use of 'Many Words' and the children being able to tell 'Stories'.

Maternal responses were higher for both aspects, that is were more likely to say the children used these aspects of English.

Table Q7.10; Differences between Paternal and Maternal responses to questions from QII about the Development of Aspects of Welsh

WELSH	N	Mean	SD	SE	Corr	T	Prob	Sig
Single Word Maternal	122	2.50	0.75	0.07				
Paternal	122	2.40	0.78	0.07	0.81	2.31	0.02	sig
Many Words Maternal	122	2.30	0.90	0.08				
Paternal	122	2.31	0.92	0.08	0.89	1.47	0.15	NS
2 words tog Maternal	122	2.30	0.92	0.08				
Paternal	122	2.31	0.89	0.08	0.91	0.47	0.64	NS
Wedimynd Maternal	122	2.15	0.96	0.09				
Paternal	122	2.13	0.94	0.09	0.85	0.35	0.73	NS
Mawr/Bach Maternal	122	2.19	0.94	0.09				
Paternal	122	2.22	0.93	0.08	0.88	0.87	0.44	NS
Colours Maternal	122	2.19	0.94	0.08				
Paternal	122	2.23	0.89	0.08	0.86	0.96	0.34	NS
Sentences Maternal	122	2.16	0.97	0.09				
Paternal	122	2.15	0.95	0.09	0.92	0.23	0.82	NS
Yesterday Maternal	122	1.90	0.94	0.09				
Paternal	122	1.93	0.94	0.09	0.86	0.56	0.58	NS
Stories Maternal	122	2.03	0.98	0.09				
Paternal	122	2.02	0.97	0.09	0.88	0.18	0.85	NS

All questions used a 3 point scale from 1 (not yet) to 3 (often).

There is a marginally significant difference between the parental responses about the use of single words in Welsh. Mothers were more likely to say their children used single words.

Parental Opinions about learning Welsh

As Table Q7.4b showed earlier, there was a large measure of agreement between the parents when asked, at QI, about how much Welsh they wanted their children to learn when they were older. Almost all parents wanted their children to learn Welsh at school. This opinion did not change between the first and second questionnaire as will be shown in the next question and illustrated in TQ8.7.

TABLE Q7.11; Parental Reasons for Wanting (or NOT Wanting) their Children to learn Welsh. Results from QII, shortly after the children were three years old in 1992.

1992	Mothers %	Fathers %	Both Pts. %
1. Both Languages are Important.	15	19	17
2. It is an Advantage.	5	8	6
3. Better Job Prospects.	8	5	7
4. Communication.	8	6	8
5. Non-reason Comments	24	22	23
6. Keep back the English.	2	1	2
7. Irrelevant or Unnecessary	11	12	11
8. Welsh Identity and Heritage.	26	26	26
	100%	100%	100%
<i>Number of Comments</i>	155	135	290
<i>Number of Subjects</i>	124	124	248

Figures given are a percentage of the comments for Mothers Fathers and All parents.

Parental opinions were examined in detail in Question 2, and that included an analysis of the comments made on the 1989 questionnaire (QI). At that time it was not possible to attribute the comments to mothers or fathers. In the second

questionnaire, QII, that was possible, and Table Q7.11 shows the results. As can be seen, fathers made about 13% fewer comments overall than did mothers, but their reasons for wanting their children to learn Welsh (or not) were remarkably similar. Mothers tended to give reasons associated with improved communication skills and job prospects and fathers tended to make comments emphasizing the importance of both languages.

Looking more closely at the differences within the groups, the most striking difference is that between the parents in the WW group (see Tables Q7.12a and Q7.12b). 35% of the comments made by Welsh-speaking fathers in this group refer to the importance of learning English as well as Welsh, compared with only 22% of the comments from mothers.

In percentage terms the greatest differences are those between parents in the WF group, relating to comments about both languages and to comments about the Welsh heritage or identity, but the numbers there are tiny. The other difference worth a mention is that between parents in the MM group. 10% more of the men's comments than of the women's related to the Welsh heritage or identity.

Fathers in Welsh-speaking partnerships seem to be more concerned about the importance of English as well as Welsh than any other group of either sex. Husbands in mixed language partnerships seem to be more concerned about their Welsh inheritance than are their wives.

TABLE Q7.12a; Reasons given for Wanting (or NOT Wanting) Children to learn Welsh by Parent and Language Background.

1992	WW		WM		MM		WF		EE		All	
	M %	F %	M %	F %	M %	F %	M %	F %	M %	F %	M %	F %
BothL	22	35	22	20	6	10	25	17	9	7	15	19
Advtg	2	2	0	10	12	14	0	0	5	12	5	8
Jobs	0	0	9	10	15	10	25	0	9	7	8	5
Commn	2	2	9	0	12	7	0	17	18	10	10	6
Other	22	17	30	20	29	28	0	0	20	29	24	22
AntiE	6	4	0	0	0	0	0	0	0	0	2	1
Irrel	0	0	0	10	9	3	0	33	32	29	11	12
W.ID	46	40	30	30	18	28	50	33	7	7	26	26
											100	100
N	50	48	23	10	34	29	4	6	44	42	155	135
N.Ss	38	38	15	15	33	33	5	5	33	33	124	124

Both = Importance of Both Languages Emphasized

Advtg = General comments about the Advantages of Welsh Learning.

Job = Better Job Prospects

Comm = For Communication Purposes

Other = Comments not specifying reasons

AntiE = Comments about keeping English & the English at bay

Irrel = Welsh as Irrelevant or Unnecessary

W.ID = Welsh Identity or Heritage

M = Mothers. F. = Fathers

Figures given are percentages in each group.

TABLE Q7.12b ; Reasons given for Wanting (or NOT Wanting) children to learn Welsh by Parent and Language Background. (Cross language Groups only)

1992	WM		WF	
	M	F	M	F
Both Langs.	5 22%	2 20%	1 25%	1 17%
Advantage	0 0%	1 10%	0 0%	0 0%
Jobs	2 9%	1 10%	1 25%	0 0%
Communication	2 9%	0 0%	0 0%	1 17%
Other	7 30%	2 20%	0 0%	0 0%
Anti-English	0 0%	0 0%	0 0%	0 0%
Irrelevant	0 0%	1 10%	0 0%	2 33%
Welsh Identity	7 30%	3 30%	2 50%	2 33%
N of Comments	23	10	4	6
N.Ss	15	15	5	5

Both Lang. = Importance of Both Languages Emphasized
 Advantage = General comments about the Advantages of Welsh Learning.
 Job = Better Job Prospects
 Communication = For Communication Purposes
 Other = Comments not specifying reasons
 Anti-English = Comments about keeping English and the English at bay
 Irrelevant = Welsh as Irrelevant or Unnecessary
 Welsh Identity = Welsh Identity or Heritage

M = Mothers. F. = Fathers

An emphasis on the usefulness of both languages is a change between the two questionnaires in general and will be discussed in the next chapter.

4. SUMMARY

Overall there is more similarity than difference between the genders on questions of language use and attitudes, both in the initial sample and in the 1992 sample.

In the 1988-89 sample, differences were identified in the language use at home in the cross language partnerships. English-speaking women used more Welsh with their children, with neighbours and with friends than did English-speaking men in these marriages. In other words, more female partners of Welsh speakers use Welsh than do male partners. There was more similarity between the Welsh-speaking men and women married to English-speakers, except in the amount of English used with neighbours. More Welsh-speaking wives than husbands used English with neighbours. Thus, although there is a tendency for both languages to be used equally, women are more likely to adapt their language use than are men in cross-language partnerships.

Differences were also discernible in the language used for talking to each other. More Welsh-speaking men continue to use Welsh in cross-language marriages than do Welsh-speaking women, and fewer change to using English. Fewer English-speaking women speak only English and more speak mostly Welsh than do English-speaking male partners. In other words, almost 40% of English-speaking women use Welsh with their Welsh-speaking partners, whereas only 20% of English-speaking men use Welsh with their Welsh-speaking partners. The majority of both groups continue to use almost entirely English in their marriages, but the women are shown to be more likely to change their language to suit their partner than vice versa. Furthermore, in these marriages, Welsh-speaking partners used their language more than did their partners, but the non Welsh-speaking women

were more likely to use Welsh than non Welsh-speaking men.

Concerning the importance attributed to the Welsh language, comparisons were made between Welsh-speakers who married fellow Welsh speakers and those who did not. There was little difference between the two groups of women, but the men were less likely to think Welsh was important. Non Welsh-speakers of either gender in cross-language partnerships were more likely to think Welsh was important than those who married English speakers. Although cross-language partnerships obviously influence the value placed on the Welsh language, Welsh speaking women are less influenced by their partners than are men. There were no significant differences between mothers and fathers in general in this regard, and only a non-significant interaction between gender and language background and answers about the importance of Welsh. A significant difference was found between parents from different language backgrounds regarding the importance of Welsh question.

In general, two thirds of all parents wanted their children to be fluent in Welsh and a further quarter wanted them to learn Welsh at school. Again it was only in the cross-language marriages that differences could be discerned by gender. More Welsh-speaking mothers than Welsh-speaking fathers wanted their children to be fluent in Welsh, but there was no overall gender difference on this question. Again a significant difference was found according to language background.

Men were generally less optimistic than women about the future of the Welsh language, but Welsh-speaking women who marry non Welsh-speakers are more pessimistic than those who do not. There was no significant gender difference overall

in these opinions, nor was there a significant interaction here between parent and language background.

Thus, although it seems that women USE more of their partner's language in cross-language marriages, it's not clear if their OPINIONS are as easily changed. Welsh-speaking women married to non Welsh-speakers still value Welsh, still want their children to be fluent in Welsh, but they do think Welsh will be used less in the future.

The last set of comparisons come from the second sample, those answering QII in 1991-1992. More women than men returned this questionnaire, and significantly more fathers of monolingual English children failed to do so.

Significantly more mothers than fathers thought their children understood some Welsh but there were no significant differences in their reports of language heard or language used, or in their satisfaction with their child's general language development. Mothers chose Welsh for personal reading and for reading with their children significantly more frequently than did fathers, and this will be linked with differences reported in the next two questions.

Parents were largely in agreement about the development of specific aspects of Welsh and English. There was a tendency for mothers to attribute more language skills to their offspring than did fathers. They were again asked how much Welsh they wanted their children to learn, and again almost all parents wanted their children to learn Welsh at school. Although fathers made fewer comments overall, their reasons for wanting their children to learn Welsh (or not) were not very different. They were more likely to emphasize the need for both languages, and mothers were more likely to comment on job prospects and communication skills.

Overall, the differences between the genders were not found to be great, especially in the two questionnaire samples. In the small sample, although the differences are more marked, the data are selective and suggestive rather than conclusive. It is the data from cross-languages partnerships that are most provocative, as will be discussed in more detail later.

1. INTRODUCTION

When parents have a new baby, especially if it is a first baby, it is not uncommon for them to alter their lifestyle for the sake of the child, and to make resolutions about the future. These alterations and resolutions often do not survive. Change is always possible, it is the maintenance of change that is more difficult. In the context of the present research, it was thought that some of the language uses described when this cohort of babies was born, and the opinions expressed about Welsh and English could be a reflection of this phenomenon; good intentions hard to put into practice with a growing child. For many parents, the first time that they have to make choices about the language/s their children will hear is when they are around age three, the time of Ysgol Feithrin or Nursery School. Therefore, it was thought especially interesting to see if parents had changed either their language use, or their support for the learning of Welsh during the three years that separated the two questionnaires.

Thus, for this question comparisons will be made between replies to the two questionnaires. They were similar in design, some questions were replicated but the second was shorter. However there were other differences, differences in the manner in which they were distributed and in the demands they made. The first questionnaire was given to the mother of every baby born on Anglesey during twelvemonths. Of the thousand or so handed out, about 45% were returned, a total of 418. Three years later the second questionnaire was

sent by post to those 418 families, and 178 responded (about 43%).

The first questionnaire, while focusing on the mother-child relationship, also asked mothers to respond on behalf of their partners. By the time of the second questionnaire, queries had arisen about the differing influence of the two parents. Consequently two copies were sent to each family with the request that fathers as well as mothers complete them. Pairs of the questionnaire, QII, were returned by 124 families and they form the basis of most of the later analyses, although a further 42 QIIs were returned by one parent only. In the first survey, when single parent families are excluded, 384 families remain forming the basis of most of the earlier analyses.

The main focus of QII, the language development of the children, although clearly representing a change over time, was discussed in question 4 and so is not discussed further in this section.

Parents were asked about current language use in both questionnaires, and about the language they preferred for a variety of activities. They were also asked about how much Welsh they wanted their children to learn and to support those choices with reasons. With hindsight, it would have been useful to repeat more of the questions calling for an opinion about the Welsh language. The primary purpose of the second questionnaire was to sample the language development of a peer group and to check demographic details, consequently replications were kept to a minimum for the sake of brevity.

In brief, after checking the validity of maternal responses on behalf of partners, this chapter examines current language use of both parents on the two occasions, preferred language

on both occasions, and choice of Welsh learning for their children at two ages with their reasons.

2. THE TWO QUESTIONNAIRES

General Comparisons

A list was obtained from the Welsh Office of all the mothers giving birth to children in the year in question. From this a comparison was made between those who did and did not return the first questionnaire. No differences were found between these groups in terms of age, sex of baby and socio-economic status (as ascribed by Health Visitors). The set of mothers who returned both questionnaires were then compared with the rest of the base population. This time, although there were no significant differences in maternal age or sex of child, there were differences in socio-economic status. Table Q8.1 shows that a significantly greater proportion of SES 1 and 2 families, and significantly lesser proportion of SES 3 families appear in the group that returned QII than appear in

Table Q8.1; Differences in Socio-Economic Status between those responding to the second questionnaire (QII) and the rest of the base population.

SES		1	2	3	4	5
NON-RESPONDENTS (N = 591)	N	22	69	215	116	169
	%	3.7	11.7	36.4	19.6	28.6
RESPONDENTS (N = 164)	N	13*	30*	42*	26	53
	%	7.9	18.3	25.6	15.9	32.3

* = Differences are significant beyond the .001 level. That is, there are significantly more respondents in SES 1 & SES 2 and significantly fewer respondents in SES 3 than expected.

NB. The figures exclude those not categorized by Health Visitors.

the group that did not. If the two groups are bifurcated, the figures look more representative, with 48.2% from SES 4 and 5 in both the responders and non-responders.

However, there appears to be a bias towards SE classes 1 and 2 in the group who responded to the second questionnaire.

The next important check concerned the allocation of couples to language background groups. In the analysis of both sets of data, respondents were assigned first to a Welsh, Mixed or English group, and then to a WW, WM, MM, WF, or EE couple group according to their use of language. A major difference lies in the evidence for these assignments. In the first questionnaire, both past and present language use variables were used, whereas in the second questionnaire only variables relating to current language use were available.

To check the validity of these groupings it was necessary to calculate the proportionate agreement between the allocation of the fathers, the mothers and the couples on the two occasions. Table Q8.2 shows that proportionate agreement was above 81% in all three comparisons, and the Kappa value, the co-efficient of agreement, ranged from 0.76 to 0.82, well within the limits of acceptability (Youngman 1979). That is,

Table Q8.2; PROPORTIONATE AGREEMENT BETWEEN THE GROUPING OF PARENTS and COUPLES at QI and at QII.

T1 and T2	Maternal Groups	Paternal Groups	Couple Groups
Proportionate Agreement	0.84745 (85%)	0.81987 (82%)	0.81666 (82%)
Kappa	0.763	0.726	0.762

Proportionate Agreement is 0.8167, that is 81.67 % of the Couples were categorized in the same group on both occasions. using Cohen's Kappa, $K = 0.762$ where K is the coefficient of agreement (Youngman 1979).

to be a member of the 'Welsh' group for example, means the same thing whichever set of data is under discussion.

The numbers and percentages of couples falling into each category on each occasion are shown in Table Q8.3. The distribution is similar on the two occasions, except in the Welsh Father group which has become a very small group.

Table Q8.3; Frequency of Parents answering the two Questionnaires by Language Background

	QUEST.I N	QUEST.I %	QUEST.II N	QUEST.II %
WELSH (WW)	93	24.2	35	28.2
WELSH MOTHER (WM)	36	9.4	16	12.9
MIXED (MM)	77	20.1	30	24.2
WELSH FATHER (WF)	46	12.0	6	4.8
ENGLISH (EE)	132	34.4	37	29.9
TOTALS	384	100.0	124	100.0

Table Q8.4 shows how many couples responding to QII were placed in the same category after the interval of three years. The predominantly monolingual groups (both WW and EE) remained much the same overall. The greatest attrition was from the Welsh-speaking Father (WF) group; couples so categorized on the first occasion tending to drift into the Mixed category. Couples in the Mixed category also tended to drift into the English-speaking group.

As can be seen, almost 82% of couples remained in the same category. The biggest shift was out of the Welsh Father group into the Mixed group, with some of the couples categorized as MM on the first occasion, shifting into the EE group.

TABLE Q8.4; Distribution of the Couples who answered both Questionnaires by Language Background

	QU.II WW	QU.II WM	QU.II MM	QU.II WF	QU.II EE	Total
QU.I WW	32	1	2			35 28%
QU.I WM	2	14	2			18 15%
QU.I MM			18		5	23 19%
QU.I WF	1	1	6	6		14 11%
QU.I EE			2		32	34 27%
Total	35 28%	16 13%	30 24%	6 5%	37 30%	124

The last general question which needs clarification concerns the validity of maternal responses on behalf of partners in the first questionnaire. This was addressed by pairing responses made indirectly at T1 with direct responses at T2 and using T-tests. Table Q8.5 examines replies to questions in QI concerning language use in eight situations. These have a five point scale (from 1= Welsh to 5= English). 'Welsh Learning' asked how much Welsh parents wanted their children to learn. This has a four point scale (1= only English to 4= Fluent Welsh). As TQ8.5 shows, there were no significant differences between the two occasions (except for marginally significant differences in language use with neighbours and in church or chapel). This is welcome as a validation of the indirect data obtained in 1988.

3. LANGUAGE USE ON TWO OCCASIONS COMPARED

The current language use of both parents was compared for the two occasions. The Paternal Language Use Table has already been discussed (Table Q8.5), and Table Q8.6 uses the same methodology to look at Maternal Language Use over time. The same responses are reported and the same scales apply. It should be noted that ALL QIIs were included in the analysis, and as this meant those without partners (or at least without form-returning partners) could be included, there were higher numbers of subjects.

As previously, a mean score of 1.0 indicates total and exclusive use of Welsh and 5.0 indicates total and exclusive use of English by the parents. Thus, as most values are just over 3.0, most parents use a mixture of Welsh and English for talking to their children, to other children, to friends, to parents and to one another, and this has not changed at all over the past three years.

The maternal table (TQ8.6) shows evidence of change. The mean value for preferred reading language is significantly lower ($p= 0.003$) on the second occasion for mothers, and also significantly lower for preferred television language ($p= 0.017$). From the mean values, English was preferred less as time went on, ($M= 4.28$ to $M= 4.09$ for reading and $M=4.04$ to $M= 3.88$ for viewing).

The first table, TQ8.5, shows that there were no significant changes in the preferences shown by fathers when reading or watching television. Mean values were above 4.00 for both activities on both occasions, indicating a tendency to prefer English for these activities.

TABLE Q8.5; Mean Paternal Language Use for specified Situations; answers from the two Questionnaires compared.

SITUATION	N	Mn	SD	SE	Corr	t	Prob	Sig
T1-Baby	122	3.11	1.72	0.16				
T2-Toddler	122	3.04	1.72	0.16	0.90	0.92	0.36	NS
T1-Children	110	3.20	1.61	0.15				
T2-Children	110	3.14	1.69	0.16	0.86	0.76	0.45	NS
T1-Friends	119	3.29	1.63	1.15				
T2-Friends	119	3.21	1.66	1.15	0.86	1.07	0.29	NS
T1-Parents	120	3.17	1.78	0.16				
T2-Parents	120	3.05	1.88	0.17	0.90	1.56	0.12	NS
T1-Partners	120	3.45	1.74	0.16				
T2-Partners	120	3.41	1.77	0.16	0.92	0.65	0.52	NS
T1-Reading	120	4.32	1.09	0.10				
T2-Reading	120	4.21	1.10	0.10	0.78	1.62	0.11	NS
T1-Thinking	120	3.65	1.61	0.15				
T2-Thinking	120	3.51	1.63	0.15	0.85	1.76	0.08	NS
T1-Viewing	119	4.10	1.16	0.11				
T2-Viewing	119	4.01	1.16	0.11	0.74	1.20	0.23	NS
T1-Welsh L.	121	3.69	0.67	0.06				
T2-Welsh L.	121	3.64	0.80	0.07	0.50	0.73	0.73	NS

There are no significant differences in paternal language choice on the two occasions in any of the above situations. "With neighbours" and "At church or chapel" were marginally significant at the .05 level.

T1 is the time of the first Questionnaire (1988-1989)
T2 is the time of the second Questionnaire (1991-1992)

The situations relate to questions asked in both questionnaires, for example Welsh L. relates to the question "How much Welsh do you want your child to learn?" This has a four point scale. All other questions have a five point scale with 1= Welsh and 5= English.

TABLE Q8.6; Mean Maternal Language Use for specified Situations; answers from the two Questionnaires compared.

SITUATION	N	Mn	SD	SE	Corr	t	Prob	Sig
T1-Baby	177	3.11	1.82	0.14				
T2-Toddler	177	3.09	1.82	0.14	0.92	0.53	0.60	NS
T1-Children	160	3.31	1.72	0.14				
T2-Children	160	3.38	1.78	0.14	0.88	1.29	0.20	NS
T1-Friends	175	3.37	1.67	0.13				
T2-Friends	175	3.38	1.63	0.12	0.89	0.10	0.92	NS
T1-Parents	173	3.25	1.84	0.14				
T2-Parent	173	3.21	1.84	0.14	0.92	0.62	0.54	NS
T1-Partners	166	3.58	1.74	0.14				
T2-Partners	166	3.45	1.83	0.14	0.86	1.74	0.08	NS
T1-Reading	175	4.28	1.12	0.08			*	
T2-Reading	175	4.09	1.22	0.09	0.73	3.00	0.001	SIG
T1-Thinking	175	3.55	1.72	0.13				
T2-Thinking	175	3.47	1.66	0.13	0.83	1.08	0.28	NS
T1-Viewing	173	4.04	1.20	0.09				
T2-Viewing	173	3.88	1.20	0.09	0.73	2.42	0.02	SIG
T1-Welsh L.	175	3.59	0.73	0.06				
T2-Welsh L.	175	3.57	0.73	0.06	0.03	0.71	0.48	NS

The situations relate to questions asked in both questionnaires, for example Welsh L. relates to the question "How much Welsh do you want your child to learn?" This has a 4 point scale.

Other questions have a 5 point scale with 1= Welsh and 5= English.

* There is a significant difference between maternal language choice for Reading on the two occasions at the 0.003 level. For language choice for Viewing the difference is significant at the 0.017 level. That is, mothers used more Welsh in these situations on the second occasion.

There were also marginally significant differences (at the 0.05 level) in "At work" and "At church or chapel".

T1 is the time of the first Questionnaire (1988-1989)

T2 is the time of the second Questionnaire (1991-1992)

In the last section (p312), TQ7.7 showed a marginally significant difference between the parents for personal reading and reading to children; mothers used more Welsh. It is possible that the difference noted here and those from the last section are all associated with the language used with a growing child. This is in accord with comments made by mothers in the small sample, and on the returned questionnaires.

4. WELSH LEARNING PREFERENCES FOR CHILDREN AT TWO AGES

Table Q8.7 comprises data abstracted from TQ8.5 and TQ8.6. It is clear from this that there is no significant difference between the amount of Welsh learning wanted for their children by either parent at either time (maternal $p= 0.48$, paternal $p= 0.73$). From the last section (TQ7.7) there was also no difference between the parents on this measure ($p= 0.71$).

Table Q8.7; Mean Maternal and Paternal Preferences concerning Welsh Learning for their Children compared over Time (Abstracted from Tables Q8.5 and Q8.6 above)

	mean	sd	se	corr	t	prob	sig
Mat. WelshL(T1) N=175	3.594	.73	.06				
Mat. WelshL(T2)	3.566	.73	.06	.031	.71	0.48	ns
Pat. WelshL(T1) N=121	3.686	.67	.06				
Pat. WelshL(T2)	3.636	.80	.07	.496	.73	0.73	ns

Mat. WelshL (T1) and Pat. WelshL (T1) refer to maternal and paternal choices concerning the amount of Welsh learning they wanted for their babies when they were older (from QI).
Mat. WelshL (T2) and Pat. WelshL (T2) refer to similar choices made three years later (from QII).

As the choices were made on a four point scale, the observed mean scores of 3.566 to 3.686 indicate that parents in general wanted their children to learn at least school Welsh (score 3) and probably to be fluent (score 4). Both questions have a four point scale with 4= Fluent Welsh

The results from both questionnaires were then examined according to language background for changes over time. Results from both parents for the two occasions separately were available in Question 2 (Tables Q2.1 {p173} and Q2.5 {p183-185}).

Answers from the mothers on the two occasions are presented in Table Q8.8 in percentage of responses from each language background group. Overall the results were similar, with more mothers hoping their children would be fluent Welsh speakers, rather than just learn Welsh at school at QII. There is also virtually no change in the answers given by the two groups of Welsh speaking mothers. However, the English speaking mothers in the WF group all want their children to be fluent on the second occasion, this representing a shift from 'school Welsh'. In the Mixed group also, the majority of mothers (83%) want their children to be fluent in Welsh at QII, having moved from thinking that 'some Welsh' or 'school Welsh' would be enough.

The English speaking group is more difficult to interpret. When their children are about three years old, fewer say they want their children to learn only English, but more say they want them to learn only some Welsh. More want their children to be fluent in Welsh at QII and fewer want their children to learn Welsh at school. Collapsing the groups, 39% of mothers in EE want their children to speak little or no Welsh at QII compared with 29% at QI, and 61% want their children to learn school Welsh or be fluent at QII compared with 72% at QI.

Table Q8.8; Maternal Preference concerning Welsh Learning for their Children in the two Questionnaires by Language Background.

	Engl.	Only	Some	Welsh	Schol	Welsh	Fluent	Welsh
	QI	QII	QI	QII	QI	QII	QI	QII
WW%	0	0	0	0	2	0	98	100
WM%	0	0	6	0	3	0	92	100
MM%	3	0	16	3	23	13	58	83
WF%	0	0	4	0	20	0	76	100
EE%	14	8	15	31	46	28	26	33
ALL	5	3	9	9	24	12	62	76

QI; N = 382

QII; N = 122

Figures are percentages of Mothers in each Language Background Group answering each Questionnaire.

More mothers in all of the groups want their children to be fluent in Welsh than previously, and fewer mothers in the English speaking group want their children to learn Welsh at school.

5. DIFFERENCES OVER TIME IN REASONS GIVEN FOR WANTING CHILDREN TO LEARN WELSH

Reasons for wanting or not wanting children to learn Welsh were discussed in detail in Q2, and reference was made to changes in reasons over time. Tables Q8.9a and Q8.9b show the raw scores and percentages respectively of types of parental comment in each of the couple groups in QI and QII. There were overall changes in the percentages giving four of the reasons for wanting or not wanting their children to learn Welsh. Fewer gave job prospects as a reason on QII (7% compared with 13% previously) or communication (8% compared

with 12% previously) or made general comments about advantages (6% compared with 16%). More now specified the need for English as well as Welsh (17% as to 9%) and there were more non-specific comments.

In the Welsh-speaking families (WW) there were two major changes; there were 20% more comments emphasizing the need for English as well and almost 17% fewer comments citing Welsh identity or heritage as a reason for learning Welsh. In the

Table Q8.9a; Reasons for Wanting (or NOT Wanting) Children to learn Welsh by Language Background, QI and QII compared.
RAW SCORES

	WW		WM		MM		WF		EE		All	
	I	II	I	II	I	II	I	II	I	II	I	II
1.	8	28	10	7	10	5	9	2	3	7	40	28
2.	5	2	4	1	17	8	6	0	35	7	67	18
3.	2	0	4	3	20	8	4	1	26	7	56	19
4.	5	2	0	2	11	6	5	1	29	12	50	23
5.	14	19	7	9	7	18	6	0	22	21	56	67
6.	2	5	0	0	1	0	0	0	0	0	3	5
7.	0	0	2	1	5	4	1	2	37	26	45	33
8.	53	42	15	10	22	14	11	4	13	6	113	76
N	89	98	42	33	92	63	42	10	165	86	430	290
N Ss	93	76	36	30	77	66	46	10	132	66	384	248

1. = Importance of Both Languages Emphasized
 2. = General comments about the Advantages of Welsh Learning.
 3. = Better Job Prospects
 4. = For Communication Purposes
 5. = Comments not specifying reasons
 6. = Comments about keeping English and the English at bay
 7. = Welsh as Irrelevant or Unnecessary
 8. = Welsh Identity or Heritage
- N = Total Number of Comments
Ss = Number of Subjects in each Group

English-speaking families (EE) more thought Welsh was irrelevant or unnecessary and commented on the importance of both languages than previously, and fewer gave job prospects, communication or general advantage as reasons. Families with Welsh-speaking mothers (WM) were the only ones where the percentage citing communication as a reason increased.

Table Q8.9b; Reasons for Wanting (or NOT Wanting) Children to learn Welsh by Language Background, QI and QII compared.

PERCENTAGE SCORES

	WW		WM		MM		WF		EE		All	
	I %	II %	I %	II %	I %	II %	I %	II %	I %	II %	I %	II %
1.	9	29	24	21	11	8	21	20	1	8	9	17
2.	6	2	10	3	18	13	14	0	21	8	16	6
3.	2	0	10	9	22	13	10	10	16	8	13	7
4.	6	2	0	6	12	10	12	10	18	14	12	8
5.	16	19	16	27	8	29	14	0	13	24	13	23
6.	2	5	0	0	1	0	0	0	0	0	1	2
7.	0	0	5	3	5	6	2	20	22	30	10	11
8.	60	43	36	30	23	22	26	40	8	7	26	26
											100	100
N	89	98	42	33	92	63	42	10	165	86	430	290
N Ss	93	76	36	30	77	66	46	10	132	66	384	248

- 1. = Importance of Both Languages Emphasized
 - 2. = General comments about the Advantages of Welsh Learning.
 - 3. = Better Job Prospects
 - 4. = For Communication Purposes
 - 5. = Comments not specifying reasons
 - 6. = Comments about keeping English and the English at bay
 - 7. = Welsh as Irrelevant or Unnecessary
 - 8. = Welsh Identity or Heritage
- N = Total Number of Comments
 Ss = Number of Subjects in each Group

That group cited job prospects less often and Welsh heritage slightly less often than previously. Data from the other cross language family is difficult to interpret as only ten comments were forthcoming, some families making none at all. The MM group, like the EE and WM groups, greatly increased the number of general comments they made. These comments tended to describe the progress of their individual children, and to reflect on the nature of bilingualism in general. The MM group also gave fewer general advantage and job prospect reasons than on the first occasion.

6. SUMMARY

Despite some differences in the composition, distribution and recipients of the two questionnaires, the groups of mothers who answered both of them did not differ significantly from the population with regard to maternal age, sex of child or, broadly speaking, socio-economic status.

There were some shifts in the language background groups to which couples were allocated, the largest being from the WF group, probably to the MM group. However, using Youngman's Kappa, proportionate agreement of over 81% was found for the allocation of parents to groups, both singly and jointly. Concerns about the indirect paternal reports in QI were allayed by the direct paternal reports in QII. Using T-tests, no significant differences were found between their answers on the two occasions.

T-tests were also used to compare both maternal and paternal language use when their children were babies and when they were three-year olds. No significant differences were found, neither were any found in the language preferences of fathers

for activities such as reading and watching television. There were differences in maternal preferences for reading language & for television language, indicating that Welsh was preferred more often as the children grew older. It is possible that, as mothers encouraged their children to learn Welsh through books and television, their liking for the language grew.

There were no significant differences between the choices parents made regarding the amount of Welsh they wanted their children to learn in QI and in Q II. This held true for both fathers and mothers. However, there appear to be some shifts over time. Almost all the mothers in all the groups except the EE group want their children to be fluent Welsh speakers at QII, an increase on QI. More English speaking mothers in EE also want that for their children, but fewer want their children to learn Welsh at school.

If mothers are choosing Welsh as a medium for reading and viewing more often because of their children, perhaps they are becoming more ambitious for their child, opting for fluency rather than just school Welsh. This could well apply to some of the mothers in the EE group, as well as those groups with a first language Welsh speaker. But it is also possible that some English speaking mothers have become less keen on the language and polarised against Welsh as a teaching medium. The reasons for that choice could give clues to what is happening. There was no apparent increase in support for the total Welsh culture, or in antipathy against it. The Welsh language was less often seen as a passport to jobs and friends on the second occasion, but many more spoke up for the need for both languages.

One last comment needs to be made on the changes between the two questionnaires. Three years separated them, and in that time the economic situation in Wales, as in the rest of the

United Kingdom, has been through a recession, more non-Welsh speaking incomers have moved into Anglesey, and the Welsh language society remained active. The families who answered the second questionnaire have lived in Anglesey for all of those three years and so have been influenced by the prevailing political and cultural scene locally. Any changes in opinion or behaviour over that time must take account of the wider stage.

Question 9:

WHAT FACTORS PREDICT A CHILD'S

LANGUAGE?

1. INTRODUCTION

The research started with a curiosity about what would happen to the language of any particular child given parents who spoke varying mixtures of Welsh and English. This question tries to look backwards. Given that these children speak English, Welsh or a mixture of the two, what predicted that outcome?

The answer is embedded in the design of the research. Having identified five different language backgrounds, they, or factors within them, seemed the most likely predictors of the future language use of children. Those associations will be examined first.

One of these factors, attitudes to language has already been shown to make a difference to the extent to which the language is used. Perhaps attitudes also influence the language learned by children. The range of data is narrower in this area, and an 'aspirations for Welsh factor' did not provide any additional information.

The search turned next to parental language itself. Question 7 has looked for evidence that parents separately influence the language used at home in general, and found few differences between their answers on the questionnaires. In this section, the language of parents in the small sample is scrutinized. Comparisons are made of the scripts from maternal and paternal sessions at age three from the small sample. This sample comprised representative families from

differing language backgrounds, so differences in English and Welsh use were computed, as were parent/child ratios (for lines and words) and MLUs. Differences in aspects of language use such as parental mirroring (echoing a child's remark) and interrupting were noted, and so were the activities chosen by each dyad.

Finally, data from the two questionnaires were subjected to a regression analysis to identify the contribution that parental language use (separately and jointly), and opinions in 1988-89 made to the language of their offspring in 1991-92.

2. THE DEVELOPMENT OF LANGUAGE

Before looking for factors predicting language development, it is necessary to note how language development in the population was defined for the purposes of this study. As described in the methodology, parents were asked to say how much their children were using 18 aspects of language, nine in Welsh and the equivalent nine in English. The points on the scale were '1' NOT YET (DIM ETO), '2' SOMETIMES (WEITHIAU) and '3' OFTEN (YN AML). On the basis of these answers, children were identified as 'Welsh' (N = 41) meaning that they spoke almost only Welsh, 'English' (N = 79) meaning that they spoke almost only English, or 'Bilingual' (N = 57) meaning that the development of their two languages was similar. This scoring allows both those children whose language is advanced and those whose language is slow to be included. Had there been children whose language had not begun to develop at all, they too would have been included in the Bilingual group by this method of scoring, and so questionnaires were scrutinized for such instances. Luckily all of the children were reported to use some language, and virtually all parents reported that

they were satisfied with their child's language development.

Table Q4.9 (p260), showed what percentage of children in each category used the aspects of Welsh and English outlined. Only those reported to use aspects frequently ('OFTEN' 'YN AML') were included and, as expected, 83% of the Welsh children use all nine aspects of Welsh and rarely use any English (with the exception of 'allgone' which should probably have been counted as a Common word and not included in the list). Similarly, 71% of the English children used all nine aspects of English and virtually no Welsh. A fairly balanced development of the two languages was shown by the Bilingual children, with 43% using all aspects of Welsh and 40% using all aspects of English.

Both languages are spoken widely on Ynys Mon. Why did not all the children develop bilingually? The rest of this section will try to clarify what helped to separate the children in this way.

3. LANGUAGE BACKGROUND

It should be remembered that five language background groups were identified on the basis of answers to the first questionnaire, and that families responding to the second questionnaire largely remained within the same groups as previously (Table Q8.4, p330). Thus, given that language background remains stable, it was to be expected that children identified as mostly monolingual Welsh speaking at age three would have WW backgrounds, children identified as mostly monolingual English-speaking would have EE backgrounds, and the Bilingual children would have one of the other three backgrounds, namely WF, WM or MM.

Table Q9.1 shows that this is largely the case. At the time of QII, 88% of the 'Welsh-monolingual' children were in the WW group, 73% of the 'English-monolingual' children were in the EE group, and 84% of the 'Bilingual' children were in the other three groups. That is, 81% of the 124 children live in families whose language background is concordant with the language they are using.

TABLE Q9.1; CURRENT LANGUAGE BACKGROUND of MONOLINGUAL AND BILINGUAL CHILDREN

Children Background	Welsh- Monolingual	Bilingual	English- Monolingual	N=124
WW	88% [30]	12% [5]	0% [0]	28% [35]
WM	3% [1]	36% [15]	0% [0]	13% [16]
MM	3% [1]	38% [16]	27% [13]	24% [30]
WF	6% [2]	10% [4]	0% [0]	5% [6]
EE	0% [0]	5% [2]	73% [35]	30% [37]
% of Total	27% [34]	34% [42]	39% [48]	100% [124]

Of the children classified as monolingual Welsh speakers at age three, 88% lived in primarily Welsh speaking backgrounds concurrently (N= 30), of those classified as monolingual English speakers, 73% lived in primarily English speaking backgrounds (N= 35), and 84% of those classified as Bilingual lived in backgrounds where more than one language was spoken (N= 35).

Table Q9.2 looks at the language backgrounds into which the three groups of three year olds had been born using the larger group of all families responding (N = 166), and classifications retrieved from categories assigned at QI.

Apart from children with mothers who were single parents on the first occasion, all received a language background category at QI. These could be used for virtually all of the children on the second occasion, even those whose fathers did not reply. However, for a current language background category, it was necessary to have a reply from both parents, and so some of the 166 with a past language background category had to be excluded at QII, leaving 124 currently categorized. These first classifications were used in TQ9.2 (and TQ9.3, TQ9.4a and TQ9.4b).

TABLE Q9;2; CURRENT LANGUAGE USE of Three-year old Children according by PAST Language Background.

CHILDREN BACKGROUND	Welsh- Monolingual	Bilingual	English Monolingual	N= 166
WW	82% 32	23% 12	0% 0	27% 44
WM	8% 3	28% 15	3% 2	12% 20
MM	0% 0	19% 10	31% 23	20% 33
WF	8% 3	21% 11	7% 5	11% 19
EE	2% 1	9% 5	60% 44	30% 50
TOTALS	23% 39	32% 53	45% 74	100% 166

Of the children classified as monolingual Welsh speakers at age three, 82% were born into primarily Welsh speaking backgrounds (N= 32), of those classified as monolingual English speakers, 60% were born into primarily English speaking backgrounds (N= 44), and 68% of those classified as Bilingual were born into backgrounds where more than one language was spoken (N= 36).

That is, 112 of 166 children (67%) were born into families whose language background at that time concurs with their language use currently.

Thus, 100 of 124 children (81%) lived in families whose language background was concordant with their language use. There is still a good degree of concordance between language background and current language use. 82% of the monolingual Welsh speakers had been born into WW homes, 60% of monolingual English speakers had been born into EE families, and 68% of Bilinguals had been born into WM (28%), WF (21%) and MM (19%) homes, making 112 children (67%) who had been brought up in the kind of family to be expected, given their language use.

It was possible to retrieve classifications from QI for all families from whom questionnaires were returned on the second occasion (N= 166). Losses between QI and QII are due largely to non receipt of paternal questionnaires on the second occasion making current language background classification impossible.

Table Q9.3 compares these two sets of classification, the QI distribution of children according to original language background group with the QII distribution according to their current language background group. There is general similarity. Although no significant differences were found in the last chapter when couples who replied to QII were assigned to groups and then compared to their previous group membership (TQ8.4, p331), it looks as if there is a difference when they were examined in connection with the language children developed. Fewer of the 'Welsh' children appear to have been born into WW backgrounds (83% compared with 88%), fewer 'English' children into EE backgrounds (60% compared with 73%), proportionally fewer 'Bilingual' children in WM (28% as to 36%) and MM (19% as to 38%) but more 'Bilingual' children were born into Welsh Father (WF) families (21% compared with 10%). Although Table Q8.4 showed little change in group membership between the two

questionnaires, what change did occur was associated with MM and WF and so it is possible that this accounts for some of the differences observed in TQ9.2. However, the numbers involved in the WM and WF groups are very small at QII, and so not a great deal of weight can be given to these differences.

The data was then re-examined prospectively. Table Q9.4a looks at what became of the children from the original

TABLE Q9.3; CURRENT Language Use in Three-year old Children by PAST and CURRENT Language Background

CHILDN	Welsh-Monolingual		Bilingual		English-Monolingual		TOTALS QI/QII
	QI N=166	QII N=124	QI N=166	QII N=124	QI N=166	QII N=124	
WW	82% [32]	88% [30]	23% [12]	12% [5]	0% [0]	0% [0]	44/35
WM	8% [3]	3% [1]	28% [15]	36% [15]	3% [2]	0% [0]	20/16
MM	0% [0]	3% [1]	19% [10]	38% [16]	31% [23]	27% [13]	33/30
WF	8% [3]	6% [2]	21% [11]	10% [4]	7% [5]	0% [0]	19/06
EE	2% [1]	0% [0]	9% [5]	5% [2]	60% [44]	73% [35]	50/37

QI= Questionnaire I, when the children were born (N= 166).
QII= Questionnaire II, when they were about 3 years old (N= 124).

Of all the children who were found to be monolingual Welsh speakers at age three, 82% had language backgrounds that were classed as WW when they were born, 16% had come from WF (8%) or WM (8%) backgrounds and 2% had come from an English speaking background (EE). Of those whose language background could be reclassified concurrently, 88% of Welsh-monolingual children live in WW backgrounds, and the other 12% live in families with both languages (WM= 3%, MM= 3% and WF= 6%).

language backgrounds. It shows that, as expected, the bulk of those from EE became monolingual English speakers (88%) and none of the children from WW did so.

Table Q9.4a; EARLY LANGUAGE BACKGROUND by Child membership of LANGUAGE USE group subsequently

Children Background	Welsh- Monolingual	Bilingual	English- Monolingual	Totals (N=166)
WW	73% [32]	27% [12]	0% [0]	44
WM	15% [3]	75% [15]	10% [2]	20
MM	0% [0]	30% [10]	70% [23]	33
WF	16% [3]	58% [11]	26% [5]	19
EE	2% [1]	10% [5]	88% [44]	50

This table re=presents the data from TQ9.3a, emphasising the subsequent language use of children by early background. Thus, 73% of the children whose original language background was classified as WW, Welsh speaking, were found to be monolingual Welsh speakers at age three. The remaining 27% were bilingual.

Those children became monolingual Welsh speakers mostly (73%), or else bilingual (27%). The MM group produced mostly English speakers (70%) and bilinguals (30%), and more than half of the children from WF and WM backgrounds became bilingual. A WF background seems more likely to produce monolingual English speakers than a WM background, but numbers are small in both of these groups, making generalization hazardous.

The five language background groups of QI were collapsed into three groups in Table Q9.4b so that a chi square analysis could be performed. This gave a value of 111.39, which is

significant beyond the .001 level in a two tail test. Thus, a WW background is significantly associated with the development of monolingual Welsh children and a EE background is significantly associated with the development of monolingual English children, not an unexpected finding! Conversely, significantly few children from EE backgrounds became Welsh speakers (or Bilingual) and no children from WW backgrounds became monolingual English speakers.

Table 9.4b; LANGUAGE USE BY CHILDREN ACCORDING TO EARLY LANGUAGE BACKGROUND (simplified)

Children Background	Welsh- Monolingual	Bilingual	English- Monolingual	
WW	73% 32	27% 12	0% 0	27% 44
WM+MM+WF	8% 6	50% 36	42% 30	43% 72
EE	2% 1	10% 5	88% 44	30% 50
	24% 39	32% 53	45% 74	100% 166

The three groups with both languages in their background were grouped together.

Chi-square value = 111.39, which is significant ($p < 0.001$).

The middle group, where families had a mixture of languages in their background, produced associations which are less easy to interpret. Half of the children from this group became bilingual, which is significantly higher than from any other group. However, nearly that many (42%) became English speakers. It must also be noted that 27% of children from WW homes become bilingual, that is learn to use English as well as Welsh. In comparison, only 10% of children from EE homes

learn Welsh as well as English, implying that the English language has the greater influence. In brief, it seems that language background at birth predicts the language development of the child in that WW leads to Welsh speaking, EE leads to English speaking and the other three groups produce either bilingual children or English speakers.

The final part of this section turns from language background to look at all the answers to questions in QII describing features in the current environments of these children. Answers are available about how much Welsh and English parents use, children hear and children understand. Tables Q8.5 and Q8.6 in the last chapter (p331 & p332), showed that there were no significant differences between Parental language use and parental language preferences between QI and QII, these data are also compared with the children's language development.

TABLE Q9.5; FEATURES OF THE CURRENT BACKGROUND OF CHILDREN IN QII

		WELSH	BILINGUAL	ENGLISH
Language Parents Use	Mostly W.	95%	53%	0%
	Both	2%	32%	30%
	Mostly E.	2%	16%	70%
Language Child Hears	Mostly W.	98%	60%	1%
	Both	2%	39%	41%
	Mostly E.	0%	2%	58%
Language Child Understands	Mostly W.	93%	26%	1%
	Both	5%	70%	5%
	Mostly E.	2%	4%	94%

Percentages of children classed as Welsh speaking, Bilingual or English speaking according to parental language use, language heard and language understood at home.

Table Q9.5 shows these comparisons, that is current features by language of children classed as monolingual or bilingual. As can be seen, virtually all of the monolingual Welsh children are said to hear and to understand mostly Welsh and to have parents who almost only use Welsh. Virtually all of the monolingual English children understand almost only English, and most hear mostly English. However, 41% hear both English and Welsh, and 30% of their parents use both English and Welsh. The bilingual children appear to hear more Welsh than English and are more likely to have parents who use mostly Welsh. But 70% of them are said to understand both Welsh and English.

If there have been no differences between the language heard and understood by the children (TQ9.5), and no differences between the language used by parents between the two occasions (TQ8.5), the picture for the monolingual Welsh speaking children is clear; having parents who use mostly Welsh and hearing and understanding mostly Welsh is associated with becoming a Welsh speaker. The picture is less clear for the monolingual English speaking children, (let alone the Bilinguals). At least 30% of these children have bilingual parents, parents who use both languages. So at least some bilingual parents produce English monolingual children.

4. PARENTAL OPINIONS

Current parental preferences for reading, thinking, talking and watching television, alone and with their children, are shown in Table Q9.6. Information on current activities is used because there are no comparable data from the first questionnaire for activities with children. They were only babies at that time. As can be seen, virtually all of the

TABLE Q9.6; PARENTAL LANGUAGE PREFERENCES at QII by CHILDREN IN THE THREE GROUPS

		WELSH	BILINGUAL	ENGLISH
Parental Reading	Mostly W.	39%	5%	1%
	Both	24%	22%	1%
	Mostly E.	37%	73%	98%
Reading to Child	Mostly W.	88%	25%	1%
	Both	10%	46%	7%
	Mostly E.	2%	29%	92%
Parental Television Viewing	Mostly W.	44%	4%	1%
	Both	46%	41%	9%
	Mostly E.	10%	55%	90%
Viewing Television with Child	Mostly W.	68%	21%	1%
	Both	25%	50%	4%
	Mostly E.	7%	29%	95%
Parental Thinking	Mostly W.	71%	48%	3%
	Both	22%	14%	6%
	Mostly E.	7%	38%	91%
Talking to Child	Mostly W.	98%	64%	1%
	Both	0%	18%	7%
	Mostly E.	2%	18%	92%

parents of monolingual English children prefer to do everything in English. Most of the parents of monolingual Welsh children prefer to think and to do things with their children in Welsh, but less than half prefer to read or watch television in Welsh. The parents of bilingual children mostly prefer English for their own reading and viewing, and are more likely to talk to their children in Welsh.

Comparing activities with and without children, their presence

does make a difference. More parents of Welsh children preferred to read to their children in Welsh than preferred to read for themselves in Welsh (88% as to 39%), and more of the same parents preferred to watch Welsh television with their children than chose it for themselves, (68% as to 44%). A similar trend is evident amongst parents of bilingual children; they are less likely to read English (29% from 73%) and watch English television (29% from 55%) if they have their children with them than if they are alone. No differences are observed in the parents of monolingual English children.

In both questionnaires, parents were asked to say how much Welsh they wanted their children to learn, and there was not a great deal of difference in their answers as reported already. It was thought possible that this choice might have a predictive value, and so responses by mothers, shortly after the birth of their babies, were compared with the subsequent language development of their children. Table 9.7a shows that 95% of the mothers of children who became monolingual Welsh

TABLE Q9.7a; Maternal Choice of Language for Baby (at QI), by subsequent language of Child (at QII).

CHILDREN =	Welsh Mono-lingual	Bilingual	English Mono-lingual	
MATERL. CHOICE				
English Only	0% [0]	0% [0]	5% [4]	2% [4]
Some Welsh	0% [0]	5% [3]	13% [10]	7% [13]
School Welsh	5% [2]	7% [4]	35% [28]	19% [34]
Fluent Welsh	95% [39]	88% [50]	47% [37]	71% [126]
	23% [41]	32% [57]	45% [79]	177

speakers wanted their children to be fluent Welsh speakers, however, the majority of all the mothers (71% of the total) made that choice originally. 47% of the mothers of monolingual English speaking children had wanted them to be fluent in Welsh, as had 88% of those who became bilingual.

The choices were collapsed into two categories, 'some or no Welsh' and 'school or fluent Welsh' in an attempt to clarify the picture. It only showed that significantly more mothers of all children wanted their children to learn Welsh than did not (Chi square= 9.16, df 1, p< 0.05). Table Q9.7b details these results.

TABLE Q9.7b; Chi-squared Results; Maternal Language Choice and Language Development

CHILDREN =	Welsh Mono-lingual	Bilingual	English Mono-lingual	TOTALS
MATERL. CHOICE				
English Only or some Welsh	0 0%	3 5%	14 18%	17 10%
School or Fluent Welsh	41 100%	54 95%	65 82%	160 90%
TOTALS	41 23%	57 32%	79 45%	177

Parental Language choices were bifurcated.
Chi-square= 9.16, p< 0.05 (However one cell had an expected frequency of only 3.94, and 5 is the lowest usually considered.)

Finally in this section, the multiple regression analysis (to be discussed in more detail at the end), included four 'aspiration for Welsh' variables from Q1, namely var58 (parental choice regarding the degree of Welsh fluency wanted for their children), var60 (the importance ascribed to the Welsh language), var62 (opinions about the future of the Welsh language) and var74 (hopes regarding the language status of

their child's future marriage partner). These were entered as independent variables, but accounted for little of the variance (see summary table, TQ9.13f). Variable 58 made a small contribution to the development of Welsh, and var62 to the development of Welsh AND the development of English. Hopes about future marriage account for a small amount of the variance in the development of English and Bilingualism, but the major contribution comes from parental language and will be discussed at the end.

Variables associated with the dependent variable 'Language the Child Understands' are not discussed as that variable is itself an opinion and so it could be confounded.

5. PARENTAL LANGUAGE; Small Sample

Background

As the language of children in the small sample developed, it was the mother's dialogue with her child which was recorded and analyzed, with one exception. After the eighth session when the child was about three years old, fathers were asked to record a session of play and conversation with their children. It is these sessions which will now be compared with the last mother-child session.

There are some differences between the two. Firstly, mothers and children had become familiar with the practicalities of the sessions and had largely lost any inhibitions. Fathers needed quite a lot of coaxing to participate. Consequently, although the observer was present for all the maternal sessions, the recorder was left with the father and he was instructed on how and what to record. Thus field notes could

TABLE Q9.8; MOTHERS and FATHERS COMPARED;
Session VIII and Session DAD

		VIII	DAD
NERYS*	Stage-W	4	3
	mlu	2.08	2.21
IWAN*	Stage-W Stage-E	5 (3)	5 (3)
	mlu	4.53	3.30
BECKY*	Stage-W	4	3
	mlu	2.35	2.12
EMYR	Stage-W Stage-E	5 (3)	5 3
	mlu	2.43	2.26
GARETH	Stage-W Stage-E	5 4	4 (4)
	mlu	3.27	3.21
DAVID	Stage-E	4	3
	mlu	2.42	2.40
NIA	Stage-E Stage-W	5 1	4 3
	mlu	3.31	2.92
MATTHEW	Stage-E Stage-W	4 1	3 2
	mlu	2.77	2.50
LLYWELA	Stage-E	6	6
	mlu	4.67	4.14

Stage-E = Stages in the development of English

Stage-W = Stages in the development of Welsh

* = Children reported to use L2 with peers

(..) = Stages NOT recorded at that session, but achieved at a previous session. (Noted only when virtually none of the second language was used at Session VIII.)

mlu = Mean Length of Utterance.

Using Wilcoxon's matched-pairs signed-ranks test with the mlu values, a significant difference is found between the two sets of scores, ($N = 9$, $T = 3$, $p < .01$).

The tenth child (who was monolingual) had left the area before Session VIII.

not be written to accompany the paternal scripts, restricting the number of comparisons that could be made. Thirdly, in maternal sessions recording was stopped if the child became silent, angry or distressed. In paternal sessions the recorder was left to run for the best part of 45 minutes. Fourthly, in the eighth maternal session, the Reynell test and part of the WIPPSI were administered before the dialogue for analysis was recorded. The fathers were able to talk and play with a child untired by previous effort. Finally there was about a three week gap between the last maternal session and the paternal session, and although that is a relatively short interval, language develops continually. However, this was the nearest approach to obtaining comparable data that could be devised, and as such provides some interesting contrasts.

Measures; MLUs, Stages and Ratios

Table Q9.8 summarizes the language stage for each language and the MLU achieved by nine children at the last maternal session (session VIII) and the session with their fathers. (The tenth child moved away after the seventh session.) In eight out of nine cases the MLU is shorter with fathers than with mothers, and with one child, Iwan, considerably shorter (3.30 compared with 4.53). The difference between these two sets of data were shown to be significant at the $p < .01$ level using Wilcoxon's matched-pairs signed-ranks test (Howell, 1989).

Six of the nine children demonstrated a lower stage of language use in their first language with fathers than with mothers, and the other three performed at the same level. In their second language, (in the five children where a second language was evident), the two WF children achieved a higher stage with their father than with their mother. This is to be expected as for those two, Welsh was their second language and their father was the Welsh speaker in the marriage.

Comparisons of parent/child ratios for both lines and words are made in Table Q9.9.

The mean and standard deviation for maternal ratios make it clear that David and his mother's ratio is markedly different from the rest. She uttered almost two and a half times as many words as David, and almost four times as many lines. (The dialogues become more even-handed as they approach one.)

Most of the children produced differing ratios with each parent. In all cases except David, the father uttered more lines and more words than his wife. For two (Iwan and Nia)

TABLE Q9.9; Comparison of PARENT/CHILD Ratios of Lines and Words at about three years old.

	MOTHER (SESS. VIII)		FATHER	
	L	W	L	W
NERYS; WW	1.27	1.85	2.70	2.36
IWAN; WW	1.63	1.85	1.66	2.03
BECKY; WM	1.37	1.60	1.67	2.59
EMYR; WM	1.15	1.55	1.37	1.86
GAR; MM	0.47	0.55	1.04	0.96
DAVID; MM	3.77	2.36	1.52	1.96
MATT; WF	1.37	1.88	1.91	2.46
NIA; WF	0.96	1.09	1.15	1.12
LLYW; EE	0.51	0.52	1.32	1.49
MEAN	1.39	1.47	1.59	2.20
SD	1.00	0.63	0.47	1.23

L = Lines

W = Words

The ratio is of Parental Lines or Words
over Child Lines or Words

the differences were slight. For Nerys and Llywela they were great. David's father was less overpowering than his mother, bringing their ratio close to the average for the group.

Table Q9.10 compares the type/token ratios of each parent and each child in the two sessions in question. As explained earlier, a child who mostly repeats a few words and phrases will obtain a lower T/T ratio than an adult whose ratio will be nearer to one. However, a child who mostly names things rather than converses will also achieve a higher ratio, and so interpretation is not easy.

Comparisons between the mean values for the parents show no marked differences, indeed they show no great differences between parents and children, or children on the two occasions. Becky is the only child whose T/T ratio varies greatly between the two sessions, apparently restricting the variety of her language with her father. He has a lower ratio than his wife, as do all of the men except Iwan's father. Possibly the mothers use a greater range of vocabulary than do fathers, but this is a difficult measure to interpret.

TABLE Q9.10; Comparison of TYPE/TOKEN Ratios for both Parents and Children in the small sample at about age three years.

		T/T	T/T
		MOTHER (VIII)	FATHER
NERYS; (WW)	Child	.47	.50
	Parent	.33	.31
IWAN; (WW)	Child	.35	.41
	Parent	.30	.41
BECKY; (WM)	Child	.33	.24
	Parent	.27	.19
EMYR; (WM)	Child	.28	.33
	Parent	.34	.28
GAR; (MM)	Child	.30	.32
	Parent	.51	.33
DAVID; (MM)	Child	.44	.36
	Parent	.24	.23
MATT; (WF)	Child	.41	.40
	Parent	.37	.25
NIA; (WF)	Child	.34	.36
	Parent	.36	.32
LLYW; (EE)	Child	.23	.30
	Parent	.34	.26
MEAN-CHILD		.35	.36
SD		.08	.07
MEAN-PARENT		.34	.29
SD		.08	.06

TYPE is the number of different words used
 TOKEN is the total number of words used

Percentage of Language Used

Table Q9.11 compares the amount of Welsh, Common and English used in these two sessions by the children and by each parent. Graphs GQ9.11a and GQ9.11b make this clearer. There is little difference in the proportion of each language used by four of the children, (Iwan, Becky, David, and Llywela). Most surprising of those is Becky, one of the children from a cross-language partnership. However, the other three with parents from differing language backgrounds all changed their language use when conversing with their fathers. Emyr used Welsh only 59% of the time with his father but 77% with his mother. Nia used Welsh 22% of the time with her father and not at all with her mother, and Matthew used Welsh 11% of the time with his father and did not use Welsh with his mother.

TABLE Q9.11; Comparison of Parental and Child Language Use at about age three years for each child remaining in the small sample.

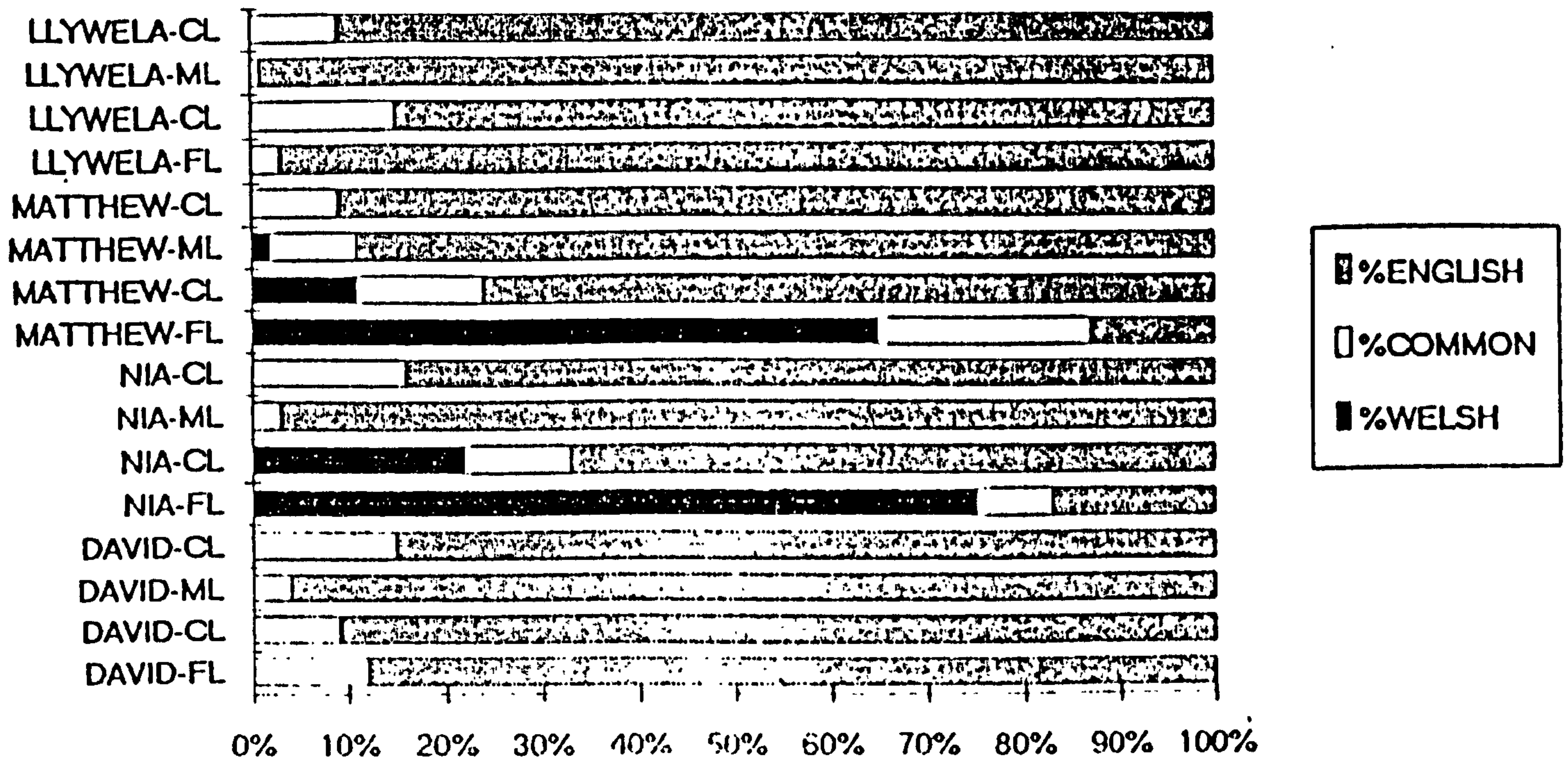
		% WELSH				% COMMON				% ENGLISH			
		FL	CL	ML	CL	FL	CL	ML	CL	FL	CL	ML	CL
NERYS	WW	79	69	85	83	17	16	15	13	4	15	0	4
IWAN	WW	86	89	95	92	12	11	5	8	2	0	0	0
BECKY	WM	85	74	75	82	13	23	17	14	2	3	8	4
EMYR	WM	61	59	83	77	20	27	14	18	19	14	3	5
GARETH	MM	80	85	64	43	18	14	4	5	2	1	32	52
DAVID	MM	0	0	0	0	12	9	4	15	88	91	96	85
NIA	WF	75	22	0	0	8	11	3	16	17	67	97	84
MATT	WF	65	11	2	0	22	13	9	9	13	76	89	91
LLYWELA	EE	0	0	0	0	3	15	1	9	97	85	99	91

The data are percentages of total language used by child (CL) with their mothers (ML) and fathers (FL) during the last sessions at about age three years old.

Unexpectedly, Nerys used English 15% of the time and Welsh only 69% of the time with her father, compared with 5% for English and 83% for Welsh with her mother. Finally, Gareth, who used both languages about equally with his mother, used Welsh 85% of the time with his father.

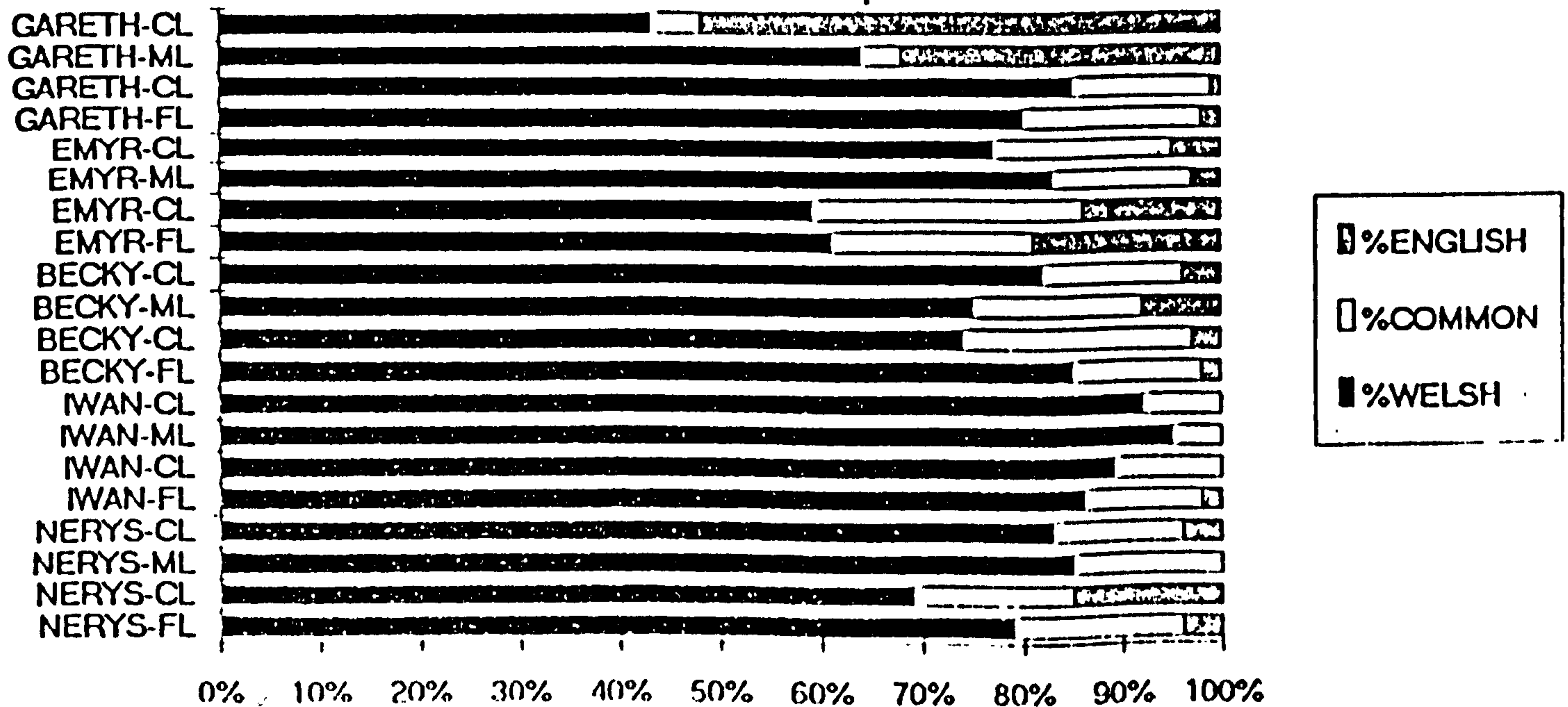
Mostly the children's language reflected the language of their parents. This was so with Iwan, Emyr, David, Llywela, and Becky. It is also the case in the Nerys-Mother, Gareth-Father, Nia-Mother and Matthew-Mother dyads. Nerys used less Welsh and more English than her Welsh-speaking father, Gareth used more English and less Welsh than his bilingual mother, and predictably, the two WF children used less Welsh and more English than their Welsh-speaking fathers. From this it is clear that three out of four of the cross-language fathers were able to influence the language used by their children in their presence. The fourth child, Becky, had a father who was trying to increase his use of Welsh as a new job had given him Welsh workmates. Nerys appeared to react against her father's use of Welsh, but Gareth too appears to have been influenced by his father's greater use of Welsh.

GQ9.11a; Percentages of Child Language & Mother Language and Child Language and Father Language at age 3 for English, Common and Welsh (English speaking Children)



CL= Child Lines, ML= Mother Lines, FL= Father Lines

GQ9.11b; Percentages of Child Languages & Mother Language and Child Language and Father Language at age 3 for English, Common and Welsh (Welsh speaking Children)



CL = Child Lines, ML = Mother Lines, FL = Father Lines

Qualitative Differences

The fathers found it more difficult to keep the conversation going with their children than did the mothers. There were more interruptions and directions and generally they were more awkward than the mothers. This has been difficult to quantify. Instances of mirroring were calculated, as were

TABLE Q9.12; Parental Behaviour with their Three-year-old Child; Instances of Interruptions, Mirroring, formal Game-playing and Reading in the last Maternal and the Paternal sessions.

	BOOKS		GAMES		MIRR-ORS		INTER RUPTS	
	M	F	M	F	M	F	M	F
NERYS	1	1	2	1	2	8	0	1
IWAN	3	0	0	3	8	10	2	0
BECKY	0	2	0	0	10	7	1	1
EMYR	0	2	1	3	3	5	0	0
GARETH	0	1	0	1	6	6	0	2
DAVID	0	3	2	0	3	16	4	7
NIA	0	1	2	0	8	7	1	0
MATT.	1	1	2	2	3	6	2	2
LLYW.	2	0	0	0	13	8	2	6

Examples of Mirroring;

Emyr/"a diod bethan mai hefyd"/ *Dad*/"diod bethan mai hefyd?"/
Nia/"and we saw billy goats"/ *Mum*/"billy goats yea"/

interruptions, reading and more formal game playing (see Table Q9.12). However, apart from an increase in interruptions in the paternal-child dialogues, there were few measurable differences between the parents.

In about half of the families, mothers commented that it would be a novel experience for their husbands to play with and talk to their child for an extended period. Perhaps the

awkwardness relates to lack of practice. On the other hand, all the mothers (with the possible exception of Nerys' mother) had become practised in keeping the child amused while attending to other matters such as a second child. The two WF fathers (of Nia and Matthew) were notable for the pressure they put on their children to converse in Welsh, each slipping back into English only in order to keep the dialogue going.

6. PARENTAL LANGUAGE; Large Sample

The evidence for the importance of parental language in the development of child language seemed clear, and so confirmation was sought from the large sample.

As mentioned, stepwise and full multiple regression analyses were performed, using the four 'aspiration for Welsh' variables (as described in the Methodology, p153ff), and Maternal, Paternal and Couple Language as independent variables, all variables from the first questionnaire when the children were still babies. The first analysis used the Development of Welsh as the dependent variables, (Table Q9.13a). In the first step Maternal Language accounted for over 52% of the variance (Adjusted R squared= .523, Beta= -0.725, $p < .0001$), and subsequent steps showed Paternal Language accounting for a further 5% of variance, and Variable58 (amount of Welsh learning chosen by Mothers for their Babies) accounting for a just over 1% more of the variance.

The next analysis had the Development of English as the dependent variable, (Table Q9.13b). Again the first step had Maternal Language accounting for most of the variance (Adjusted R squared= .408 {41%}, Beta= 0.64, $p < 0.0001$), and

Paternal Language for a further 12%. Couple Language, or the language background within the family (categorized earlier as WW, WM, MM, WF, or EE) accounted for a further 7% and Variable62 (Maternal Opinion about the Future of Welsh) and Variable74 (Maternal Choice of marriage partner for their Babies) adding a further 3% and 1% respectively.

The third analysis used Development of Bilingualism as the dependent variable, (Table Q9.13c). This time 58% of the variance was ascribed to Maternal Language (Adjusted R squared= .578, Beta= 0.762, $p < 0.0001$), with Paternal and Couple Language adding about 10% and 3% each. A further 1% of variance was accounted for by Variable74.

The Language Use of three year olds was the dependent variable in the next analysis, (Table Q9.13d) and again Maternal Language accounted for most of the variance, this time 64% (Adjusted R squared= .6427, Beta= 0.803, $p < 0.0001$). Paternal Language gave another 10%, and Couple Language almost another 2%.

In the fifth and final analysis (Table Q9.13e), Language Understanding of three year olds was the dependent variable, and here too Maternal Language was in the first step, accounting for 57% of the variance, (Adjusted R squared= .5698, Beta= 0.737, $p < 0.0001$). Again Paternal Language made the next contribution to the variance (with 14%) followed by Variable60 (Maternal Opinion about the Importance of Welsh) which added another 2%, Variable74 (another 1%) and Variable62 (almost another 1%).

TABLE Q9.13a; STEPWISE and FULL MULTIPLE REGRESSION ANALYSIS SOLUTIONS for DEVELOPW (The Development of Welsh)

STEPWISE=		Step 1	Step 2	Step 3	Full (All Ind. Vars. entered)
INDEPEND. VARIABLES and their B weights	Adjusted R. Square	.52263 (52%)	.57203 (+5%)	.58512 (+1%)	.59111 (+.6%)
	F Sig. F	179.45 .0000	109.93 .0000	77.63 .0000	34.66 .0000
	WSpeakF- Beta Sig. T	-.7250 .0000	-.5835 .0000	-.5358 .0000	-.4930 .0000
	WSpeakM- Beta Sig. T		-.2679 .0000	-.2431 .0001	-.2432 .0001
	VAR58- Beta Sig. T			.1400 .0147	.1123 .1007
	VAR62- Beta Sig. T				.0854 .0987
	WSpeakC- Beta Sig. T				.0226 .6876
	VAR74- Beta Sig. T				-.1020 .1012
	VAR60- Beta Sig. T				.0513 .4582

WSpeakF= Maternal Language
 WSpeakM= Paternal Language
 VAR58= Amount of Welsh Learning chosen by Mother for Baby
 VAR62= Maternal Opinion about the Future of Welsh
 WSpeakC= Couple Language Use
 VAR74= Maternal choice of marriage partner for Baby
 VAR60= Maternal Opinion about the Importance of Welsh

Maternal Language accounts for more than 52% of the variance in the Development of Welsh in this population.

TABLE Q9.13b; STEPWISE and FULL MULTIPLE REGRESSION ANALYSIS SOLUTIONS for DEVELOPE (The Development of English)

		Step 1	Step 2	Step 3	Step 4	Step 5	Full
I N D E P V A R S & B 's	Adj R.Sq	.40840 (41%)	.52539 (+11%)	.59366 (+7%)	.62277 (+3%)	.63713 (+1%)	.63518 (-.2%)
	F SigF	113.52 .0000	91.22 .0000	80.38 .0000	68.27 .0000	58.24 .0000	41.54 .0000
	WSpk -F Beta SigT	.6419 .0000	.4271 .0000	.3471 .0000	.3247 .0000	.2637 .0000	.2787 .0000
	WSpk -M Beta SigT		.4066 .0000	.3951 .0000	.3854 .0000	.3745 .0000	.3852 .0000
	WSpk -C Beta SigT			.2783 .0000	.2621 .0000	.2214 .0000	.2123 .0001
	VAR 62- Beta SigT				.1796 .0004	.1775 .0003	.1820 .0002
	VAR 74- Beta SigT					.1556 .0077	.1592 .0072
	VAR 58- Beta SigT						.0651 .3129
	VAR 60- Beta SigT						-.0159 .8081

WSpeakF= Maternal Language

WSpeakM= Paternal Language

WSpeakC= Couple Language Use

VAR62= Maternal Opinion about the Future of Welsh

VAR74= Maternal choice of marriage partner for Baby

VAR58= Amount of Welsh Learning chosen by Mother for Baby

VAR60= Maternal Opinion about the Importance of Welsh

Maternal Language accounts for more than 41% of the variance in the Development of English in this population.

TABLE Q9.13c; STEPWISE and FULL MULTIPLE REGRESSION ANALYSIS SOLUTIONS for DEVELOPB (The Development of Bilingualism)

STEPWISE		Step 1	Step 2	Step 3	Step 4	Full (All I.Vs. entrd)
INDEPEND VARIABLE and B weights	Adjusted R.Square	.57776 (58%)	.68448 (+10%)	.71712 (+3%)	.73041 (+1%)	.73458 (+.4%)
	F Sig. F	224.04 .0000	177.80 .0000	138.74 .0000	111.40 .0000	65.44 .0000
	WSpeakF- Beta Sig. T	.7618 .0000	.5573 .0000	.5016 .0000	.4433 .0000	.4038 .0000
	WSpeakM- Beta Sig.T		.3871 .0000	.3790 .0000	.3686 .0000	.3616 .0000
	WSpeakC- Beta Sig.T			.1940 .0000	.1551 .0007	.1529 .0009
	VAR74- Beta Sig.T				.1480 .0033	.1341 .0079
	VAR62- Beta Sig.T					.0633 .1284
	VAR58- Beta Sig.T					-.0067 .9027
	VAR60- Beta Sig.T					-.0754 .1771

WSpeakF= Maternal Language
 WSpeakM= Paternal Language
 WSpeakC= Couple Language Use
 VAR74= Maternal choice of marriage partner for Baby
 VAR62= Maternal Opinion about the Future of Welsh
 VAR58= Amount of Welsh Learning chosen by Mother for Baby
 VAR60= Maternal Opinion about the Importance of Welsh

Maternal Language accounts for about 58% of the variance in the Development of Bilingualism in this population.

TABLE Q9.13d; STEPWISE and FULL MULTIPLE REGRESSION ANALYSIS SOLUTIONS for MA25 (The Language Use of 3 year olds)

STEPWISE		Step 1	Step 2	Step 3	Step 4	Full (All I.Vs. entrd)
INDEPEND VARIABLE and B weights	Adjusted R.Square	.64267 (64%)	.74427 (+10%)	.76024 (+2%)	.76487 (+.4%)	.76559 (+.1%)
	F Sig. F	294.16 .0000	238.20 .0000	173.28 .0000	133.56 .0000	77.05 .0000
	WSpeakF- Beta Sig. T	.8030 .0000	.6038 .0000	.5641 .0000	.5233 .0000	.4990 .0000
	WSpeakM- Beta Sig.T		.3772 .0000	.3714 .0000	.3676 .0000	.3569 .0000
	WSpeakC- Beta Sig.T			.1382 .0008	.1370 .0008	.1239 .0040
	VAR60- Beta Sig.T				-.0887 .0432	-.0622 .2361
	VAR62- Beta Sig.T					.0548 .1612
	VAR74- Beta Sig.T					.0461 .3265
	VAR58- Beta Sig.T					-.0309 .5494

WSpeakF= Maternal Language
 WSpeakM= Paternal Language
 WSpeakC= Couple Language Use
 VAR60= Maternal Opinion about the Importance of Welsh
 VAR62= Maternal Opinion about the Future of Welsh
 VAR74= Maternal choice of marriage partner for Baby
 VAR58= Amount of Welsh Learning chosen by Mother for Baby

Maternal Language accounts for about 64% of the variance in the Language Use of three year olds in this population.

TABLE Q9.13e; STEPWISE and FULL MULTIPLE REGRESSION ANALYSIS SOLUTIONS for MA26 (Language Understanding in 3 year olds)

		Step 1	Step 2	Step 3	Step 4	Step 5	Full
I N D E P V A R S & B 's	Adj t R.Sq	.56981 (57%)	.70592 (+14%)	.72771 (+2%)	.74051 (+1%)	.74621 (+.6%)	.74858 (+.2%)
	F SigF	210.28 .0000	190.64 .0000	141.76 .0000	113.72 .0000	93.91 .0000	68.21 .0000
	WSpk -F Beta SigT	.7367 .0000	.5355 .0000	.4547 .0000	.3953 .0000	.3858 .0000	.3730 .0000
	WSpk -M Beta SigT		.4313 .0000	.4230 .0000	.4099 .0000	.4052 .0000	.3992 .0000
	VAR 60- Beta SigT			-.1779 .0003	-.1552 .0012	-.1504 .0015	-.1295 .0203
	VAR 74- Beta SigT				.1427 .0038	.1393 .0043	.1121 .0276
	VAR 62- Beta SigT					.0864 .0364	.0773 .0615
	WSpk -C Beta SigT						.0798 .0774
	VAR 58- Beta SigT						-.0431 .4270

WSpeakF= Maternal Language

WSpeakM= Paternal Language

VAR60= Maternal Opinion about the Importance of Welsh

VAR74= Maternal choice of marriage partner for Baby

VAR62= Maternal Opinion about the Future of Welsh

WSpeakC= Couple Language Use

VAR58= Amount of Welsh Learning chosen by Mother for Baby

Maternal Language accounts for about 57% of the variance in the Language Understanding in three year old children in this sample.

These data are summarized in table Q9.12f which illustrates that the largest contribution to all five dependent variables is Maternal language. Paternal language has a further contribution to make to all three Language Development variables, and to the other dependent variables, Child Use and Child Understand. Paternal language accounts for about ten percent of the variance in all of these. Couple language is of less importance, adding only one percent to the variance in the development of bilingualism, and 8% to the development of English.

However, in all five analyses, Maternal Language was the first and by far the largest contributor to the variance observed in the Development of Welsh, the Development of English and the Development of Bilingualism in the child, and to the variance seen in the Language Use and Language Understanding of three year old children.

TABLE TQ9.13f; SUMMARY OF MULTIPLE REGRESSION ANALYSIS
 showing the amount of variance in the Dependent Variables
 accounted for by each of the Independent Variables.

(Dep. Vars)	Develop Welsh	Develop English	Develop Biling.	Lang. Child Uses	Lang. Child Understds
(Indep. Vars)					
Maternal Language	52%	41%	58%	64%	57%
Paternal Language	5%	12%	10%	10%	14%
Couple Language	-	7%	3%	2%	-
Mat.Wishes (var58)	1%	-	-	-	-
Mat.Import. (var60)	-	-	-	-	2%
Mat.Opinion (var62)	1%	3%	-	-	1%
Mat.Marry (var74)	-	1%	1%	-	1%

DEPENDENT VARIABLES (from QII)

Develop Welsh } are the scores achieved by children on the
 Develop English } nine aspects of English and of Welsh in
 Develop Biling. } the second questionnaire.
 Lang.Child Uses is the language the child used at age 3 yrs.
 Lang.Child Understds is the language the child understood at
 age 3 years.

INDEPENDENT VARIABLES (from QI)

Maternal and Paternal Language are self evident.
 Couple Language refers to the language background of couples,
 namely EE, WW, MM, WM or WF.
 Var58, 'Mat.Wishes' is maternal choice of Welsh learning.
 Var60, 'Mat.Import' is maternal importance ascribed to Welsh.
 Var62, 'Mat.Opinion' is maternal opinion about the future of
 Welsh.
 Var74, 'Mat.Marry' is maternal hopes regarding the marriage
 of their children.

7. SUMMARY

Initially the procedure for trifurcating children from the second questionnaire into language use categories was described, and thereafter the three language groups of children, 'Welsh' 'English' and 'Bilingual' were used as the basis for all of the large sample analyses.

The first comparison was with the language background groups, both past and present. On the whole, past and current language background groups to which these children belonged remained constant. Group membership was as expected; the majority of the Welsh monolingual children came from WW backgrounds, the majority of English monolinguals from EE backgrounds and the majority of the bilinguals from one of the mixed background groups. Looked at predictively, most of the children from a WW background became Welsh speakers, most from an EE background became English speakers, and most of those in the two cross-language groups, WM and WF became bilingual. 70% of those from a MM background became monolingual English speakers.

Current parental preferences were then examined in the light of children's current language. Welsh speaking children heard and understood almost only Welsh and had parents who used almost only Welsh. Most of these parents used their Welsh for thinking and for all activities with their children. Most English speaking children have parents who use virtually only English, and prefer it for almost all activities, whether alone or with their children. However, a large minority of English monolingual children have bilingual parents. More Bilingual children hear and understand Welsh and have parents who use Welsh than hear and understand English and have mostly English speaking parents. These parents tend to use English to read and watch television, but, like the parents of Welsh

speaking children, they are less likely to do so if they are with their children.

Finally evidence that parental language predicted child language, was gathered, first from the small sample and then from the base population. Evidence from the small sample is based on the last maternal session and a paternal session when the child was about three years old. All nine children performed at the same or a lower stage of language use in their first language with their fathers than with their mothers, and all but one had lower MLUs. In those children where a second language was evident, two demonstrated a higher stage with their father than with their mother. The father/child ratios were mostly greater than the mother/child ratios. All but one of the fathers used more lines and more words than his child, that is, took a more dominant part in the dialogue. Also, the type/token ratios were greater for fathers than for mothers, but this is not an easy measure to interpret. Turning to the amount of Welsh, Common and English used in these two sessions there is little difference between them for four of the children. Three of those from cross-language backgrounds adapted their language to that of their father as did one child from a mixed language background. There were qualitative differences between the maternal and paternal sessions, with fathers using more directions and interrupting more. However these were hard to quantify.

The stepwise multiple regression analyses make it clear that mother's language has the greatest influence on child language. Maternal language is responsible for the largest part of the variance in the Development of Welsh, the Development of English and the Development of Bilingualism, as well as for most of the variance in the language children understand and the language they use.

Chapter Five; DISCUSSION

1. INTRODUCTION

Nine questions were asked at the onset of this research to guide and focus methodology and analysis. Not only do they each contain their own set of further questions, but many more could have been asked and have arisen during the course of the research. Before trying to articulate the missing questions of some importance, it is here necessary to summarize the answers so far, and then to examine their importance.

Throughout there has been a creative tension between the findings from the large sample and the development of the individual children. Doubtless the small sample do not include all possible types of language situation, but time and again they have either illustrated a trend found in the large group, or have suggested analyses of the data from the large group.

The following section will take a wider view. It will try to pull all the threads together and to identify broad themes within the work that have permeated a number of the questions. It will then try to place the research findings within the context of current work in this area, although this area is not easily defined having links as it does with child language, second language learning, and with both developmental and bilingual work in general. Finally it will look at the questions that have arisen during this research and how further work could be designed to address these questions.

2. SUMMARY of QUESTIONS

Q1 "What Language Backgrounds exist on Ynys Mon (Anglesey)?"

From the replies from the first questionnaire, Q1, it was possible to divide respondents first into Welsh speakers, English speakers and Mixed language speakers, and then to classify couples as almost always Welsh speaking families (WW), almost always English speaking families (EE), families with a Welsh speaking mother or father only (WM and WF respectively) and families where both partners had a mixture of languages in their background (MM).

On Anglesey, of the 384 who could be categorized, about 24% were WW families, 34% were EE families, and the rest used a mixture of languages in the home. Most of the Welsh speakers used Welsh in as many situations as possible, as did the English speakers. The exception was the media. The majority of all parents read mostly in English, and English television is the most popular with the majority of all groups except Welsh speakers and over 40% of those choose it most of the time. This is due, at least in part, to lack of available options in many instances.

There was evidence that the term 'bilingual' is used rather loosely, and some indications that men may have more influence over the language used in the home than women.

Q2 "What Opinions do Parents hold concerning Language?"

The first questionnaire asked questions about the opinions of parents, and respondents not only answered, but added their own comments. The vast majority (85%) wanted their children to learn Welsh at school or to become fluent Welsh speakers. This percentage had gone up slightly (to about 88%) when these

children were approaching school age, although this population had then lived in a Welsh community for at least three years. The reasons they gave for this support for the Welsh language were both integrative and instrumental. The EE families mostly gave instrumental reasons, such as improved job prospects and better communication. The WW families gave integrative reasons, reasons associated with their feelings of Welshness and their Welsh heritage. At least 80% of those returning this questionnaire felt that it was at least quite important for their children to learn Welsh. However, although over half thought it would be used as much in the future as at present, fewer thought its use would increase than thought it would decrease.

In the small sample, opinions were less easy to quantify; without the constrictions of a questionnaire, mothers in the small sample expressed subtle and sometimes conflicting opinions about the language their child was learning.

Q3 "What Language are a small sample of children learning?"
Early recording sessions sometimes gave the impression that the child was not learning language at all! However, from about age two (session 4) it became evident that all of the children were active partners in the dialogue with their mother.

In an attempt to quantify the language heard, some words and phrases were called 'Common'. These are words that cannot be called Welsh or English as they are common to both, or are proper names or are baby words. Common utterances are those containing such a mixture of languages that they cannot be ascribed to either Welsh or English. Thus it was possible to describe the language used by each child and each mother at every session as a percentage of Welsh, Common and English

words and utterances. The EE children never used Welsh in the recordings, and the WF children used very little. The WM children used mostly Welsh, and, as the sessions proceeded, the WW children used more Welsh and less English and Common phrases, until, by the last session, neither used any English. Children under three can develop monolingually in Welsh on Ynys Mon, if borrowed words are discounted. One of the MM boys used English almost exclusively, and the other, Gareth was able to express himself in both languages by three years old.

To examine if the small sample was representative, in the second Questionnaire, QII, parents were asked about the development of 18 aspects of language, nine in Welsh and nine in English. Most children appeared to be learning some English, and about half were learning some Welsh. Few in the EE group were learning even simple Welsh, and few in the WW group were learning any English. Five couples appeared to be using a one person-one language strategy with their children (of 141 couples). These five children comprise 11% of the children who became bilingual. In cross language partnerships, at least half of the children were learning Welsh, as were those from the MM group. They were all learning English as well. In terms of language development, it looked as if the small sample was reasonably representative.

Q4; "How are the small sample learning language?"

Initially, mean length of utterance (MLU) was used to examine how these children were learning language, and it was clear that as they acquired more language their MLU increased from about one and a half words in the early sessions to about three in the later ones. There were differences between the ten children, but they did not seem to be associated with

language background, although the child who was bilingual by age three, did have an MLU that was slightly above average by the last session.

Following the work of Brown (1973) and Crystal (1976), the ten children were assigned to a stage of language development at each session. With some reservations regarding the Welsh-speaking children, (because of standardisation problems) all children were at stage 1 at the first session, and had moved to at least stage 4 by the last session. Three children appeared to be developing a second language by the end, but gave no sign of this until their first language was established.

These results were a reflection of the large sample. The children in the large sample had been split into three groups, two monolingual groups, Welsh and English, and a bilingual group. Examining the results again, it was evident that the bilingual group had reached stage 3 in both languages and also stage 4/5 in one of their languages. The two monolingual groups had both reached stage 4/5. There were hints that the first language of the bilinguals was more likely to be Welsh than English.

Q5 "How are these children using language?"

It proved difficult to be precise about what was meant by pragmatic language use, so that in the end six categories of language function were used to organise incidents in the scripts which seemed to illustrate how children from all five language backgrounds were beginning to use language itself as a tool. These were instrumental, regulatory, interactional, self-expressive, societal and cognitive, and it was suggested that they formed a sequence developmentally. Although it proved a useful way of ordering the examples, it was not clear

that the functions are developmentally sequential; some reversal was evident, but instances may well have been missed as samples were only recorded at three monthly intervals. Most of the children were able to make language do things for them in all of the ways described by the sixth session (at about 30 months), and their abilities did not appear to relate to the acquisition of one or two languages nor to the acquisition of Welsh or English.

Q6 "When do children become aware of language per se?"

The evidence to answer this question was rather elusive, consisting of examples in the scripts when the children refer to language or else appear conscious of language use. In some cases this could be shown to happen before age three. As early as 27 months, some of the children were referring to what people, including themselves had said, and were playing with words. Later they used intonation to mark special speech, began to talk about talking on occasion, and to switch code.

Code switching is one of the features noted in bilingualism, and this seemed the appropriate place to look for evidence of bilingual development. A number of features were found, but there was no indication of a sequence and, as the numbers are so small, the evidence is only suggestive. However, children were heard to copy the intonation of a second language and to translate, to scold parents for using the 'wrong' language and to become distressed at parental insistence on the use of a second language.

There were no clear causal connections between metalingual awareness and the development of bilingualism. However, the boy who had developed the competent use of two languages by age three, was also aware of differences in the use of

language from a very early age.

Q7 "Which Parent has more influence on the Language of the home?"

The groups of most interest here are the parents in cross language partnerships. The women in WF and WM partnerships use more of their husband's language with the children and generally than the men use their wife's language. There were also differences in the language chosen to talk to one another. The majority use English as the common language, but there are gender differences amongst the few who do otherwise. Welsh-speaking men tend to continue to use Welsh in cross-language marriages more often than do Welsh-speaking women. More English-speaking women speak mostly Welsh than do English-speaking male partners. In other words, almost 40% of English-speaking women use Welsh with their Welsh-speaking partners, whereas only 20% of English-speaking men use Welsh with their Welsh-speaking partners. Women are more likely to change their language to suit their partner than vice versa.

A further comparison was made, between those Welsh speakers in WW partnerships and those in WF or WM partnerships and how important they thought Welsh was. They were also asked about how much Welsh they wanted their children to learn. There was little difference amongst the women in either WW or WM, but the men in cross language partnerships were less likely to think it important and fewer wanted their children to be fluent in Welsh. Women appear to be less influenced by their partner than are men when it comes to opinions. They were also generally more optimistic about the future of the Welsh language than were men.

Further comparisons were made between the men and women who answered QII. Overall there were few differences in their

answers. Mothers tended to say their children could do more than did fathers, but it is not clear if that comes from closer observation or greater indulgence. Both parents wanted their children to learn Welsh. Mothers made more comments than fathers, and tended to cite employment possibilities and communication as reasons for learning Welsh. Fathers tended to emphasise the need for both languages.

Differences between the genders were not great. Women in cross-language partnerships were more likely to learn and use their partner's language than were men in a similar situation, but less likely to be influenced by their partner. There are indications that mothers are more interested in the language than are fathers, but it is not clear who has greater influence in the home.

"Q8 Do the Opinions and the Language Use of Families Change over time?"

There were no significant differences between the people who replied to QI and those who replied to QII, and this last group had not changed their language background group membership significantly over the three years. Also, worries that paternal reports in QI were unrepresentative because they were indirect were allayed by the lack of significant difference between that set of answers and those given by the fathers directly at QII.

Overall there were very few differences between the answers obtained on the two occasions. Mothers and fathers used more or less the same language and chose at least the same amount of Welsh for their children as they had done previously. The only exceptions seemed to be in maternal choice of language for reading and watching television. Their choice of Welsh had increased, possibly in line with their increased

use of Welsh through reading and watching television with their children. A similar shift was not noticeable in fathers' choices.

Support for Welsh remained high with an increase in support on the second occasion. Almost all parents, except some of those in EE, wanted their children not just to learn Welsh at school, but to be fluent. Some of the EE mothers too wanted fluent Welsh speaking children, but fewer wanted them to learn Welsh at school. It is possible that either of these choices was influenced by the approach of formal schooling.

Although there appear to be few measurable differences after three years, those three years have been spent in a bilingual community, bringing up at least one small child. Changes must have occurred. It is frustrating that more questions were not asked that might have tapped, for instance, changes in attitude to the Welsh language.

Q9 "What factors predict a Child's Language?"

One of the assumptions made at the start of this project was that language background predicted language use, and so that was the first factor to be compared with the language of the children whose parents answered QII. Since there was little difference in group membership from QI to QII, the original grouping was used. The majority of children born into monolingual language backgrounds were monolingual at age three. Those who had been born into cross language partnerships mostly became bilingual, and those born into mixed language backgrounds tended to become monolingual English speakers.

The next candidate for predictor was parental preferences. Because so many parents wanted their children to learn Welsh,

either at school or fluently, it did not predict subsequent language use, and none of the other attitude questions were repeated. The languages choices of parents currently accorded with the language development of their children. Of interest here was the backgrounds of the bilingual children. More of these children are said to hear and understand Welsh than are said to hear and understand English, and more have parents who use Welsh than parents who use English. Grosjean (1982) quotes Quebequois fears that the first step towards the loss of a language is bilingualism.

It seemed likely that parental language predicted what language the child would learn. In the small sample a comparison was made between a maternal and a paternal session when the children were three years old. All of the children spoke less with their fathers, although the stage of their language remained the same. Three of the children in cross-language partnerships adapted their language to suit their father's, as did the bilingual child, speaking no English with his father. Differences were clear and predictable, but numbers were small.

Finally, factors thought to be involved were entered into a stepwise multiple regression analysis which made it clear that maternal language is responsible for the greatest variance in the development of Welsh, of English and of Bilingualism.

The data gathered to answer these questions is of varying interest and significance. The next section will attempt to pull together some of the more interesting and more significant features and to make some suggestions about how children become bilingual.

3. WELSH SOCIETY

The Welsh Speakers

Less than a quarter of the families on Anglesey who replied to the first questionnaire, QI, were classified as primarily Welsh speaking, and about a third were classified as primarily English speaking. But, by including cross language partnerships and couples with mixed language backgrounds, some Welsh is spoken in almost two thirds of the families in the sample in some situations, and by at least one of the partners. This is a reflection of the overall situation. Statistics from the 1991 census show that 61% of people in Gwynedd can speak Welsh. Accurate figures are not yet available for Anglesey, and in the 1981 census they were about 1% less than the Gwynedd figure. This is further confirmation that those returning the first questionnaire were a representative sample.

At the time of the second questionnaire, QII, more than a quarter of the families replying were classified as primarily Welsh speaking, less than a third were primarily English speaking, and almost three quarters of the families used Welsh in some situations and by at least one of the partners. This cannot be seen as representing a significant change over time. There is proportionate agreement between the two samples (see TQ8.2, p329), although numbers were different, and the socio-economic status of the second group favoured Groups 1,2 and 5. Of the mothers who gave birth to babies in 1988-89, there were no significant differences between those who returned QI and those who did not. There is no reason to believe that they differed greatly from women having children in subsequent years. Therefore, it would appear likely that the 1988-1989 group is representative of Anglesey families with parents in the age group 20-39 and that between two thirds and three

quarters of families on Anglesey use Welsh at least some of the time.

Opinions

Opinions and attitude were assumed to be important factors in the language chosen by parents for themselves and their children. This was not shown to be so. In the first questionnaire, 80% of mothers thought Welsh was quite important or very important. At age three 55% of families had children who were Welsh speaking or bilingual (TQ9.4, p350). Thus, a positive attitude does not ensure that children learn Welsh. At a more focused level, eight of the ten families expressed very positive attitudes towards bilingualism, but only three showed any evidence of becoming bilingual by three. Conversely, the family which expressed negative attitudes towards Welsh ensured that their son was not heard to speak a word of Welsh before they left the area when he was 34 months old. Thus non-findings should be borne in mind during consideration of some of the following, more positive findings.

School Welsh

One of the main findings to come out of this research has been the overall support by parents for their children to learn Welsh. More than 85% of parents wanted their children to learn Welsh at school or else to be fluent Welsh speakers. Education through the medium of Welsh has been the policy of the Local Education Authority in Gwynedd since the early 1970s. Children entering primary school (and most nursery schools) go into a Welsh cultural environment, where the Welsh language predominates, but where teachers are used to accommodating the child whose first language is English.

It may well be that this finding is an acknowledgement of the inevitable; the percentage wanting their children to learn only English had dropped from 5% to 2% by the time the children were three and school entry was imminent. Furthermore, each of the families who returned the second questionnaire had lived on the island for the preceding three years and had been influenced by the prevailing bilingual culture of Anglesey. It could also be the result of parental education. The mothers in this sample were between 20 and 39 years old when the study started, and so the younger ones will have benefited from a Welsh medium education during at least part of their time at school.

Why parents want their Children to learn Welsh

Not everybody gave reasons for wanting their children to speak Welsh, but the reason given most often was related to a feeling of Welshness. The tone of many comments was surprise that one should question it; "We are Welsh so we speak Welsh". All of the family spoke Welsh, people were proud of their heritage and it was important to keep the language alive.

" Gwlad neb iaith, gwlad neb galon." (Land without a language, land without a heart). (mother in WW group).

Primarily these reasons came from groups that had a Welsh speaking parent, WM and WF as well as WW, but some came from the MM and from the EE group as well. Nearly three quarters of those classified as mostly English speaking supported Welsh medium education, and the demographic questions show that these are not all incomers. About a quarter of EE mothers had lived on the island all their lives. Many Welsh born parents use virtually no Welsh and so were included in the EE group. Welsh in background and outlook but not speaking the language,

they are sometimes overlooked and, according to comments on the questionnaires, can be made to feel like foreigners in their own land. They regret their lack of the language, often due to childhoods in South Wales, but are ardent supporters of school Welsh. Many of the non-Welsh speaking mothers also wanted their children to learn their Welsh at school, as did a minority of Welsh speaking mothers.

As discussed elsewhere (Lyon and Ellis, 1991), if a society wants its children to become fluent Welsh speakers, the school cannot take all of the responsibility. Sometimes school experience appears to influence later Welsh language use, but not invariably; about 20% of the English speaking mothers answering the first questionnaire had some education through the medium of Welsh but barely used it as an adult, and some of the Welsh speaking mothers had never attended Welsh language schools. The school is inseparable from the larger community, and much of the business of living in North Wales is conducted in English. Even Welsh-speaking schoolchildren develop favourable attitudes towards the English language and tend to use more English as they get older, (Price-Jones, 1982). But conversely, if parents want their children to become fluent Welsh speakers, they need bilingual schools. Baker (1988a) has argued that the support of these parents for Welsh-speaking pre-school playgroups has been more important in producing a bilingual policy than has legislation.

Enlightened self interest provided the other set of reasons for wanting children to learn Welsh. These included improved job prospects, better communication and the general advantage to be gained from having two languages. In Gwynedd, most local government posts require the ability to communicate in both languages, and Welsh speaking is an added advantage in many other posts. Therefore it is realistic for parents to want to ensure that their children learn Welsh. A difference occurred

between the first and second questionnaire. By 1991-2 the economic climate had deteriorated making jobs less plentiful and fewer parents cited job prospects as a reason. These may not be associated, but it may be that parents no longer expect that children will get jobs, or that they may need to seek work outside North Wales.

Communication issues sometimes become more visible in bilingual cultures. Many non Welsh speaking parents will have had the experience of not understanding a conversation, or of having to look for an English translation. It cannot be taken for granted that English will be the medium of communication. Many parents from across the groups gave improved communication and fitting into society as reasons for wanting their children to learn Welsh. Again the percentage of these reasons had dropped three years later. It is possible that mothers had been able to see how easily little children communicate with one another without a great deal of formal language, and so had had some of their concerns in that regard allayed.

The most interesting difference over the three years was the increase in the percentage of reasons that emphasized the need for both languages, from 9% to 17%. Many Welsh speakers stressed that they wanted their children to learn English as well as Welsh. Williams (1979) had shown that parents did not want to lose the advantage given by speaking English, even when they supported the introduction of Welsh medium education. It is possible that again the deteriorating economic climate has alerted parents to the need for children to have as many advantages as possible. Children may need to move elsewhere for work.

Gardner and Lambert (1972) suggested two basic types of motivation for learning a second language, instrumental (to

secure employment or an education for example), and integrative (to become part of the society). This model was a very useful way of looking at the findings from the first questionnaire, QI. Approximately 26% of reasons gave 'Welsh Identity' reasons, that is integrative reasons, and 29% gave reasons connected with general advantage, or instrumental reasons. As argued elsewhere (Lyon and Ellis, 1991) 'communication' reasons (12%) are difficult to classify. It could seem integrative to wish to communicate and fit into society, but it is surely instrumental to wish to understand the language spoken at school. The rest of the answers from QI comprised 10% who felt Welsh was unnecessary, 1% who felt English was anathema, many non reason comments, and 9% who made a point of supporting both languages. At QII, largely because support for both languages had grown, the model did not fit so well (TQ2.8, p191, gave the details). Welsh identity reasons and Welsh irrelevant reasons remained constant, but all else changed.

There was a tendency for WW families to give Welsh Identity reasons on both occasions, and for EE families to give Welsh irrelevant reasons, much as one would expect. However, parents from backgrounds with more than one language gave reasons from across the whole range of possibilities.

The Future of the Welsh Language

The census of 1981 showed that, in Gwynedd 63.0% of the population could be described as "persons over the age of three able to speak Welsh". This marked a small decline from the 1971 figure of 64.7% (Williams, 1987). Early results from the 1991 census put this figure at 61%, indicating that the decline has not been halted. More encouraging are the figures for children between the ages of 3 and 15 years. In 1981, 69.3% of these children could speak Welsh in Gwynedd. The

1991 census shows an increase to 77.6% (OPCS, 1992). That is, more than three quarters of the children in this part of Wales can now speak Welsh¹

As discussed, the figures for Anglesey are likely to reflect those for the whole county quite closely. Of the 384 families answering a question about the future of the Welsh language in 1988-89, most thought its use would remain at about the same level. Some of the WW families thought its use might increase, many of the EE families thought its use might decrease. People expect that things will remain much the same in the future as at present, and it is the present experience of up to three quarters of families on the island that Welsh is spoken. When the 1971 census was taken, the battle for Welsh medium education was still being fought. All of the parents in this sample were included if they lived in Wales. At the subsequent census in 1981, the education policy had been in operation for less than a decade. At that time, the parents in this sample were between the ages of 13 and 32, and so the younger ones had had the benefit of the new policy, but the older ones had not. By 1991, not only had some of the parents received all of their schooling through the medium of Welsh, but others had children receiving an education through Welsh. A new generation of Welsh speakers was progressing through the school system.

Thus, as well as the optimism of the WW families, there are epidemiological reasons for thinking that the decline in people able to speak Welsh has been halted. However, able to speak Welsh is not the same as using Welsh. To be competent is not the same as to perform. At the beginning of the

¹For Wales as a whole, the comparative figures are 19.0% of the population could speak Welsh in 1981, and 18.7% could do so in 1991. Of children from 3 to 15 years of age, 17.7% could speak Welsh in 1981, and 24.4% could do so in 1991 (OPCS, 1992).

century, deSaussure (quoted in Lyons, 1968, pp 51-2), recommended that the focus be on "parole", on the performance of speakers, rather than on the "langue" , the language which they know. People may choose to describe themselves as Welsh speaking or not, dependent on circumstances such as whom they want to impress. Behavioural descriptions are more objective and less value-laden; many Welsh speakers just never use Welsh with certain people out of habit (Baker, 1992). While predicting the stability, or even the rise in people able to speak Welsh, it is still possible that its use will decline, and one of the major factors if not the major factor is likely to be the media.

The Media; Television

It has been argued that the spread and status of a minority language is influenced by its use in radio and television programmes, and in newspapers and other reading matter, (Bell, 1983; Dodson, 1985a; Baker, 1988a). In QI, the majority of families (76%) watched English language television almost exclusively (TQ1.3, p161). Only 6% mostly watched Welsh language television, and the rest swapped from one to the other. The comparison with English language television is not a fair one. In North Wales, instead of part of the Channel 4 schedule, Sianel Pedwared Cymru (S4C), transmits mostly in the medium of Welsh. Its programmes comprise only about 15% of programmes available on any one evening. It is run by a small company with limited income, and so has a relatively small range of productions.

A further problem for programme makers is the choice of Welsh used for broadcasting. There are many Welsh dialects and some Welsh speakers prefer to listen to standard English than to an unfamiliar variety of Welsh. Over the past 60 or 70 years, the BBC has educated the public to listen to one variety of

English, making us all bi-dialectical. A corresponding process has not yet happened in Welsh for Wales.

One small but significant difference was found between the time when the babies were born and three years later. Mothers watched significantly more Welsh language television on the second occasion than on the first (TQ8.6, p334). On the second occasion families were again asked about the sort of television they watched personally. This time 59% of the total sample watched only English language television, and when asked about the sort of television they watched with their three year old, the percentage dropped to 54% viewing only English language broadcasts. When alone, only 12 % chose Welsh language television most of the time, but 23% chose it when in the company of their children (TQ8.6). Maybe Welsh language children's programmes are as good as if not better than those made in English; Swper Ted has become an international figure. Or maybe parents are changing their behaviour to suit what they see as the best interests of their children. Children preparing for Welsh medium education could well be seen as needing to be familiar with Welsh songs and nursery rhymes and mothers, especially mothers in mixed language partnerships, might need some revision. The children appear to be influencing the viewing behaviour of the parents, and especially of the mothers.

The Media; Reading Matter

Only a tiny proportion of the original sample chose to read mostly in Welsh (5%) compared with the majority who chose English (86%). The remainder said they chose reading material in both languages (see TQ1.4, p163). This is hardly surprising in view of the material available. Although more local papers are either written in Welsh or else have sections in Welsh, there is no national paper in Welsh, daily or weekly.

There are one or two general interest magazines published in Welsh, but they do not compare with the vast range of magazines and journals of all kinds currently available in English. If you are a gardener or want to buy a second hand car, you must turn to English publications. Things are improving in the children's books market; not only are books of Welsh nursery rhymes easily available, but books for children of all ages are finding their way into shops such as W.H.Smith. But you still need to search for Welsh novels.

In reading too, a significant change had taken place by the time of the second questionnaire. More mothers were reading in Welsh than previously (TQ8.6, p334). At QII, 11% (of the reduced sample) were choosing to read in Welsh, and this increased further to 29% when they were reading with their children. Again the presence of small children seems to have influenced maternal behaviour both when they are present and when mothers are alone.

It would seem, therefore, that children have a large part to play in the maintenance, and possibly the proliferation of the Welsh language. With legislation facilitating the use of Welsh officially, and the subsequent growth of schools educating through the medium of Welsh or bilingually, parents appear to have accepted that their children will need to speak Welsh, and have developed positive attitudes towards that process. For those parents with a strong Welsh background these attitudes are rooted in feelings of Welsh identity, as might be expected. Perhaps even more important for the future of Welsh are those parents from English speaking or mixed language backgrounds who also support the local policy. Not only do they express positive attitudes about the learning of Welsh, but there is evidence that the mothers at least are changing their behaviour in line with their opinions. As small children approach school entry it seems that mothers

begin to introduce them to Welsh books and to Welsh language television, and, possibly, to read and watch more Welsh language material for themselves.

4. COMMUNICATION FIRST

Language Mixing

Children learn to communicate in whatever language is around. They start with looks and gestures, follow with largely unintelligible utterances and slowly begin to make sense to their mothers. Long before that they are keeping their place in what Bateson (1975) has called 'proto-conversations', grunting in the pauses, following gaze, pointing in response to a question and so on, learning about relations as well as about things.

Great interest has been focused on what happens once the child in a bilingual environment begins to acquire a lexicon. A major question still unresolved is whether or not such a child learns to differentiate the two languages from the beginning, or whether they learn one mixed set of words and phrases initially, picked arbitrarily from both languages which they differentiate later. This argument, outlined by Arnberg and Arnberg in 1985, is referred to as the one-system, two-system debate. In the Review Chapter it was referred to as the Gradual Differentiation and Separate Development Theories.

Almost all researchers see language mixing as the key issue, and they have either welcomed evidence of its existence as support for their theoretical position, or marginalized its significance and found alternative explanations to account for it. Early language mixing has been reported in many studies, particularly in single case studies such as Leopold (1939;

1949a; 1949b) and Imedadze (1967). The argument is whether this early mixing represents a lack of discrimination and possible confusion, or whether it is largely insignificant.

The Gradual Differentiation Theory suggests that this mixing is important. An early mixed language lexicon develops a syntactic system with features mixed from both languages, and only slowly develops into two distinct systems (Volterra & Taeschner, 1978). Thus, evidence of early mixing, lexically and syntactically, is to be expected, as one system separates into two.

The Separate Development Theory postulates separation of two languages from the start, or from early on. Mixing can more appropriately be explained by other factors such as the lack of lexical alternatives, and is a phenomenon which can occur in as little as 2% of a child's total utterances (see Lindholm and Padilla, 1978). It can also be seen as immature pragmatic skills, (Meisal, 1989) or else a reflection of unacknowledged parental language mixing (Genesee, 1989). Evidence of little mixing supports this position.

Common Language

Thus, it was necessary to find a way of deciding which language a child (or mother) was using at any particular part of the recorded session that did not presuppose a theoretical standpoint. Because of the geographical proximity of Welsh and English, they share many words which cannot fairly be claimed by one in preference to the other. Therefore, the term Common language was adopted as a device to allow analysis without prejudice to either language. However, the percentage of Common language decreased as the children's language developed, whether the developing language was Welsh or English. It is therefore worthwhile to look at Common

language again to see whether it is simply language mixing, whether it is a variant of motherese, or whether it has some other function or explanation.

To re-state the original definition, Common language includes five types of word, Proper names, Baby words, Foreign/technical words, words that sound and mean the same in Welsh and English, and 'Wenglish' words (words taken from English but used in Welsh form). Utterances were defined as Common either when they contained only Common words and not enough structure to decide if the syntax was English or Welsh, or if they comprised equal parts of Welsh and English. Half Welsh half English utterances occurred rarely.

Before considering whether Common language is a form of language mixing, it will be examined as a potential kind of motherese or baby talk.

Common Language as Motherese or Baby Talk?

The language of mothers is different when talking with babies than when talking with older children or with adults, and this language is called 'motherese' (e.g. Snow & Ferguson, 1977; Furrow, Nelson & Benedict, 1979). Motherese has been described as short, correct, clearly enunciated utterances about things and happenings in the immediate environment (Gleitman, Newport & Gleitman, 1984). There is dissention about how facilitative and how necessary this is to the baby's acquisition of language, a debate not central to this study. What is important is that motherese has been so clearly described, and so Common language can be examined as a variant of motherese. By baby talk is meant simple language, and baby words and sounds for common objects and events. As such, it is so clearly a precursor of language proper as to be relatively uncontentious.

Of the types of word assigned to Common language, the childish, onomatopoeic words for things such as 'wow-wow', 'gee-gee', 'cwac-cwac/ quack-quack' and 'bei-bei/bye-bye' are all part of baby-talk, by definition. It was their common occurrence across the two languages that led to them being so assigned, and they were used by both mothers and children. Proper names were well represented in the early sessions at least. Mothers talked to children about who they had seen, frequently used family photographs to encourage speech, and had many children's books featuring well known characters such as Swper Ted and Postman Pat. The children would often respond to a picture simply with a proper name, and mothers would accept that as sufficient. There was little evidence of Wenglish (Welsh-English creations), by mothers or children, and few foreign or technical words (apart from 'video' and 'okay').

The bulk of Common language comprised words that are common in meaning and sound to both languages, words such as 'Dad', 'doli/dolly' and 'lori/lorry'. They could be words that are generally acquired early and/or are used more frequently by all young language learners. They did refer to things in their immediate surroundings, and the games played and the topics of conversation changed little from dyad to dyad. Therefore it is possible that three of the five types of Common words could be expected to occur more frequently with this age group than with older children, thus associating it with motherese and with baby talk. However, further research is necessary to clarify this issue.

Common Language as Language Mixing?

Language mixing and borrowing are sometimes confused. When two languages are in close contact, as are English and Welsh, borrowing inevitably occurs (see Poplack et al., 1989).

Elements from one language are used in the other, with nouns and verbs the elements most often and most easily transferring (Baetens-Beardsmore, 1982). In adults this borrowing occurs most often from English to Welsh in sentences such as "Be 'di number yr engineer yn Ysbyty Gwynedd?" ("What's the engineer's number in Gwynedd Hospital?"). 'Rhif' is number, and 'pieriannydd' is engineer, but colloquially the English words are used in Welsh syntactic form. According to the definition of Common language above, such a sentence is Welsh. However, children's language is simpler in the beginning, with fewer and less reliable clues to an underlying syntax.

The study by Redlinger and Park (1980) found evidence of language mixing which decreased with the child's increasing language competence. Their study is similar to the present one in that a small number of subjects (four), were studied over a relatively short time (a year), and their development reported in stage of language development and Mean Length of Utterance, (following Brown 1973). They pointed out that many of the early studies did not report stages or MLU when reporting language mixing, nor did they relate its incidence to total speech output. In their study, they excluded 'yeah' and 'ya' as too difficult to assign to either language. In the present study, such words were counted as Common language. Redlinger and Park (1980) report that, at Stage I, levels of language mixing were between 20% and 30%, but dropped to between 2% and 6% by Stage V. This, they say, supports the gradual differentiation theory (TR.1, the simplified table of stages, is reprinted below for reference). They do not report whether the children had reached that stage in both languages, or only in their first language. Their subjects were four two-year old children learning two languages from parents using a one person/one language strategy, and so the mixed input explanation is not possible.

Table R.1; Simplified Description of Stages of Language Development (duplicate)

STAGE	FEATURES	MLU	APPROX. AGE
I	Naming/Mostly one word utterances	1.75	by 18m
II	Using 2 words together	2.25	18m - 24m
III	Three element utterances	2.75	24m - 30m
IV	Simple sentences/ four elements	3.50	by 36m
V	Joining phrases with 'and', 'but'. Embedding.	4.00	about 42m
VI	More complex utterances. Pronouns. Auxiliary verbs.	not useful	about 48m onwards

Comparison with the present study is not straightforward. The three children who showed evidence of becoming bilingual (Iwan WW, Emyr WM and Gareth MM) had progressed to stages III, II and IV respectively in their first language at about two years old, but were only at stage I in their second language. By age three they were at Stage V in their first and at least Stage III in their second language. The frequency of Common language for these three children ranged from 23% at Stage II-W (Welsh)/Stage I-E (English), through 15% at Stage IV-W/Stage I-E, to 5-18% at Stage V-W/Stage III-E. Thus, even though it contains more than language that is normally termed 'mixed', Common language decreases proportionately with increasing language proficiency in the two languages.² So far the gradual differentiation theory is supported.

However, Common language decreased for monolingual children too, from 13-34% at Stage II-E, through 12-20% at Stage III-E, to 5-6% at Stage V-E. (This refers to David MM, Llywela

²Data relating to MLU are summarized in Table Q4.2 and Graphs Q4.2a and Q4.2b. Details of language use by child can be found in Appendix IX and are summarized in Graph Q3.4.

EE and Michael EE from age two to three years old). Furthermore, maternal frequency of Common language dropped in line with that of their children, from 9-10% for the bilingual mothers when their sons were about two years old to 4-14% when they were three, and, for the mothers of monolingual children, from 5-15% at age two to 1-4% at age three. Arnberg and Arnberg (1985) noted the importance of the language model that children were exposed to. The children in the present study were exposed to mothers who used Common language as well as Welsh and/or English. So Common language cannot be equated with 'language mixing' as used in the literature currently, although Wenglish and utterances using both languages were included. And the Common language input from parents provides an alternative explanation which discredits the gradual differentiation theory, though it adds nothing to the separate development theory.

Borrowing, that is where a single word or phrase from one language is woven into an utterance in the other language, was not computed. Poplack, Wheeler and Westwood (1989) have already suggested that there needs to be a distinction between borrowing and code switching. Speakers of English do not notice that 'bungalow' for example, is a borrowed word, and so a borrowed word in an utterance did not change its status. When single words occur in the context of another language system, it is not necessarily 'language mixing' either. Children label things and events in context, and, in the early stages, to use a Welsh rather than an English word for 'dog' is no more significant than labelling it 'wow-wow' or 'Fido'.

When a single word was the whole of the utterance, the 'Common Language' device allowed a classification for 'wow-wow' and 'Fido' that did not make them Welsh or English or even mixed language.

Without further work, no conclusions can be drawn about the

function of Common language, apart from its heuristic function. Part of it maps on to motherese, and part on to language mixing, but proper names remain uncovered. Arguably it is more useful to handle the phenomenon of words and utterances that do not belong solely to one language by calling them 'common' than by calling them 'language mixes'.

A Further Suggestion

In the three children who were developing two languages by the end of the study, there is clear evidence that one of their languages developed first, and only when that had reached about Stage IV or V did the development of their second language move beyond the one word stage. Iwan WW, and Emyr WM, were 33 months old before their recorded English moved from Stage I to Stage III, and Gareth made a similar move at about 31 months. As there was a three month gap between recordings, these children could have moved through Stage II unrecorded, or else they needed a period of listening before they could use English. This phenomenon has been reported elsewhere (Karniol, 1990). The table of stages from Q4 (TQ4.5), is reprinted below for ease of reference.

Schlyter (1987), reporting on three children who only learned to separate their languages by Stage III, commented "when these children develop language-specific grammatical patterns, they should also be able to separate their languages lexically, ie should not mix." (Schlyter, 1987, p46). Two of her three subjects reached Stage IV in one of their languages but not the second by about 39 months old, but there are insufficient details reported to allow close comparison with the present study. She counted single word borrowing as 'language mixing' and gave no data on the children's normal language models.

TABLE Q4.5; Stages reached by individual Children by Session according to Criteria from Brown and Crystal, with MLU for each Child . (duplicate)

		I	II	III	IV	V	VI	VII	VIII
NER	Stg	1	1	1	2	2	2	4	4
WW	mlu	1.67	1.54	1.36	1.58	1.89	1.51	2.19	2.08
IWA	Stg-W	1	1	2	3	4	5	5	5
	Stg-E	1	1	1	1	1	1	3	(3)
WW	mlu	1.90	1.88	2.37	2.89	2.65	3.00	2.76	4.53
BEC	Stg-W	1	1	1	2	3	3	4	4
WM	mlu	1.40	1.18	1.89	1.85	1.89	2.00	2.32	2.35
EMY	Stg-W	1	1	2	2	3	4	5	5
	Stg-E	1	1	1	1	1	1	3	(3)
WM	mlu	1.30	1.21	1.60	2.16	2.46	2.76	2.32	2.43
GAR	Stg-W	1	(1)	3	3	4	4	4	5
	Stg-E	1	(1)	1	1	1	3	3	4
MM	mlu	1.61	--	2.53	2.70	3.15	2.81	3.51	3.27
DAV	Stg-E	1	(1)	(1)	1	2	3	3	4
MM	mlu	1.88	--	--	1.82	1.94	1.79	1.99	2.42
NIA	Stg-E	1	1	3	3	4	4	4	5
WF	mlu	1.07	1.47	2.21	2.32	3.03	2.64	2.70	3.31
MAT	Stg-E	1	1	1	2	2	3	3	4
WF	mlu	1.17	1.48	1.47	1.79	1.61	2.82	2.30	2.77
LLY	Stg-E	1	1	3	4	5	6	(6)	6
EE	mlu	2.50	1.55	2.52	3.48	3.12	2.95	--	4.67
MIC	Stg-E	1	1	1	2	3	4	5	(5)
EE	mlu	2.18	1.05	1.72	2.01	2.61	2.70	3.15	--

Stg-E = Stages in English

Stg-W = Stages in Welsh

Three children moved beyond stage 1 in their second language, Iwan, Emyr and Gareth. (see Graphs Q4.5a, Q4.5b, and Q4.5c, pp250-251).

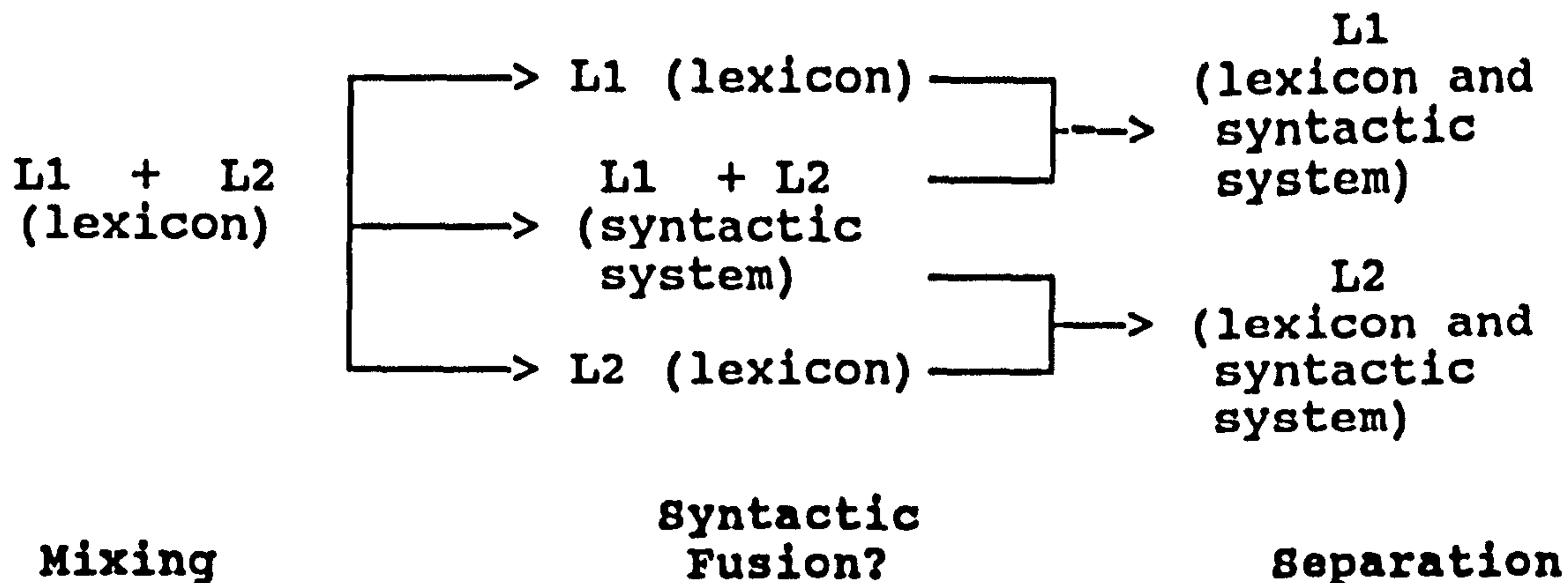
Where a session was not recorded the stage value for the previous session is assumed (in brackets).

When the aspects of Welsh and English achieved by children in the large sample are examined, a trend can be observed that supports the development observed in the three bilingual children. Most of the children classified as bilingual had reached Stage II at least in both languages, and Stage IV or V in one language (TQ4.9, p260). Caution must be exercised in attributing stageness at a distance, and based only on maternal reports of use of specified aspects of language. However, these results do not contradict those of the small sample.

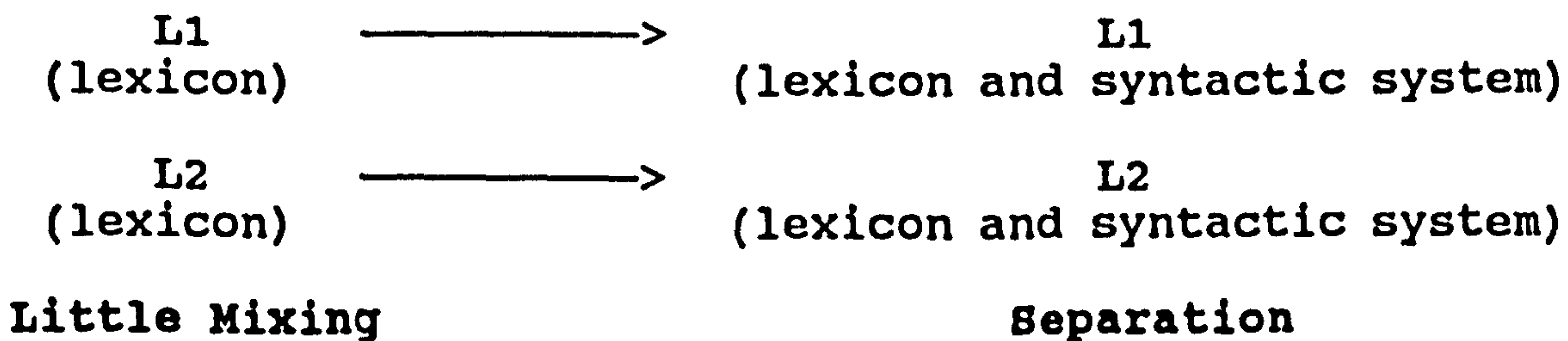
Figure 3 compares models of bilingual language acquisition. (It is an extension of Figure 1, p95). The first two, the Gradual Differentiation (one store) Model and the Differentiated (two store) Model have been discussed already, in the Review Chapter (pp 91-96). A third model, the sequential model, is suggested as a result of the development observed in three children in the small sample and not contradicted by the results from the survey. Like the first model but unlike the second, it allows for children who do NOT become bilingual despite a few L2 words. Like the second model but not the first, it has the children acquiring L1 and L2 syntactic systems (however rudimentary) from the start. As it stands, it could also be a model for second language learning. When applied to a child learning language for the first time, the interval between the acquisition of a L1 syntactic system and a L2 syntactic system may be very brief, possibly no more than a few months.

Figure 3; Three Models of Bilingual Language Acquisition.

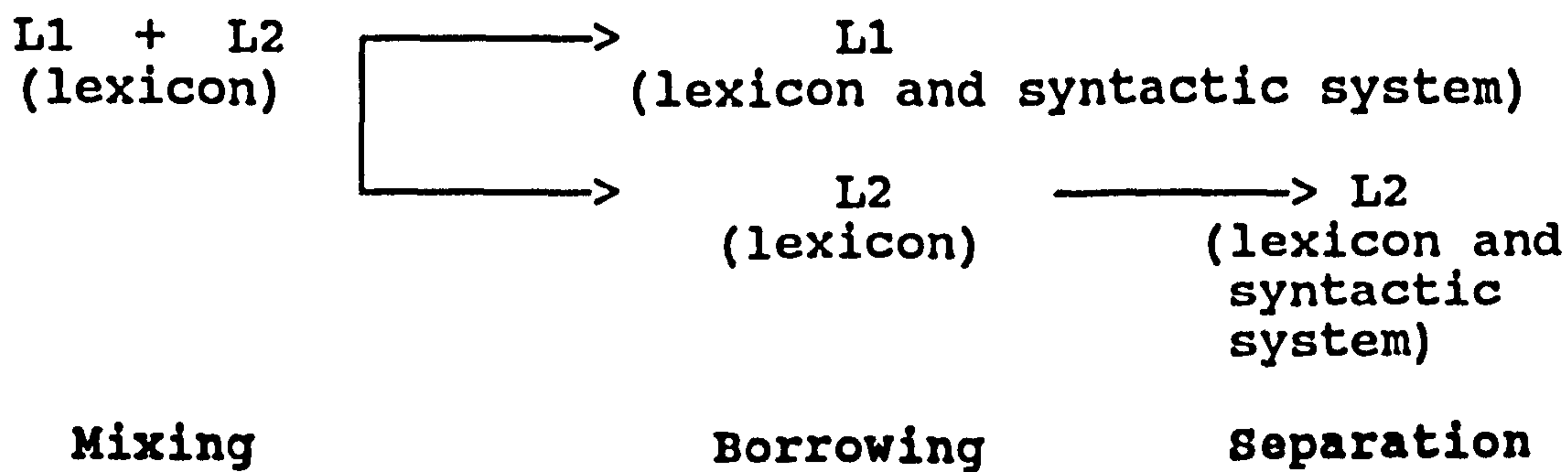
1. GRADUAL DIFFERENTIATION MODEL (Volterra & Taeschner 1978)



2. DIFFERENTIATED MODEL (Genesee, 1989)



3. SEQUENTIAL MODEL



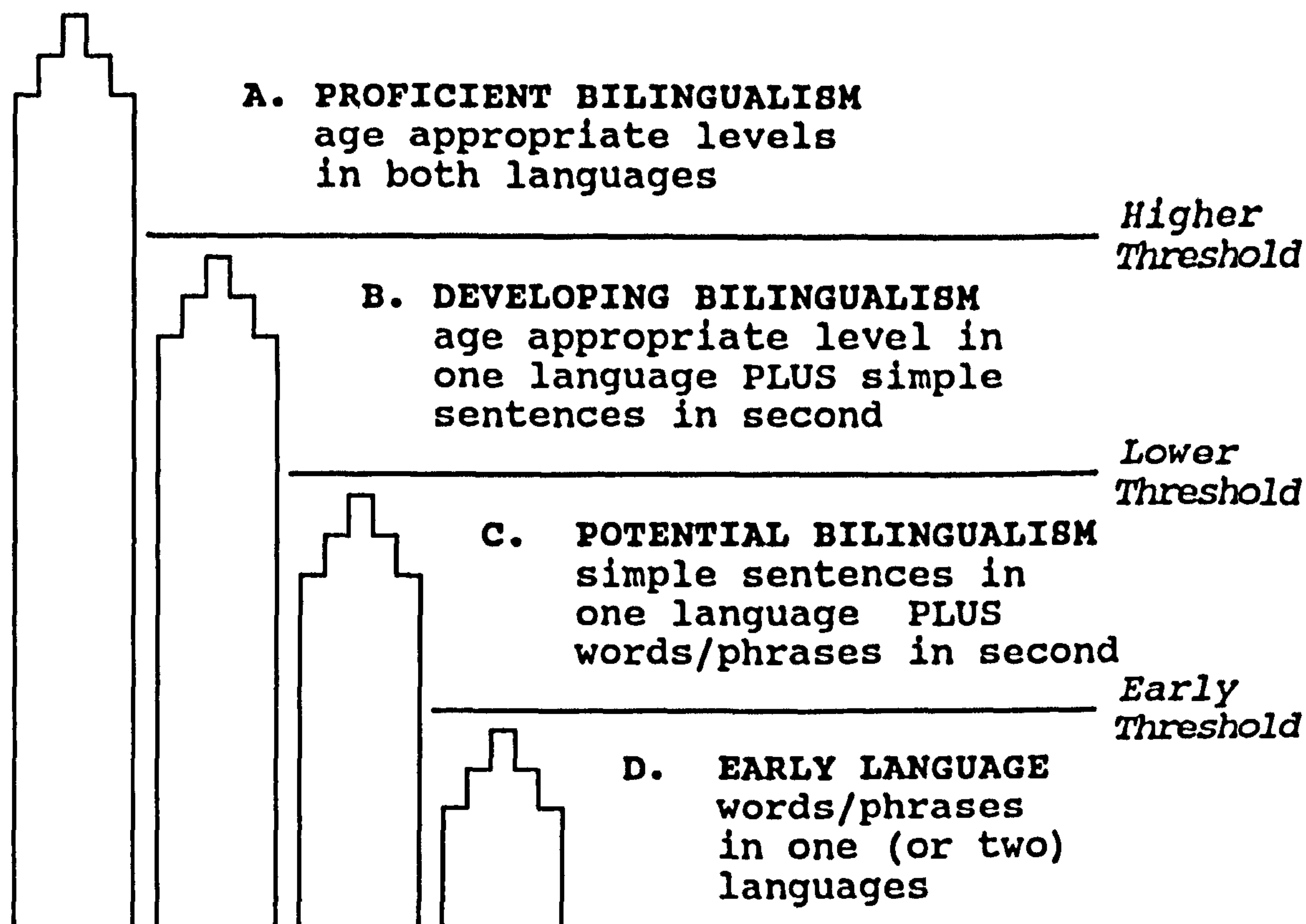
Question 6 discussed features in the development of the three children which were reported by mothers during the sessions or else were noted by the observer. From having cross language playmates, they moved to occasional translations and Wenglish creations, through awareness of intonation and of the

right/wrong language according to speaker until, at least for one child, they could comment on their own language use. This pattern fits the general idea that, for some children at least, a level of competence in one language is necessary before children can begin to explore and develop their second language as well, even when both languages have been available from birth. That level seems to approximate Stage IV according to definitions by both Brown (1973) and Crystal (1976).

The sequential model has features of a model suggested for later bilingual development by Skutnabb-Kangas and Toukomaa (1976), and expanded by Cummins (1976; 1978a; 1980; 1984; 1991). They were especially interested in the relationship between bilingualism and cognitive abilities, and the phenomenon whereby some studies reported bilinguals to have a cognitive advantage over their monolingual peers, while others reported that bilingualism was associated with poor cognitive performance. The Threshold Model sought to explain these findings. It proposes that there are two thresholds, (see Figure 2, p98 in Chapter 2). Although the evidence from the present study is not overwhelming, what data there is could also fit into an expanded version of this framework as indicated in Figure 4.

In the expanded version of the threshold model, the higher threshold remains that above which the child has achieved age appropriate levels of competence in both languages (and is likely to reap the cognitive benefit of bilingualism). The neutral zone, between the higher and lower thresholds, is here called 'Developing Bilingualism' rather than 'Partial Bilingualism'. At this level, one language is developing at age-appropriate levels, probably beyond Stage V, but the second language has still to catch up.

Figure 4; DEVELOPMENTAL THRESHOLD MODEL
Level of Bilingualism Attained



The area beneath the second threshold, called 'Limited Bilingualism' in the original, is called 'Potential Bilingualism' in this developmental version, as it is argued that children cannot be called bilingual on the basis of single words and phrases. At this point the child is usually somewhere between three and four years of age and only one syntactic system has been discovered, (about Stage III-IV). Simple sentences are used which is age appropriate.

The earlier zone has been added. This is where the child first acquires language in the form of a lexicon comprising words and phrases from whatever language is heard. In the developmental model, children cross the early threshold when language begins to take off, when they move beyond simple words and phrases to simple sentences. Bilingual language acquisition is seen as a sequential process, and so the early

threshold is crossed by one language initially. Failure to move on across the lower threshold in the first language, could be compounded by the development of an L2 beyond the single word threshold. This could result in a negative cognitive effect as the child with two primitive syntactic systems could be at greater risk of interference.

It should be emphasized that this is a model to explain the normal development of bilingual children. Terms such as 'simple use', 'more complex use' and 'native-like level' are descriptors of the natural developmental sequence, and in no way derogatory. It is suggested that young children who are becoming bilingual as they acquire language, cross these thresholds naturally, first with one language and then with the next. Only when circumstances interfere with the process does the child become stuck at an early level for a shorter or longer period. This suggestion extends rather than amends the original Threshold Model.

This model needs to be tested. If the early threshold is crossed at about age three, when one language develops to the level of simple sentences, (Stage IV), it will be necessary to look for children of about three who can produce simple sentences in two languages, to evaluate that hypothesis. Above the lower threshold, the model predicts that developing bilinguals will have reached different stages in their two languages, their first-learned language probably taking the lead. To find balanced bilinguals at this developmental level (possibly before school entry) would disprove that part of the model.

The lower threshold has not been defined clearly in the original model. By using the Developmental Threshold Model, and analyzing the language of a large sample of potentially bilingual children at around the time of school entry, it

might be possible to clarify the linguistic features necessary to ensure a child crosses the lower threshold, thereby avoiding the negative cognitive correlates of underdeveloped bilingualism. These are tentative ideas which need to be explored further and tested.

One person one language ?

Ronjat, in 1913 first recommended that, to encourage the acquisition of two languages in young children, one person (usually a parent) should use one language only with the child, and the second person should use only the other. Thus the child would have two clear models from whom to learn two languages. This strategy has been widely reported since.

It was not clear from this study whether or not the 'one person one language' strategy is the best way to encourage bilingual language development. As stated in Q3, on the data available from the large sample, only five families appear to have adopted this strategy, all producing bilingual children at age three (TQ3.9, p232). However, it is not known if this was a deliberate strategy, or a natural language choice by the parents. These families represent only 11% of all of the children who became bilingual.

In the small sample none of the families set out to use that approach rigorously, but both of the WF families adopted an approximate version naturally; neither Nia nor Matthew used Welsh with their mothers, but managed most of the conversation recorded with their fathers in Welsh. Becky (WM) would not use English with her mother, but was reported to do so interchanging it with Welsh when talking to her father. Gareth (MM) used no English with his father, but used both languages equally with his mother. He was the child whose language was most clearly bilingual by age three, and who

acquired his languages sequentially. Of the other two who followed the same pattern, Iwan's parents both preferred to use Welsh (WW), and Emyr (WM) had a father who was learning Welsh, and liked to use Welsh with his son. Thus, the three young bilinguals whose languages were acquired sequentially, came from three very different language backgrounds.

Perhaps if the one person-one language strategy had been decisively adopted by one or more of the parents in the small sample, the notion of monolingual before bilingual language acquisition would not have been supported so clearly. In the classical studies (Ronjat, 1913; Leopold, 1939; 1949a; 1949b) time and effort were spent trying to ensure relatively equal exposure to the two languages for the children concerned. In a less leisuredly age, it is not always clear how much time the working parent can and does spend with the object of their one person/one language strategy. In this study, the mother was the speaker who spent most time with the child. All of the fathers worked fulltime and spoke with their children only after work and during holidays and weekends. Without equal input from both languages, it would not be reasonable to expect balanced bilingual language acquisition, unless the primary carer also balanced her languages in the child's presence. The argument is rather that, in the commonplace bilingual world, children establish themselves as competent to about Stage IV or V (simple sentences and embedding) in one language first, before they develop their second language beyond Stage I (single words and phrases).

This is not what is usually meant by successive language acquisition, and although McLaughlin has arbitrarily called it simultaneous language acquisition "*if the child is introduced to the second language before that age [3 years].*" (McLaughlin, p101, 1984), it isn't really simultaneous either. Further, as has been said previously, the exposure to two

languages simultaneously has no necessary connection with the acquisition of two languages simultaneously.

The children appear to learn one way of communicating before they try another as well. This process was seen (but not analyzed) for a further two children during their fourth year, and the process did not differ superficially at least, from that observed in the first three children who reached that level by age three. The two later children were from WF and WM backgrounds, thus children from four of the five language backgrounds defined, followed the same pattern of bilingual language acquisition. The exception was the EE group. From that position, both languages are presumed to continue their developmental paths, although nothing can be said about whether competence in the second language reaches that of the first sooner, later or at all.

5. USING LANGUAGE

Metalinguistic Awareness

Tantalising questions arose from the search for evidence of metalingual awareness in the data. The small group of children produced amazing comments about language, but only occasionally. If the observer had been able to record more frequently, or if mothers had been left with tape recorders, perhaps there would be more examples of language awareness in some if not all of the ten children.

Many researchers have connected metalinguistic ability and metalinguistic awareness with bilingualism (eg, Bialystock, 1991b; 1992). All ten of the subjects gave evidence of metalingual ability, whether by joking with words, or making words up, or reporting conversations, or modifying requests

to make them more palatable. Only five³ gave any indication of using two languages by age three. Iwan and Gareth, who were both bilingual by three, were noticeably skilled at talking about talking, and Gareth at least, could certainly be described as metalingually aware. He commented on differing language use and was able to resist his mother's efforts to get him to talk in Welsh (see Q 4 and Appendix III, App. 35 onwards). Metalingual awareness is a phenomenon that is common in the children developing language, but it is not a sufficient explanation for bilingualism.

Perhaps it is the awareness of two language systems that is necessary for bilingualism, and in particular, for separation of the two languages. This is a more complex question. Even leaving aside Swain's argument that the differentiation of two codes in one language is essentially similar to the differentiation of two different languages (Swain, 1972), with very young children it is difficult to be sure that spontaneous comments reflect metalingual awareness or a more automatic response, and to question it might lead to an awareness not previously present.

Metalingual awareness (of two language systems) does seem to have been demonstrated by Gareth when he said "'excuse me' *dwi'n deud yn yr ysgol*/" ("I say 'excuse me' in school). There were no similar examples from the other children, but then Gareth's second language was ahead of that of the others. Would these children need to become metalingually aware before they became bilingual? Or as a result of becoming bilingual? Or need they never develop this awareness, but simply learn to use two language systems? A Vygotskian approach suggests

³Five includes the three who were bilingual with their mothers by session 8 (Gareth MM, Iwan WW, and Emyr WM), and the two who used their second language only when recorded with their fathers (Nia WF, and Matthew WF).

that metalingual awareness is necessary for the child to become independently bilingual.

Language Separation

Arnberg and Arnberg (1992) use a Vygotskian model to account for the language separation of the bilingual child. Elementary mental functions could account for learning a word or phrase in response to contextual attributes. Thus, at this level a child in a bilingual environment might respond with 'doggie' to an English television programme, and with 'ci bach' to the neighbour's puppy. It is not clear whether they think that this type of learning could also account for levels beyond Stage I, that is single word utterances. Higher mental functions are invoked to explain those instances when the child notices that two language systems are being used, when they can comment on this, and when they can, eventually, control their own use of the two languages.

In the present study, Nia (WF), Becky (WM), Emyr (WM), Gareth (MM), and Iwan (WW) were all either recorded or reported knowing which was the 'right' language for a speaker, the first three by 31 months, and the other two before three years old. Could they be described as functioning at a higher level, as aware of the existence of two systems, or were they reacting to a (wrong) stimulus? All were using two language systems by 4 years old. Earlier they had used only single words in their second language and, apart from this borrowing, little language mixing was heard or reported.

Referring to the one system/two system debate, DeHouwer (1990) suggested that to address someone in 'the wrong language' was indicative of pragmatic incompetence. Obversely, the child who is able to differentiate 'right language'/'wrong language' has achieved a measure of pragmatic awareness when he or she

objects to being addressed incorrectly. So to use the 'right' language with someone and to react to the 'wrong' one, is more properly seen as pragmatic awareness rather than metalingual awareness. In the present study, the evidence for pragmatic awareness was also sketchy and suggestive. It did seem evident that children develop pragmatic skills as they develop lexical, syntactic and discursive skills, whether or not they are becoming bilingual.

A major difficulty with language separation is that it is not always conscious. Adult bilingual speakers do not always know which language they have been using unless they search for environmental clues; at a wedding party, a grandmother could not say whether she had spoken to the guests in Welsh or English as they were a mixed group linguistically. Presumably the adult bilingual speaker is able to be aware of their language separation, even though they often function automatically. Are young bilinguals similarly aware of two systems? This difficulty also raises an uncomfortable question about the research study itself. If parents, and especially bilingual parents, are not always aware of the language they are using, how reliable are their reports of the language/s used by their children and reported in QII? English is such a pervasive language that Welsh parents are not always aware of what is 'not-Welsh'.

Bilingualism and Cognition

One of the most important research areas in the field of bilingualism concerned the cognitive handicap/benefit of acquiring two languages as a child. This was the *raison d'être* for the Threshold model. There is some support for the 'handicap' theory in the scholastic performance of children from minority language cultures in the United States when the Education policies assumed that it was in all children's best

interest to become proficient in English first and foremost. Many of these children were not taught to be literate in their first language, lost respect for it and for their culture, and further, did not perform well in English speaking schools that were divorced from their background (Grosjean, 1982).

In Wales, early studies purported to show a disadvantage for bilingual children, but many were flawed. Methodological weaknesses included the use of tests of intelligence conducted in the child's second, weaker language, and no matching of variables such as age, gender and socio-economic status, (see Baker, 1988a, for a full discussion). Following work by Peal and Lambert in 1962, it is now suggested that being bilingual may give a positive, cognitive advantage to children. Being able to see any event through two different languages allows the child to dissociate from one viewpoint and to entertain alternative hypotheses.

The children in this study were too young to test reliably, but here were no indications of disadvantage in those learning two languages. The two of the boys who were showing signs of becoming bilingual performed at above average levels on the WIPPSI. However, as contact is being maintained with some of the group, it would be interesting to see if there is support for either position as the children develop. With this in mind, the work of Ellen Bialystock is of special interest. She has suggested that the early development of control of selective attention is what gives bilingual children cognitive advantage over their monolingual peers (Bialystock, 1992).

Being Bilingual

It is necessary to look for the last time at the whole problem of what is meant by the term "bilingual". By now it should be clear that this work has taken the use of two languages

beyond Stage I, however simply or inaccurately, as defining the bilingual. Since the diversity of speakers calling themselves bilingual at QI, people were not asked to label themselves, but asked to say what they did. Similarly, when children are referred to as bilingual in this study, it is on the basis of recorded language use or else of reported use of aspects of both languages. The notion of 'balanced bilingualism' was abandoned as unworkable and not useful.

In Ynys Mon, it appears that more effort is needed to become bilingual if the child's background is English than if it is Welsh. Apart from single words, very few of the children from EE backgrounds were using Welsh at QII. Most of those from Mixed language backgrounds (MM, WM and WF) were using a lot of English and about half were using Welsh, (see Tables Q3.7 and Q3.8, pp229-230). From Table Q3.9 (p232), 22% of bilingual children had two parents who preferred to use Welsh with them. The majority (65%) had two parents who preferred to use both languages. Looking at what predicts language use, Table Q9.4 (p350) makes it clear that more infants from WW than from EE backgrounds become bilingual, (27% compared with 10%). If, as has been suggested here, children develop one language first and then begin to develop a second, the first language of bilingual children is more likely to be Welsh than it is to be English.

6. GENDER AND INFLUENCE

Those who marry across cultures

Early research on choice of marriage partners showed that people tend to choose those who are similar to themselves in cultural background, attractiveness and economic status (see Thibaut and Kelley, 1959; Bernstein, 1971). In choosing

someone out of their own culture, potential partners must feel very committed to one another, and strong enough to resist social pressures (Shakespeare described the situation rather well!). Once the partnership is established, many things that could have been taken for granted by members who shared a common background will have to be negotiated. In cross language partnerships, the language they use at home is arguably one of the most important. There is little research on the effects of the language of one person on the language of another. If one or both partners have to learn a second language, then, according to research by Dulay, Burt and Krashen (1982), their chances of linguistic success are enhanced, that is if you assume a positive emotional state, empathy and strong motivation. Self confidence is also associated with success in second language learning, and it seems reasonable to assume that those who marry out of their own culture are quite self confident. This leads to the expectation that cross language partners in general tend to become bilingual.

The situation is not so clear in North Wales. Although there are cultural differences between English and Welsh backgrounds, virtually all Welsh people speak English (although not all Welsh people speak Welsh, for historic reasons). Cross language marriages in North Wales are not always cross cultural marriages. Both partners are likely to speak English and one will also speak Welsh. Of interest here is whether these partnerships tend to produce bilingual speakers (that is increase the overall use of Welsh), or will people take the easy option and use the language they already share?

After data from the first questionnaire was examined, it looked as if neither extreme situation occurred; not all partners in cross language marriages become bilingual, neither

do they revert to using only English (see Tables Q1.2, Q1.3, Q1.4 and Q1.5 {pp160-164}). Instead most non Welsh speaking partners seemed to make an effort to use some Welsh, and most primary Welsh speakers used less Welsh than their peers in all-Welsh partnerships. In other words, both parents (and both languages) had an influence in the home.

But it was also clear that the parents did not have equal influence on the language of the home. As the calculations beneath Table Q1.7 (p167), demonstrated, the father has more influence than the mother, whether his first language is English or Welsh.

More Welsh is likely to be used in cross-language marriages when the Welsh speaker is a man than when it is a woman. However, when the Welsh speaker is a woman, more families expect their children will become fluent Welsh speakers than when it is the father who speaks Welsh. It seems that mothers influence the language of their children more than the language of their husbands.

Influence is hard to quantify. Welsh speaking men in cross language partnerships are less likely to think that Welsh is important than their peers who have a Welsh speaking partner, whereas Welsh speaking women are not influenced in this way. Less Welsh may be used in a cross language partnership if the Welsh speaker is a woman, but Welsh will be considered more important in those circumstances than if the Welsh speaker were a man.

The only study that approaches the question of parental influence using a Welsh speaking population is that by Harrison and his colleagues, who looked at the language used by children of two to seven years old in Wales (Harrison, Bellin & Piette, 1981). In an attempt to discover why so many

bilingual mothers in Wales raise their children monolingually, they found that monolingual English speaking fathers have a great deal of influence on whether one or two languages were used in cross language marriages. Where these fathers discouraged the use of Welsh, their children were all monolingual English speakers, but where they encouraged the use of Welsh, only 35% were monolingual English-speakers. They did not look at the full spectrum of language backgrounds, but focused on what the present study has called WM and WW families, and interviewed only the mothers in their sample.

The influence of the partner or partnership?

It was assumed at the start of this project that the joint language background of the parents, the environment into which a particular child had been born, would have a major influence on the subsequent language development of the child. That it does have an influence was shown in the multiple regression analyses (Tables Q9.13, pp369-373), but it is not the major influence. Both the language of the mother and the language of the father explained more of the variance. That is, the coupleness of the family is less influential than the parents separately.

The mother's role in her children's language development is honoured in the phrase "mother-tongue". Little attention was paid to the role of fathers until recently. Gleason and her colleagues have now shown that men do adapt their speech to young children, but that the quality of child-father communication is less smooth and more challenging than child-mother communication, (Gleason, 1975; Gleason & Greif, 1983). This accords with the findings of this study. Fathers interrupted more, spoke more, gave more directions and generally dominated the conversations more than did mothers

in the small sample. It could simply be that children spend more time with mothers, as they did in the present group, and that children perform with more confidence with a familiar partner. It would be interesting to find a group of male primary carers, and compare their child-father communications with those of female primary carers and both sets of partners.

The effects of gender on language use have been studied extensively, and an outline of the feminist position and a discussion of dominance can both be found in the Literature review section. However mention must be made at this point of two sets of findings, the first which show that women are good at second language learning (e.g. Carroll & Sapon, 1959), and the second which show that women have a number of skills which facilitate communication with children, (Scott, 1980; Henley & LaFrance, 1984). Newson (1979) has argued that these last are not inborn skills, but are those which the culture expects women to acquire. He comments that, if it were socially acceptable, many men could learn baby-minding skills and how to talk to young children.

Fathers and English

In the first survey, there were fewer couples allocated to the two cross language groups, WF (46, 12%) and WM (36, 9%). By the second questionnaire, all numbers were reduced, but the Welsh speaking Father group was reduced to just 6 families, 5% of the reduced sample, while the WM group only reduced to 16 (13%). An examination of Table Q8.4 shows that the biggest attrition was from the WF group to the MM group. In other words, men who were primarily Welsh speakers in 1988 had increased their use of English so much that they were at least using the two languages equally across a number of their current activities. (There is similar attrition from the MM group to the EE group. Here one can state that less Welsh is

being used in the family, probably by both partners, but it could be less than little. To be a WF father a man had to be using a lot of Welsh widely at T1.)

Considering the parallel situations of fathers in WF at T1 and at T2, and mothers in WM at T1 and T2, what factors could account for the greater loss of Welsh usage in the first group compared with the latter? The most obvious is that the men went out to work and the women stayed at home with the new baby. Almost all the men in the second sample were in full employment, although no details are available about where they worked or what kind of work they did. Home provided many of the situations where Welsh was used frequently, with children, family and friends. These were the variables that loaded highly on the Welsh Speaking Factor (Table M.3, p125) and which do not change greatly over time. In the domestic situation, a woman can control the language used for reading and viewing as well, and can avoid using English at all if she has a mind to.

On the other hand, in the work situation English is probably unavoidable. Work was also a variable that loaded highly on the Welsh speaking factor, but it is more subject to change. Although most public employers now require people to speak Welsh, many private employers do not. More English than Welsh is heard in public places, and if a man's work colleagues happen to be English speaking, he is likely to adopt their language during the day out of natural courtesy.

There are indications that English speaking men are the group least interested in language per se and in the Welsh language in particular. It was mostly the monolingual English speaking fathers who did not return the second questionnaire (TQ7.7, p312). Just as the Welsh speaking mother can avoid English in her everyday life, so the English speaking father can avoid

Welsh, both at work and at home.

As a counter to the drift away from Welsh by Welsh fathers, there is a small consolation. Six children coming from families designated as EE families at QI were found to be Welsh speaking or bilingual at age three (TQ9.4a, p350). They represent 12% of the EE families that remained from T1 to T2 and as such are not statistically significant. They are interesting as they indicate that the language drift is not entirely towards English.

Thus, it seems that the father has greater influence than the mother on the language used in the home, although he may well be less interested in language. The Language Background of the family has less influence on the subsequent language development of the child than had been expected, a finding that will be discussed in greater detail under the next heading.

7. PREDICTING LANGUAGE

A mother's language is the most powerful predictor of her child's language development. As a language partner, she elicits more language from her child, at a higher level of language complexity and with a longer average length of utterance in comparison with the father. In the multiple regression analysis, her language use accounted for between 41% (the Development of English) and 64% (Child Language Use) of the variance in her child's language at age three.

Much of the second questionnaire was devoted to eliciting opinions and measuring the attitudes of parents towards the Welsh language. However, variables associated with attitudes

accounted for little of the variance in child language at three. Again what people do seems to be more predictive than what they think, or at least than what they say they think.

The language of the father, while not the main contributor, did have a significant, independent contribution to the language children developed (between 5% and 14%), though least to the development of Welsh. Fathers influence the language of the home, mothers influence the language of the child.

The past language background of two thirds of the children in the study was in accord with their current language use. However, language background in itself was not predictive. In the multiple regression analysis, only small independent contributions were made by the language used by the couple. It had been expected that the language background would be the major influence on the child, and families in the small sample were chosen for their coupleness. However, describing types of family, even just in terms of language use, is perilous as was illustrated by that small group. One of the MM families turned out to use only English and the other to be bilingual.

Perhaps it would be useful to look at some of the reasons why it seems so obvious that the language used by the mother should predict that used by her three year old child.

- Mothers are the ones who spend most time with small children.
- Women have styles of speech which are more appropriate to talking with children.
- Mothers engage in a greater range of activities with their children than anyone else.
- Women are the more socially acceptable caregivers of small children.

All of the above statements apply to the children in the small

sample. All ten fathers were in fulltime employment and their wives stayed at home. Fathers were more dominant in conversation with their children than were mothers. Some fathers displayed a reluctance to play with their children, let alone share in caretaking roles, and all of the women felt it was right to stay at home while their children were little. As these assumptions are still shared by many in the local community, it would be difficult to test some of them without interference. The man who chooses to run the home while his partner earns a salary is still exceptional.

The majority of mothers in the large sample did not work outside of the home, (although some worked part-time) and the majority of fathers worked full-time. No other information relevant to these issues was available from QII. It might be possible to recruit families where both parents of small children work fulltime and children are cared for in other ways. The first reason, that amount of contact is what counts, could then be tested. Within that set, there may well be some families that include 'new men' as fathers, men who value the gentler side of maleness, and who are willing to share the family tasks. Thus could the 'range of activities' reason be assessed. Finally, Newson (1979) suggested that there is no reason why fathers should not attune their language skills to meet the needs of babies, and so we might look to a time when caring for a home and a child is a commonplace occupation for either sex. At such a time it is reasonable to expect that a child's language is best predicted by that of his or her caregiver, not necessarily of his or her mother. Although 'caregiver tongue' is unlikely to be the term adopted.

8. CAVEATS

Reliance on parental report

Saying and doing are separate, often unconnected activities. There is evidence within this research that when parents say they think Welsh is important, that does not necessarily lead to them doing anything about it. Therefore, caution is needed in interpreting the results reported here from the two questionnaires. The results represent what parents say about their own and their children's language use, their preferences for certain activities and their wishes regarding their children's future Welsh language use. Reporting behaviour is less value laden generally than reporting opinion, but the questions concerning aspects of Welsh and English are particularly open to bias. The parents who think the English should be chased back across Offa's Dyke are not likely to acknowledge that their children are picking up quite a lot of English, and the parents who think bilingual language development indicates superior intelligence will tend to make exaggerated claims for their children.

To balance that somewhat sceptical view is the confirmation received at QII of maternal reports about their partners at QI. If mothers could give reasonably accurate accounts of paternal behaviour and self perception, maybe they could also give reasonable accounts of their children's behaviour. That is, if they notice it accurately. Bilingual adults are not always aware of the language they use and may not be aware of the language used by their children. This could take the form of not discriminating between two languages used, or of not recognising phrases and utterances as not-Welsh or not-English, thus biasing the results according to beliefs and expectations outlined in the last paragraph.

It may need reiterating here that throughout Language Use

rather than Language Ability has been used to define parents, families and children. Although a more reliable measure, it can lead to apparent anomalies. If the language use of two parents is almost entirely English across a number of situations, these parents are said to belong to an English speaking (EE) family. They may have had Welsh as their first language, but if they ceased to use it in childhood and use it rarely as an adult, they count as a non Welsh speaking family. Such a family may be prompted to revive its Welsh for the sake of a child, much as the general population of mothers increased its use of Welsh for reading and viewing with children.

One last danger with questionnaire data needs a brief mention. It is usually clear what a question means to the researcher, and in face to face interviews, it is possible to pick up and clarify misunderstandings. There is no way of clarifying, or even of identifying misunderstandings in a postal questionnaire. There is no way to tell whether, when asked "does your child use simple sentences in English?" parents know what is meant by 'sentence'. This is an even more pertinent criticism when the population in question is bilingual. Translation is a notoriously thorny issue, and opportunities for misinterpretation abound.

Reliance on Few Subjects

Single case studies have an honourable history in psychological research, and the field of language development owes a great debt to the single case work of Leopold (1945a; 1945b; 1954), Piaget (1952; 1959) and Brown (1973) to name only those most quoted in the present research.

The present study attempts to exclude some of the factors associated with later, related-subject research (such as

Imedadze, 1967; Saunders, 1982; Taeschner, 1983; Fantini, 1985). It was possible to follow the language development of only ten individual children, and only at approximately three monthly intervals. The single case studies already mentioned, used atypical children and there is a risk of choosing atypical subjects with all studies using a small N. However, subjects were matched as far as was possible, and in order to make them as representative as possible the unusual were excluded. There is also a risk of subject attrition. Luckily all but one of the ten remained on the island for the duration of the study, and only six of the ninety planned recording sessions were missed. With so few subjects, it is possible for a researcher to build a good relationship with each family, one reason why the rate of missed sessions is so low. Another reason is because sessions were recorded in the homes. This too was only possible with small numbers and in itself has advantages as well as problems of non standardisation. By recording at home, children and parents were more at ease, discussion of background detail was facilitated, and parents became more interested in and committed to the project.

It was often frustrating that recordings could only be made as infrequently as every three months, especially once the children had developed beyond Stage II. More frequent recording might have produced more examples of pragmatic and metalinguistic ability and awareness. It was in this regard that researchers who use their own children as subjects are to be envied. Although in contrast, the risk of subjective bias must be ever present. Possibly it was present in this study. The very relationships that eased the recording process may have led the observer to be less than objective in her interpretation of events. She herself may have influenced the events she was observing. There is no way out of that particular conundrum. All that can be said is that she was aware of the dangers of contamination, and at all times

attempted to become invisible during the actual recording, and to resist the children's overtures. It felt as if mothers and children mostly forgot she was there.

Subject Selection

This study solicited data from all families of a proband of babies in a given area. It did not concentrate only on children who were or were becoming bilingual, but upon children from a range of backgrounds within a bilingual culture. Neither did it focus on parents who adopted formal strategies to assist their children's language development.

While acknowledging that the small group who agreed to take part in the recording sessions expressed an interest in their children's language which one cannot take for granted, these families were in no way exceptional, and arguably more representative of families in general than those with linguists, psychologists or psycholinguists as parents or friends. On the one hand, this meant that parents were naive about language development and haphazard in the way they related linguistically to their children. On the other hand, they were not constrained by theory, and what was recorded was spontaneous, unplanned discourse.

By choosing to record five types of family, those who later became bilingual could be described within the context of other possible language development paths. Had only monolingual Welsh speaking families been studied, Iwan's early bilingualism could only have been discussed within the context of Welsh speaking, and all the rich variety of cross language families would have been ignored. Because the total population of same age children had been contacted, some generality could be assumed from the two questionnaires, and findings could be followed over time.

Thus, this study differs from most in its choice of subject, a difference which can be seen as both advantageous because it lends breadth, but constricting because it limits the applicability of some of its findings.

9. FURTHER WORK

Discourse Analysis

A surprisingly large amount of data is generated by recording and transcribing part of one side of a tape once every three months. Many further questions occurred during the course of this study, and the group to be discussed first relate to the mother-child conversations as a whole. It was decided to transcribe by utterance, and to indicate an initiation with a new line. Although computation and analysis of maternal and child initiation would have to be at first hand and could be tedious, but it could also be illuminating. One might expect that initiations would mirror both volume (mother/child ratios approaching one) and complexity (increasing MLU and type/token ratios). It may not be so, or it may not be so universally. There is evidence (quoted earlier in this work) that women use language differently from men. Perhaps this phenomenon starts at the very beginning of language. From the observations made during recording, there seemed little difference in the assertiveness of the ten children, and no clear pragmatic differences emerged. Perhaps differences would be discernible in the pattern of initiations.

Such a close analysis would allow one to see if children in households where both languages are used follow the language lead of their mothers. This could be a subtle following. Mothers often spoke to the observer with an English aside which appeared to be ignored by the children. It might be

that such comments related to later English use, even if only the use of English single words or phrases.

It would also be very interesting to subject the data to an analysis by response, using the work of Blank and Franklin (1980) and Conti-Ramsden and Friel-Patti (1986). First they coded initiating utterances into 'obliges' (or utterances requiring a response) and 'comments' at four levels of conceptual complexity, and then they coded responses as adequate, requests for clarification, inadequate or no response, and ambiguous. These codes were used for both child and maternal initiations and responses. Conti-Ramsden and Friel-Patti were able to show that mothers pitched their utterances at or one level above the level of complexity to which the children responded most effectively. The children and mothers initiated topics equally, but mothers used more obliges and children more comments. Not only should it be possible to replicate some of their results, but it should be possible to suggest whether their work had cross language application.

Language Development from 3 to 5 years

After recording the language development of these ten subjects for almost two years, it was decided to continue to record half of the children, one from each Language Background group, until they were at least five years old. With so much information available this seemed to be an excellent opportunity to follow up any trends indicated by the present work. Thus recordings have been made at six monthly intervals, and almost all of the children have reached their fifth birthday. Transcription and analysis has been deferred for the time being, but many of the suggestions made concerning discourse analysis could be followed through to age five. During these recordings, all except Llywela, the

English speaking child, have been recorded using both languages. It will be interesting to see how this process occurred.

Earlier it was suggested that these children might further the debate on whether bilingualism gave cognitive advantage or not. Not only should it be possible to look at the recordings made of these children with cognitive development in mind, but some of the specific tests for metalingual ability and of control of selective attention suggested by Bialystock might be made.

Common Language

It would be interesting to test whether the phenomenon of "Common" language is more than a device for handling the data in this thesis. From earlier discussion, one future step will be to analyze the component parts and to identify how much can be equated with language mixing, how much motherese and so forth. Beyond that, it might be useful diagnostically; it might be that those children for whom the ratio of Common language to Welsh or English does not decrease with time or Stage development are at risk of confusion in a bilingual situation. This would require an analysis of the conversations of language delayed children in the first instance, to see if they differed in measurable ways from the subjects of this study.

Even as no more than a device for handling data, it could provide a helpful way of conceptualizing a part of language use, both bilingual and monolingual. As adults use Common language, even when their children have progressed beyond the Stage V level, does it serve any useful function in their speech? Is it simply a measure of their name dropping and foreign word usage, or do adults vary in the frequency with

which they use words common to Welsh and English (like car and tren/train) and if so why?

The Sequential Model of Bilingual Language Acquisition

Further work could be designed to test this model directly. It should be possible to recruit a group of children at the early two-word utterance level (about age 18-24 months), from mothers who use both Welsh and English. These children are likely to be using words and phrases from both languages, and it is hypothesized that they will be discovering one grammar. To chart their progress in sufficient detail, at least monthly recording would be advisable, but these could be more focused. In the present study, tea-party and bed-time games produced many useful speech samples, and these games could be used in a more regularized fashion to provide all of the children with a similar language-evoking experience.

These recordings would provide data from which to assess the stage of language development in both languages for each child. Recordings would have to continue until the children had reached a criterion level for both languages, (perhaps Stage V), or until they had reached school age. Some children might not become bilingual.

Some interesting questions arise. Would it would be important to control the language use of the researcher and/or to negotiate the language use of the mother? The language use of mothers has been shown to predict child language, and so, for the model to explain commonplace bilingual language acquisition, the mother's language use should be as natural as possible. What can be done about the language use of the researcher? Should the aim be to mirror that of the mother? Or should the researcher again try to minimise the linguistic influence they have in the recording session, a task that is

likely to become increasingly difficult as the young subjects learn how much fun it is to have new people to talk to!

It would also be possible to go beyond the general stage descriptions of Brown (1973) and Crystal (1976), at least after about Stage III. Specific linguistic tasks could be devised for the children in both languages. For example, they might be asked to repeat sentences that include clauses, or to answer questions that encourage embedded answers. These would have to be standardized in Welsh and English. Using such a schedule it might be possible, perhaps by recruiting from Ysgolion Feithrin⁴ and Nursery Schools, to test this model with fairly large numbers of children in the early part of their bilingual development.

Thinking in Welsh

Although this work has had children as its focus, an intriguing question relates to adults. Is it so that the language you use for thinking determines your language group membership? Anecdotally, there are stories which indicate that thinking in a foreign language is a significant stage towards assimilation into that language community. In this study, few parents said they used both languages for thinking, the majority used either Welsh or English. It would be interesting to enlist larger numbers of, ideally, bilingual speakers to answer questions about their thinking language, and ways in which this changed. Does it change by topic? by mood? or by person? Skilled bilingual speakers switch so easily from one language to the other, would they be able to answer such questions anyway?

⁴The Welsh equivalent of Nursery Schools

CONCLUSIONS

1. Although less than a quarter of the families in this study could be classed as Welsh speaking, some Welsh was used in between two thirds and three quarters of families on Ynys Mon (Anglesey).

2. There is a surprisingly large amount of support in this population for children to learn Welsh at school. This is backed up with some evidence of change in maternal behaviour towards greater use of Welsh as children approach school age. The support comes from all types of family, Welsh speaking, English speaking and those with a mixture of languages in their background, but all of these families have lived on Anglesey for at least three years.

3. English speakers tend to want Welsh for their children as an additional advantage, whereas Welsh families see Welsh as part of their heritage. The current economic climate appears to have impinged upon reasons given; fewer people see Welsh as a passport to employment and many Welsh speakers now want to ensure their children do not lose opportunities available through English. So, even with a positive attitude to the Welsh language by the majority of parents, the pressures on the Welsh language remain high.

4. In the small sample, there were few differences in the ways in which children learned to communicate and to use language. Common language appears to be a useful if under explored device for describing language use in small children and their caregivers.

5. The children who were becoming bilingual did not appear to learn one, mixed language code and then differentiate two codes, nor did they appear to develop two languages from the start. Instead, the three children who showed signs of becoming bilingual developed one language (Welsh) to Stage IV, the stage of embedding and complex sentences, before learning to use their second language for more than just single words and phrases. It is suggested that the potentially bilingual child develops his or her first language to a simple syntactic stage before beginning to develop a second language. The child's early lexicon may well contain words or phrases from more than one language. Borrowing is not equated with language mixing.

6. An extended version of the Threshold Model, the Developmental Threshold Model of bilingual language development is suggested. This is not incompatible with results from the large sample.

7. It is possible for metalingual awareness to emerge in bilingual children before age three. Its significance and relationship with cognition and with bilingualism have not been explored in the present study.

8. It would appear that children are less likely to become bilingual if their language background is English than if it is Welsh. Elsewhere bilingualism has been seen as a first step towards the loss of a language .

9. Men were shown to have greater influence on the language used in the home than women. In cross language partnerships,

both languages are used, but there is more adaptation on the part of the women than by the men. Welsh speaking men continue to use Welsh with their non Welsh speaking partner more often than do Welsh speaking women in similar partnerships. English speaking women are more likely to use Welsh in their cross language partnership than are English speaking men. However, the greatest effect is due to the English language itself, with cross language marriages leading to a greater use of English overall. There are also indications that fathers are less interested in language per se; there was more attrition from the Welsh Father group than from any other (proportionally).

10. The mother's language is shown to be the best predictor of a child's language at age three. Although fathers had some influence in their children's subsequent language use, by far the greatest predictor of future language use by children of three was their mother's language when they were born.

Thus some suggestions have been made concerning how children become bilingual, and maternal language has been shown to be the most significant predictor of childhood bilingualism at age three.

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APPENDICES

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APPENDIX Ia : QUESTIONNAIRE 1 (English Version)

LANGUAGE BACKGROUND QUESTIONNAIRE (Q.I)

If you have a partner living with you, please will you tick the answers that apply to him, as well as the answers that apply to you.

QUESTION 1

At present, which language do you use :

SELF

PARTNER

- with the baby ?
- with other children ?
- with close friends ?
- with neighbours ?
- with your parents ?
- with shopkeepers ?
- with people at work ?
- at church or chapel ?
- with one another ?

QUESTION 2

- Which language do you prefer for reading ?
- for thinking ?
- for watching television ?

QUESTION 3

- How would you describe your first School ?
- your last School ?

QUESTION 4

Would you say you are bilingual ?

YES

NO

YES

NO

Language Background Questionnaire

If you have a partner living with you, please will you tick the answers that apply to him as well as the answers that apply to you.

QUESTION 5

When you were a child in primary School, what language did you use

SELF

PARTNER

- at home ?
- with your Mother ?
- with your Father ?
- with your Brothers ?
- with your Sisters ?
- with your favourite Grandparent ?
- with your best friend ?
- at School ?

QUESTION 6

YES

NO

Are there other children living at home ?

if YES, what language does

- the eldest use at home ?
- the eldest use at School ?
- the eldest use with friends?

Is there more than one child at home

YES

NO

(if NO, go to Question 7)

if YES, what language does

- the youngest use at home ?
- the youngest use at School ?
- the youngest use with friends?

Language Background Questionnaire

If you have a partner living with you, please tick the answers that apply to him, as well as the answers that apply to you.

QUESTION 7

Do you speak Welsh ?

No, not yet

A few words and phrases

Taking a Welsh course

Can join in simple conversation

Speak local Welsh with friends

Fluent Welsh speaker

I'd rather describe myself as

SELF

PARTNER

QUESTION 8

Do you want your baby

to speak only English

to pick up some Welsh

to learn Welsh at School

to speak Welsh fluently

other (please specify)

don't know

Please give reasons for your answer

QUESTION 9

How important or unimportant do you think it is for children to learn Welsh?

SELF

PARTNER

UN-IMPORT.	NOT VERY IMPORT.	QUITE IMPORT.	VERY IMPORT.

UN-IMPORT.	NOT VERY IMPORT.	QUITE IMPORT.	VERY IMPORT.

Don't know

--

--

Language Background Questionnaire

If you have a partner living with you, please tick the answers that apply to him, as well as that apply to you.

QUESTION 10

Which is closest to your opinion ?
Do you think that, in your children's lifetime

	SELF	PARTNER
Welsh will replace English in this part of Wales	<input type="checkbox"/>	<input type="checkbox"/>
Welsh will be used more than it is now	<input type="checkbox"/>	<input type="checkbox"/>
Welsh will be used the same as it is now	<input type="checkbox"/>	<input type="checkbox"/>
Welsh will be used less than it is now	<input type="checkbox"/>	<input type="checkbox"/>
English will replace Welsh in this part of Wales	<input type="checkbox"/>	<input type="checkbox"/>

QUESTION 11

When your baby grows up, do you hope that he/she will

	SELF	PARTNER
live on Ynys Mon ?	<input type="checkbox"/>	<input type="checkbox"/>
live in North Wales ?	<input type="checkbox"/>	<input type="checkbox"/>
live in Wales ?	<input type="checkbox"/>	<input type="checkbox"/>
live in Britain ?	<input type="checkbox"/>	<input type="checkbox"/>
live abroad ?	<input type="checkbox"/>	<input type="checkbox"/>

QUESTION 12

When your baby grows up, do you hope that he/she will

marry a Welsh speaking person ?	<input type="checkbox"/>	<input type="checkbox"/>
marry a non Welsh speaking person ?	<input type="checkbox"/>	<input type="checkbox"/>
not mind either way ?	<input type="checkbox"/>	<input type="checkbox"/>

Language Background Questionnaire

To help me classify your answers, I'd like to ask you a few questions about yourself and your family.

QUESTION 13

What is your full name : _____

Your address : _____

Your baby's name : _____

Your baby's date of birth : _____

About how old are you ?

20 or younger

21 to 39

40 or older

How would you describe yourself ?

WORKING CLASS	LOWER MIDDLE CLASS	UPPER MIDDLE CLASS	UPPER CLASS

NOT SURE

QUESTION 14

Do you have a husband/boyfriend ?

YES

NO

If NO, go to Question 15

If YES, about how old is he

20 or younger

21 to 39

40 or older

Does his have a job that regularly takes him away from home ?

YES

NO

How do you think he would describe himself ?

WORKING CLASS	LOWER MIDDLE CLASS	UPPER MIDDLE CLASS	UPPER CLASS

NOT SURE

Language Background Questionnaire

If you have a partner living with you, please tick the answers that apply to him, as well as the answers that apply to you.

QUESTION 15

Are there aother children at home besides the baby ?

YES

NO

If NO, go on to Question 16

If YES, please tell me their NAMES and AGES

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

QUESTION 16

Have you always lived in this area ?

SELF	
YES	NO

PARTNER	
YES	NO

If NO, when did you first move to Ynys Mon ?

QUESTION 17

Are either of your parents still alive ?

YES	NO
-----	----

YES	NO
-----	----

If YES, where do they live

with you ?

a few minutes walk away ?

a short journey away ?

some distance, but not too far away ?

a long way away ?

QUESTION 18

Please add any comments about your language background, or about this questionnaire, which you think might be important.

Thank you very much for your help.

Will you please check that you have answered everything and then send it back in the envelope provided.

APPENDICS Ib : HOLIADUR I (Cyfeithiad Cymraeg)

HOLIADUR CEFNDIR IAITH (Q.I)

Os oes gennych bartner yn byw gyda chi, ticiwch yr atebion sy'n berthnasol iddo ef, yn ogystal a'r atebion sy'n berthnasol i chi.

CWESTIWN 1

EICH HUN

PARTNER

Ar hyn o bryd, pa iaith 'rydych yn ei siarad:

gyda'r babi ?

gyda phlant eraill ?

gyda ffrindiau agos ?

gyda chymdogion ?

gyda'ch rhieni ?

gyda siopwyr ?

gyda phobl yn y gwaith ?

yn yr eglwys neu'r capel ?

gyda'ch gilydd ?

CWESTIWN 2

Pa iaith sydd orau gennych ar gyfer

darllen ?

meddwl ?

gwyllo'r teledu ?

CWESTIWN 3

Sut y byddach yn disgrifio

eich ysgol cyntaf ?

eich ysgol olaf ?

CWESTIWN 4

A fydddech yn dweud eich bod yn ddwyieithog ?

BUASWN

NA FUASWN

BUASWN

NA FUASWN

Holiadur Cefndir Iaith

Os oes gennych bartner yn byw gyda chi, ticiwch yr atebion sy'n berthnasol iddo ef, yn ogystal a'r atebion sy'n berthnasol i chi.

CWESTIWN 5

EICH HUN

PARTNER

Pan oeddech yn blentyn yn yr Ysgol Gynradd, pa iaith oeddech yn ei ddefnyddio

gartref ?

gyda'ch Mam ?

gyda'ch Tad ?

gyda'ch Brodyr ?

gyda'ch Chwiorydd ?

gyda'ch hoff Nain neu Daid ?

gyda'ch ffrind gorau ?

yn yr Ysgol ?

CWESTIWN 6

OES

NAGOES

Oes plant eraill yn byw gartref ?

os OES, pa iaith ydi'r hynaf yn siarad

yn y cartref ?

yn yr ysgol ?

gyda ffrindiau ?

Oes na mwy na un plentyn yn byw gartref

OES

NAGOES

Os NAGOES ewch ymlaen i Cwestiwn 7

os OES, pa iaith ydi'r ieuengaf yn siarad

yn y cartref ?

yn yr ysgol ?

gyda ffrindiau ?

Holiadur Cefndir Iaith

Os oes gennych bartner yn byw gyda chi, ticiwch yr atebion sy'n berthnasol iddo ef, yn ogystal a'r atebion sy'n berthnasol i chi.

CWESTIWN 7

Ydych chi'n siarad Cymraeg

na, dim eto

ychedig o eiriau ac ymadroddion

dilyn cwrs Cymraeg

gallu ymuno mewn sgypysiau syml

siarad Cymraeg lleol gyda ffrindiau

siarad Cymraeg yn rhugl

EICH HUN

PARTNER

Buasa'n well gen i fy nisgrifio
fy hun fel

CWESTIWN 8

Ydach chi eisiau i'ch babi

siarad Saesneg yn unig ?

ddod i fedru rhywfaint o Gymraeg ?

ddysgu Cymraeg yn yr ysgol ?

siarad Cymraeg yn rhugl ?

arall (nodwch)

ddim yn gwybod ?

Rhowch y rhesymau dros eich ateb

CWESTIWN 9

Yn eich barn chi pa mor bwysig neu pa mor ddibwys ydi hi i'ch plant ddysgu Cymraeg ?

EICH HUN

PARTNER

	DDIM YN BWYSIG IAWN	GWEDDOL BWYSIG	PWYSIG IAWN
DIBWYS			

	DDIM YN BWYSIG IAWN	GWEDDOL BWYSIG	PWYSIG IAWN
DIBWYS			

Ddim yn gwybod

--

--

Holiadur Cefndir Iaith

Os oes gennych bartner yn byw gyda chi, ticiwch yr atebion sy'n berthnasol iddo ef, yn ogystal a'r atebion sy'n berthnasol i chi.

CWESTIWN 10

P'run ydi'r agosaf at eich barn chi ?
Yn oes eich plant eich hun, ydych chi'n credu y bydd

	HUN	PARTNER
Y Gymraeg yn dod yn lle'r Saesneg yn y rhan hon o Gymru ?		
Y Gymraeg yn cael ei defnyddio fwy nag y mae yn awr ?		
Y Gymraeg yn cael ei defnyddio tua'r un faint ag y mae yn awr ?		
Y Gymraeg yn cael ei defnyddio llai nag y mae yn awr ?		
Y Saesneg yn dod yn lle'r Gymraeg yn y rhan hon o Gymru ?		

CWESTIWN 11

Pan fydd eich babi wedi tyfu ydych chi'n gobeithio y bydd ef/hi

	HUN	PARTNER
yn byw ar Ynys Mon ?		
yn byw yng Ngogledd Cymru ?		
yn byw yng Nghymru ?		
yn byw yn Prydain ?		
yn byw dramor ?		

CWESTIWN 12

Pan fydd ef/hi wedi tyfu, ydych chi'n gobeithio y bydd ef/hi

yn priodi person sy'n siarad Cymraeg ?		
yn priodi person sydd ddim yn siarad Cymraeg ?		
'does dim gwahaniaeth y naill ffordd neu'r llall		

Holiadur Cefndir Iaith

Er mwyn helpu i ddsbarthu eich atebion, hoffwn ofyn ychydig o gwestiynau amdanoch chi a'ch teulu.

CWESTIWN 13

Beth yw eich henw yn llawn: _____

Eich cyfeiriad : _____

Enw eich babi : _____

Dyddiad geni eich babi : _____

Faint ydi eich oed ?

20 neu iau	
21 i 39	
40 neu hyn	

Sut y byddech yn eich disgrifio eich hun ?

DOSBARTH GWEITHIOL	DOSBARTH CANOL IS	DOSBARTH CANOL UWCH	DOSBARTH UWCH	DDIM YN SIWR

CWESTIWN 14

Oes gennych chi wr/cariad ? OES NAGOES

os OES, tua faint ydi ei oed ?

20 neu iau	
21 i 39	
40 neu hyn	

Oes ganddo waith sy'n mynd ag ef oddi cartref yn aml ? OES NAGOES

Sud ydach chi yn meddwl byddai ef yn ei ddisgrifio ei hun ?

DOSBARTH GWEITHIOL	DOSBARTH CANOL IS	DOSBARTH CANOL UWCH	DOSBARTH UWCH	DDIM YN SIWR

Holiadur Cefndir Iaith

Os oes partner yn byw gyda chi, ticiwch yr atebion sy'n berthnasol iddo ef yn ogystal a'r atebion sy'n berthnasol i chi.

CWESTIWN 15

Oes unrhyw blant eraill gartref heblaw'r babi ?

OES

NAGOES

Os NAGOES, ewch ymlaen i Cwestiwn 16

os OES, rhowch eu henwau a'u hoed

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

CWESTIWN 16

EICH HYN

PARTNER

Ydych chi wedi byw yn yr ardal hon erioed ?

DO

NADDO

DO

NADDO

os NADDO, pryd wnaethoch chi symud i Ynys Mon gyntaf ?

CWESTIWN 17

Ydi eich Mam neu Tad yn dal yn fyw ?

YDI

NACYDI

YDI

NACYDI

os YDI/YDYNT ble mae'n nhw'n byw?

gyda chi ?

yn ymyl (gwaith ychydig o funudau o gerdded) ?
taith fer i ffwrdd ?

tipyn o ffordd, ond nid yn rhy bell i ffwrdd ?
ymhell i ffwrdd ?

CWESTIWN 18

Ychwanegwch unrhyw sylwadau am eich cefndir iaith, neu am yr holiadur hwn, a allai fod yn bwysig yn eich barn chi.

Diolch yn fawr i chi am eich help.

Gwnewch yn siwr, os gwelwch yn dda, eich bod wedi ateb popeth ac yn anfonwch ef yn ol yn yr amlen a ddaeth gyda ef.

APPENDIX II; a) Schedule for Initial Interview.

INITIAL INTERVIEW; SUBJECTS

J.LYON

NAME;	DoB
MOTHER'S NAME	FATHER'S NAME
ADDRESS	DATE
PREGNANCY	
BIRTHWEIGHT	
BIRTH HISTORY	
TIME HERE	TIME HERE
BEFORE	BEFORE
MOTHER'S WORK	FATHER'S WORK
MOTHER'S AGE	FATHER'S AGE
S.E.S.	S.E.S
WORK PLANS	TIME AWAY from HOME
PARENTS	PARENTS
FREQ. VISIITS	FREQ. VISITS
OTHER RELATIVES	OTHER RELATIVES
FRIENDS	FRIENDS
INTERESTS	INTERESTS

2/ INTERVIEW NAME;

JL

LANGUAGE;-

1. PAST

PAST

2. OWN SCHOOL

OWN SCHOOL

3. COMMENTS

COMMENTS

4. CURRENT

CURRENT

5. COMMENTS

COMMENTS

6. PERSONAL Thinking

PERSONAL Thinking

7. Day Dreaming

Day Dreaming

8. Newspapers

Newspapers

9. Books

Books

10. Television

Television

11. COMMENTS

COMMENTS

12. FUTURE IMPORTANCE

FUTURE IMPORTANCE

13. SURVIVAL

SURVIVAL

14. BABY

BABY

15. NURSERY

NURSERY

16. SECONDARY

SECONDARY

17. COMMENTS

COMMENTS

18. URDD

URDD

19. CHAPEL

CHAPEL

20. COMMENTS

COMMENTS

21. WORK (baby)

WORK (baby)

22. LIVE (baby)

LIVE (baby)

23. MARRY (baby)

MARRY (baby)

24. COMMENTS

COMMENTS

3/ INTERVIEW NAME;

JL

What do you do if your baby cries?

When did you feed your baby?

What do you plan to do about toilet training?

What would you do if your baby had a temper?

When do you put your baby to bed?

What do you do if he/she does not sleep?

What does your baby eat?

What does your husband do with him/her?

What games do you play with him/her?

APPENDIX IIb : Experimental Version of Reynell Test in Welsh

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APPENDIX III : Sample Data for one child (Gareth)

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APPENDIX IV : SAMPLE PROCESSED DATA: (GARETH)

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Appendix V; DICTIONARY of COMMON WORDS

ENGLISH	WELSH
AUNTIE	ANTI
BAG	BAG
BALLOON	BALWN
BANANA	BANANA
BANK	BANC
BAR	BAR
BAT	BAT
BATH	BATH
BIKE	BEIC
BISCUIT	BISGET
BLOCK	BLOC
BOTTLE	BOTEL
BLOUSE	BLOWS
BOX	BOCS
BROWN	BROWN
BUCKET	BWCED
BUNNY	BWNI
BUGGY	BUGGY
BUS	BWS
BYE	BEI
CAP	CAP
CAR	CAR
CARAVAN	CARAFAN
CARPET	CARPED
CHOCOLATE	SIOCLED
CLAY	CLAI
CLEAR	CLIR
CLIP	CLIP
CLOCK	CLOC
CLOWN	CLOWN
CLUB	CLWB
COFFEE	COFFI
COMIC	COMIC
COT	COT
COVER	CYFER
CRAYON	CRAEON
CUSTARD	CWSTARD
DAD	DAD
DADDY	DADI
DANCE	DAWNS
DESK	DESG
DOLL	DOL
DOLLY	DOLI
DRILL	DRIL
DRAWER	DROR
ELEPHANT	ELIFFANT
ENGINE	INJAN
FARMER	FFARMWR
FENCE	FFENS
FLASK	FFLASG
FLAT	FFLAT
FORK	FFORC
FROCK	FFROG

GARAGE	GAREJ
GUITAR	GITAR
HAT	HET
HELLO	HELO
HURRAY	HWRE
JAM	JAM
JEANS	JINS
JELLI	JELI
JIG-SAW	JIG-SO
LABEL	LABEL
LAMP	LAMP
LIFT	LIFFT
LOT	LOT
LORRY	LORI
MAM	MAM
MAP	MAP
MARMALADE	MARMALED
MAT	MAT
MATTER	MATAR
MINUTE	MUNUD
MONKEY	MWNCI
MOO	MW
MOTOR	MODUR
NECKLACE	NECLIS
NICE	NEIS
OKAY	OKAY
OOPS	OOPS
PAINT	PAENT
PARCEL	PARSIL
PARK	PARC
PARTY	PARTI
PEAS	PYS
PEDAL	PEDAL
PEE	PI
PEEP	PIP
PENCIL	PENCIL
PETROL	PETROL
PHONE	FFON
PIANO	PIANO
PICNIC	PICNIC
PILLS	PILS
PINK	PINC
PLATFORM	PLATFFORM
POCKET	POCED
POO	PW
POSTMAN PAT	POSTMAN PAT
POT	POT
POWDER	POWDR
PRAM	PRAM
PUDDING	PWDIN
PUSS	PWS
PYJAMAS	PYJAMAS
QUACK	CWAC
QUARTER	CHWARTER
QUESTION	CWESTIWN
RECORD	RECORD
RIGHT	REIT
ROCKET	ROCED

ROUND	ROWND		
SAM TAN	SAM TAN		
SANDAL	SANDAL		
SAUCER	SOSER		
SCARF	SGARFF		
SCREW	SCRW		
SHED	SIED		
SHOP	SIOP		
SKIRT	SGERT		
SIGNAL	SIGNAL		
SINK	SINC		
SLIPPERS	SLIPERS		
SOUND	SOWND		
SPAGHETTI	SBAGETI		
SPANNER	SBANER		
SPLASH	SBLAS		
SQUARE	SGWAR		
STAND	STAND		
STATION	STESION		
STOP	STOP		
STORY	STORI		
SUGAR	SIWGR		
SURE	SIWR		
TA	TA		
TANKER	TANCWR		
TAP	TAP		
TEDDY	TEDI		
TELEPHONE	TELEFFON		
THOMAS TANK	TOMAS TANC		
TIP	TIP		
TOAST	TOST		
TOILET	TOILED		
TOMATO	TOMATO		
TOP	TOP		
TOWEL	TYWEL		
TRACK	TRAC		
TRACTOR	TRACTOR		
TRAIN	TREN		
TRAY	TREI		
TROUSERS	TROWSUS		
TRUCK	TRYC		
TUNNEL	TWNEL		
TYRE	TEIAR		
VAN	FAN		ADDITIONAL (see text)
VEST	FEST		
VIDEO	FIDEO	A	Y
WELL	WEL	IN	YN
YARD	IARD		
YEA	IA		
ZIP	SIP		
ZOO	SW		

Refs;

Y GEIRIADUR MAWR; The Complete Welsh-English English-Welsh Dictionary. Llandysul; Swag Gomer, 1986.

Y GEIRIADUR LLIWGAR; Welsh Children's Picture Dictionary. Caerdydd; Usborne Publishing Ltd., 1979.

APPENDIX VI; INTER RATER RELIABILITY

Six scripts were examined and compared for numbers of utterances per speaker turn, as follows;

1. Iwan Dad
37 months

2. Iwan4
25 months

3. Gareth8
36 months

SHEILA		JEAN		SHEILA		JEAN		SHEILA		JEAN	
I. 4	D. 4	I. 4	D. 4	M. 1	I. 1	M. 1	I. 2	G. 1	G. 1	G. 1	G. 1
D. 4	I. 1	D. 4	I. 1	I. 1	D. 2	I. 2	M. 4	M. 2	M. 2	M. 2	M. 2
I. 1	D. 2	I. 1	D. 2	M. 4	I. 1	M. 4	I. 1	G. 1	G. 1	G. 1	G. 1
D. 2	I. 1	D. 2	I. 1	I. 1	M. 8	I. 1	M. 8	M. 2	M. 2	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	M. 8	I. 1	M. 8	I. 1	G. 1	G. 1	G. 1	G. 1
d. 1	I. 1	d. 1	I. 1	I. 1	M. 2	I. 1	M. 2	M. 3	M. 3	M. 3	M. 3
I. 1	D. 8	I. 1	D. 8	M. 2	I. 3	M. 2	I. 3	G. 1	G. 1	M. 1	M. 1
D. 7	I. 2	D. 8	I. 2	I. 3	M. 4	I. 3	M. 4	M. 1	M. 1	M. 1	M. 1
I. 2	D. 3	I. 2	D. 3	M. 4	I. 2	M. 4	I. 2	G. 1	G. 1	G. 1	G. 1
D. 3	I. 2	D. 3	I. 2	I. 2	M. 2	I. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 2	D. 2	I. 2	D. 2	M. 2	I. 4	M. 2	I. 4	G. 1	G. 1	M. 1	M. 1
D. 3	I. 1	D. 2	I. 1	I. 4	M. 4	I. 4	M. 4	M. 1	M. 1	M. 1	M. 1
I. 0	D. 1	I. 1	D. 1	M. 4	I. 3	M. 5	I. 2	G. 1	G. 1	G. 1	G. 1
D. 1	I. 1	D. 1	I. 1	I. 3	M. 3	I. 2	M. 2	M. 2	M. 2	M. 2	M. 2
I. 1	D. 1	I. 1	D. 1	M. 3		M. 4	M. 4	G. 1	G. 1	G. 1	G. 1
D. 1	I. 1	D. 1	I. 1					M. 2	M. 2	M. 2	M. 2
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 2	G. 2	G. 2	G. 2
D. 1	I. 1	D. 1	I. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
I. 1	D. 2	I. 1	D. 2	I. 2	I. 2	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 2	I. 1	D. 2	I. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
I. 1	D. 2	I. 1	D. 2	I. 1	I. 1	I. 2	I. 2	G. 1	G. 1	G. 1	G. 1
D. 2	I. 1	D. 2	I. 1	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
I. 1	D. 2	I. 1	D. 2	I. 1	I. 1	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 2	I. 2	D. 2	I. 2	M. 3	M. 3	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 1	D. 3	I. 2	D. 3	I. 1	I. 1	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 3	I. 1	D. 3	I. 1	M. 2	M. 2	M. 3	M. 3	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 2	I. 2	G. 2	G. 2	G. 2	G. 2
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2	M. 2
I. 1	D. 4	I. 1	D. 4	I. 1	I. 1	I. 1	I. 1	G. 3	G. 3	G. 3	G. 3
D. 4	I. 1	D. 4	I. 1	M. 2	M. 2	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 2	G. 2	G. 2	G. 2
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 2	M. 2	M. 3	M. 3	M. 3	M. 3
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 1	I. 1	D. 1	I. 1	M. 4	M. 4	M. 4	M. 4	M. 3	M. 3	M. 3	M. 3
I. 1	D. 6	I. 1	D. 6	I. 1	I. 1	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 6	I. 1	D. 6	I. 1	M. 1	M. 1	M. 1	M. 1	M. 2	M. 2	M. 2	M. 2
I. 1	D. 2	I. 1	D. 2	I. 2	I. 2	I. 2	I. 2	G. 3	G. 3	G. 3	G. 3
D. 2	I. 1	D. 2	I. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 6	G. 6	G. 6	G. 6
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 1	I. 1	I. 1	I. 1	G. 3	G. 3	G. 3	G. 3
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 2	I. 2	I. 1	I. 1	G. 1	G. 1	G. 1	G. 1
D. 1	I. 1	D. 1	I. 1	M. 2	M. 2	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 1	D. 1	I. 1	D. 1	I. 2	I. 2	I. 2	I. 2	G. 1	G. 1	G. 1	G. 1
D. 1	I. 2	D. 1	I. 2	M. 2	M. 2	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 2	D. 1	I. 2	D. 1	I. 2	I. 2	I. 2	I. 2	G. 1	G. 1	G. 2	G. 2
D. 1	I. 1	D. 1	I. 1	M. 1	M. 1	M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
I. 1	I. 1	I. 2	I. 1	I. 2	I. 2	I. 4	I. 4	G. 1	G. 1	G. 1	G. 1

D. 1	D. 0	x	M. 4	M. 4	M. 1	M. 1
I. 2	I. 2		I. 2	I. 2	G. 2	G. 2
D. 3	D. 3		M. 2	M. 1	M. 2	M. 2
I. 1	I. 1		I. 1	I. 1	G. 4	G. 4
D. 2	D. 2		M. 2	M. 3	====	====
I. 1	I. 1		I. 1	I. 1	G. 1	G. 1
D. 2	D. 2		M. 1	M. 2	M. 1	M. 1
I. 1	I. 1		I. 1	I. 1	G. 6	G. 6
D. 3	D. 3		M. 1	M. 1	M. 2	M. 2
I. 2	I. 1	x	I. 1	I. 2	G. 1	G. 1
D. 2	D. 2		M. 2	M. 2	M. 1	M. 1
====	====		====	====	G. 1	G. 1
I. 1	I. 1		M. 0	M. 0	M. 1	M. 1
D. 2	D. 1	x	I. 2	I. 2	G.14	G.14
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 3	D. 3		I. 2	I. 2	G. 1	G. 1
I. 2	I. 2		M. 1	M. 2	M. 1	M. 1
D. 3	D. 3		I. 1	I. 1	G. 3	G. 3
I. 2	I. 2		M. 2	M. 2	M. 1	M. 1
D. 2	D. 1	x	I. 1	I. 1	G. 1	G. 1
I. 1	I. 2	x	M. 2	M. 2	M. 1	M. 1
D. 1	D. 1		I. 2	I. 2	G. 1	G. 1
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 1	D. 1		I. 4	I. 4	G. 1	G. 1
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 2	D. 2		I. 1	I. 1	G. 1	G. 1
I. 0	I. 0		M. 1	M. 1	M. 1	M. 1
D. 1	D. 1		I. 2	I. 2	G. 1	G. 1
I. 1	I. 0	x	M. 1	M. 1	M. 1	M. 1
D. 4	D. 2	x	I. 1	I. 1	G. 3	G. 3
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 1	D. 1		I. 3	I. 4	G. 8	G. 7
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 3	D. 2	x	I. 1	I. 1	G. 2	G. 2
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 4	D. 3	x	I. 1	I. 1	G. 2	G. 2
I. 2	I. 2		M. 2	M. 2	M. 1	M. 1
D. 1	D. 1		I. 1	I. 1	G. 1	G. 1
I. 1	I. 1		M. 2	M. 2	M. 2	M. 2
D. 1	D. 1		I. 2	I. 3	G. 2	G. 2
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 1	D. 1		I. 2	I. 3	G. 4	G. 4
I. 1	I. 1		M. 1	M. 1	M. 1	M. 1
D. 3	D. 3		I. 1	I. 2	G. 8	G. 9
I. 1	I. 1		M. 2	M. 2	M. 1	M. 1
D. 2	D. 2		I. 1	I. 1	G. 2	G. 2
====	====		M. 2	M. 2	M. 1	M. 1
I. 2	I. 2		I. 3	I. 5	G. 2	G. 2
D. 1	D. 1		M. 1	M. 1	M. 1	M. 1
I. 2	I. 2		I. 1	I. 1	G. 3	G. 3
D. 1	D. 1		M. 1	M. 1	M. 1	M. 1
I. 1	I. 1		I. 1	I. 1	G. 1	G. 1
D. 1	D. 1		M. 2	M. 4	M. 3	M. 2
I. 1	I. 1		I. 1	I. 2	G. 1	G. 1
D. 1	D. 1		M. 1	M. 1	M. 1	M. 1
I. 1	I. 1		====	====	G. 3	G. 3
D. 1	D. 1		M. 0	M. 0	M. 1	M. 1
I. 1	I. 1		I. 1	I. 1	G. 1	G. 1

D. 2	D. 2	M. 1	M. 1	M. 1	M. 1
I. 1	I. 1	I. 2	I. 3 x	G. 2	G. 2
D. 1	D. 1	M. 1	M. 1	M. 1	M. 1
I. 1	I. 0 x	I. 1	I. 1	G. 1	G. 1
D. 3	D. 3	M. 2	M. 3 x	M. 1	M. 1
I. 1	I. 1	I. 1	I. 1	G. 2	G. 1 x
D.11	D.10 x	M. 3	M. 4 x	M. 1	M. 1
I. 1	I. 1	I. 1	I. 1	G. 1	G. 1
D. 1	D. 1	====	====	M. 1	M. 1
I. 1	I. 1	I. 3	I. 4 x	G. 2	G. 2
D. 1	D. 1	M. 3	M. 3	M. 4	M. 2 x
I. 1	I. 1	I. 2	I. 2	G. 2	G. 2
D. 5	D. 5	M. 2	M. 4 x	M. 1	M. 1
I. 1	I. 1	I. 2	I. 2	G. 1	G. 2 x
D. 1	D. 1	M. 2	M. 2	M. 1	M. 1
I. 1	I. 1	I. 1	I. 1	G. 4	G. 5 x
D. 2	D. 2	M. 1	M. 1	M. 1	M. 1
I. 1	I. 1	I. 2	I. 2	G. 6	G. 6
D. 1	D. 1	M. 1	M. 2 x	M. 1	M. 1
I. 1	I. 1	I. 5	I. 5	G. 1	G. 1
D. 1	D. 1	M. 1	M. 1	M. 1	M. 1
I. 2	I. 2	I. 2	I. 4 x	G.12	G.11 x
D. 4	D. 5 x	M. 1	M. 2 x	M. 1	M. 2 x
I. 1	I. 1	I. 2	I. 2	G. 2	G. 2
D. 2	D. 2	M. 1	M. 1	M. 1	M. 1
I. 1	I. 1	I. 3	I. 3	G. 3	G. 3
D. 1	D. 0 x	M. 1	M. 1	M. 1	M. 1
I. 3	I. 3	I. 1	I. 2 x	G. 3	G. 3
D. 3	D. 3	M. 1	M. 1	M. 1	M. 1
I. 1	I, 1	I. 3	I. 3	G. 3	G. 3
D. 1	D. 0 x	M. 1	M. 1	M. 2	M. 2
M. 1	I. 0 x	I. 1	I. 1	G. 2	G. 3 x
D. 3	D. 3	M. 1	M. 2 x	M. 1	M. 1
I. 2	I. 1 x	I. 1	I. 1	G. 1	G. 2 x
D. 3	D. 3	M. 1	M. 1	M. 1	M. 1
====	====	I. 2	I. 2	G. 1	G. 1
		M. 2	M. 2	M. 1	M. 1
		I. 1	I. 1	G. 1	G. 1
		M. 1	M. 1	M. 1	M. 1
		I. 1	I. 1	G. 4	G. 4
		M. 1	M. 1	M. 1	M. 1
		I. 2	I. 2	G. 3	G. 3
		M. 1	M. 1	M. 1	M. 1
		I. 1	I. 2 x	G. 2	G. 2
		M. 3	M. 4 x	M. 2	M. 2
		I. 1	I. 1	G. 8	G. 8
		M. 1	M. 1	M. 1	M. 1
		I. 2	I. 2	G. 1	G. 1
		M. 1	M. 1	M. 1	M. 1
		====	====	G. 1	G. 1
				M. 1	M. 1
				G.13	G.14 x
				M. 1	M. 1
				G. 1	G. 1
				M. 1	M. 1
				G. 3	G. 3
				====	====

Speaker Turns= 140
 Disagreements= 20
 Agreements = 120
 Reliability = 85.71%

Speaker Turns = 151
 Disagreements = 37
 Agreements = 114
 Reliability = 75.5%

Speaker Turns = 160 -->
 Disagreements = 14
 Agreements = 146
 Reliability = 91.25%

4. Becky7
34 months

5. Nerys6
31 months

6. Emyr5
28 months

4/

SHEILA		JEAN		SHEILA		JEAN		SHEILA		JEAN	
M. 3		M. 3		N. 0		N. 0		E. 0		E. 0	
B. 1		B. 1		M. 1		M. 1		M. 3		M. 3	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 2	x	M. 1		M. 1		M. 2		M. 3	x
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 2		B. 2		M. 1		M. 2	x	M. 1		M. 1	
M. 3		M. 4	x	N. 1		N. 0	x	E. 2		E. 2	
B. 1		B. 1		M. 1		M. 1		M. 2		M. 3	x
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 1		M. 1	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 4	x	M. 2		M. 2		M. 2		M. 2	
M. 1		M. 2	x	N. 1		N. 1		E. 1		E. 2	x
B. 1		B. 1		M. 1		M. 1		M. 1		M. 1	
M. 4		M. 5	x	N. 1		N. 1		E. 1		E. 1	
M. --	--			M. 1		M. 1		M. 3		M. 2	x
B. 1		B. 1		N. 1		N. 1		E. 1		E. 1	
M. 1		M. 2	x	M. 1		M. 1		M. 1		M. 1	
B. 1		B. 1		N. 2		N. 2		E. 1		E. 1	
M. 2		M. 3	x	M. 1		M. 1		M. 1		M. 1	
B. 1		B. 1		N. 1		N. 1		E. 2		E. 2	
M. 1		M. 1		M. 2		M. 2		M. 1		M. 1	
B. 1		B. 1		N. 1		N. 1		E. 2		E. 2	
M. 1		M. 1		M. 1		M. 1		M. 2		M. 2	
B. 2		B. 3	x	N. 1		N. x		E. 4		E. 4	
M. 4		M. 4		M. 1		M. 1		M. 3		M. 4	x
B. 1		B. 2	x	N. 2		N. 2		E. 1		E. 1	
M. 1		M. 1		M. 1		M. 1		M. 4		M. 4	
B. 1		B. 2		N. 1		N. 2	x	E. 1		E. 1	
M. 3		M. 3		M. 7		M. 8	x	M. 1		M. 2	x
B. 1		B. 1		N. 0		N. 0		E. 1		E. 1	
=====											
B. 0		B. 0		M. 0		M. 0		M. 1		M. 1	
M. 5		M. 5		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 5		M. 5	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 2		M. 2		M. 1		M. 1	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 2		M. 2	
M. 2		M. 2		N. 1		N. 1		E. =====		E. =====	
B. 1		B. 1		M. 2		M. 2		M. 0		M. 3	x
M. 1		M. 1		N. 2		N. 2		E. 0		E. 1	x
B. 1		B. 1		M. 1		M. 1		M. 3		M. 3	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 6		M. 6	
M. 1		M. 1		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 2		M. 2		M. 4		M. 4	
M. 1		M. 1		N. 2		N. 2		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 6		M. 6	
M. 1		M. 1		N. 2		N. 2		E. 1		E. 1	
B. 1		B. 1		M. 2		M. 2		M. 1		M. 1	
M. 1		M. 1		N. 2		N. 2		E. 1		E. 1	
B. 3		B. 4	x	M. 2		M. 2		M. 1		M. 1	
M. 3		M. 3		N. 1		N. 1		E. 1		E. 1	
B. 1		B. 1		M. 1		M. 1		M. 1		M. 1	
				N. 1		N. 1		E. 1		E. 1	

M. 1	M. 1	M. 1	M. 2	M. 2	M. 1
B. 1	B. 2 x	N. 2	N. 2	E. 2	E. 2 x
M. 3	M. 3	M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 2	M. 2
B. 1	B. 1	N. 2	N. 2	E. 1	E. 1
M. 1	M. 1	M. 1	M. 2 x	M. 1	M. 1
B. 1	B. 1	N. 2	N. 2	E. 2	E. 2
M. 1	M. 2 x	M. 1	M. 1	M. 3	M. 2 x
B. 2	B. 2	N. 1	N. 1	E. 2	E. 2
M. 1	M. 1	M. 1	M. 1	M. 2	M. 2
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	=====	M. 3	M. 3	M. 3
B. 1	B. 1	N. 1	N. 1	E. 2	E. 2
M. 3	M. 3	M. 1	M. 1	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 2 x	M. 1	M. 1
B. 1	B. 1	N. 2	N. 2	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 2	M. 2
B. 3	B. 4 x	N. 1	N. 1	E. 2	E. 2
M. 2	M. 2	M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 2	N. 2	E. 2	E. 2
M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
B. 1	B. 2 x	N. 1	N. 1	E. =====	E. =====
M. 4	M. 4	M. 2	M. 3 x	M. 4	M. 4
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 2	M. 3 x	M. 1	M. 1	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1	E. 1	E. 1
M. 2	M. 2	M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 2	E. 2
M. 2	M. 2	M. 3	M. 5 x	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 3	M. 3
B. 1	B. 2 x	N. 2	N. 2	E. 1	E. 1
M. 1	M. 1	=====	M. 16	M. 16	M. 20 x
B. 2	B. 1	N. 0	N. 0	E. 1	E. 1
=====		M. 1	M. 1	M. 5	M. 5
B. 1	B. 1	N. 2	N. 2	E. 1	E. 1
M. 3	M. 3	M. 2	M. 2	M. 2	M. 2
B. 1	B. 3 x	N. 1	N. 1	E. 1	E. 1
M. 5	M. 6 x	M. 1	M. 1	M. 2	M. 2
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 3	M. 3	M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1	E. 1	E. 1
M. 1	M. 1	M. 1	M. 1	M. 2	M. 2
B. 3	B. 4 x	N. 1	N. 1	E. 4	E. 4
M. 2	M. 2	M. 2	M. 2	M. 2	M. 2
B. 1	B. 1	N. 5	N. 5	E. 1	E. 1
M. 2	M. 2	M. 1	M. 1	M. 2	M. 2
B. 2	B. 2	N. 3	N. 3	E. 1	E. 2
M. 1	M. 1	M. 2	M. 2	M. 5	M. 6 x
B. 1	B. 2 x	N. 1	N. 1	E. 1	E. 1

M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 2
M. 3	M. 3	=====	
B. 2	B. 2	N. 0	N. 0
M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 2	M. 2	M. 3	M. 3
B. 2	B. 2	N. 1	N. 1
M. 2	M. 4	M. 2	M. 3
B. 2	B. 2	N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1
M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 2
=====		M. 4	M. 4
B. 1	B. 1	N. 1	N. 1
M. 3	M. 4	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1
M. 2	M. 4	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 1	M. 1	M. 3	M. 4
B. 3	B, 4	N. 1	N. 1
M. 1	M. 1	M. 3	M. 3
B. 5	B. 7	N. 1	N. 1
M. 1	M. 1	M. 2	M. 2
B. 3	B. 3	N. 1	N. 1
M. 1	M. 1	M. 2	M. 2
B. 1	B. 1	N. 1	N. 1
M. 2	M. 3	M. 1	M. 1
B. 3	B. 3	N. 1	N. 1
M. 1	M. 2	M. 6	M. 8
B. 1	B. 1	N. 1	N. 1
M. 2	M. 3	M. 3	M. 3
B. 1	B. 1	N. 1	N. 1
M. 2	M. 5	M. 1	M. 1
B. 1	B. 0	N. 1	N. 1
M. 1	M. 1	M. 2	M. 2
B. 1	B. 1	N. 1	N. 1
M. 4	M. 4	M. 2	M. 2
B. 9	B.10	N. 1	N. 1
M.10	M.10	M. 1	M. 1
B. 2	B. 2	N. 1	N. 1
M. 2	M. 2	M. 2	M. 2
B. 2	B. 3	N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
=====		N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 1	M. 1	M. 1	M. 1
B. 2	B. 2	N. 2	N. 2

M. 3	M. 3
E. 1	E. 1
M. 1	M. 1
E. 1	E. 1
M. 2	M. 2
E. 1	E. 2
M. 2	M. 2
E. 2	E. 2
M. 2	M. 2
E. 1	E. 1
M. 4	M. 3
E. 2	E. 2
M. 3	M. 2
E. 1	E. 1
M. 1	M. 1
E. 1	E. 1
=====	

Speaker Turns = 125
Disagreements = 16
Agreements = 109

Reliability = 87.2%

M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 2	M. 2	M. 1	M. 1
B. 1	B. 2 x	N. 1	N. 1
M. 3	M. 3	M. 1	M. 1
B. 1	B. 0 x	N. 1	N. 2 x
M. 1	M. 1	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 2	M. 2	M. 1	M. 1
B. 1	B. 1	N. 1	N. 1
M. 3	M. 4 x	M. 2	M. 2
B. 1	B. 1	N. 1	N. 1
M. 1	M. 1	M. 9	M. 9

=====

Speaker Turns = 179
Disagreements = 16
Agreements = 163

Reliability = 91.06%

M. 1	M. 1
B. 1	B. 1
M. 1	M. 1
B. 1	B. 1
M. 4	M. 5 x
B. 1	B. 1
M. 1	M. 1
B. 2	B. 2
M. 3	M. 4 x
B. 9	B. 9
M. 1	M. 2 x
B. 1	B. 2 x
M. 1	M. 1
B. 1	B. 1
M. 2	M. 3 x
B. 1	B. 1
M. 1	M. 2 x
B. 1	B. 2 x
M. 1	M. 1
B. 1	B. 1
M. 1	M. 1
B. 2	B. 2

=====

Total Speaker Turns = 963
Total Disagreements = 144
Total Agreements = 819

Overall Inter-Rater Reliability = 85.0%

M. 2	M. 2
B. 1	B. 1
M. 3	M. 3
B. 1	B. 1
M. 2	M. 2
B. 1	B. 1
M. 1	M. 1
B. 1	B. 1
M. 1	M. 1
B. 3	B. 3

=====

Speaker Turns = 208
Disagreements = 41
Agreements = 167
Reliability = 80.29%

Appendix VII: ACR Questionnaire

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Please refer to the original text to see this material.

APPENDICS VIIIA : HOLIADUR II (Cyfeithiad Cymraeg)

HOLIADUR DATBLYGIAD IAITH (Q.II)

MAE'R HOLIADUR HWN AM EICH PLENTYN SYDD BRON YN DAIR OED

Ysgrifennwch M os mai chi yw ei fam/mam

neu T os mai chi yw ei dad/thad

CWESTIWN 1

Ar hyn o bryd pa iaith
a ddefnyddiwch:

gyda'ch plentyn tair oed

gyda phlant hyn

gyda phlant iau

gyda ffrindiau agos

gyda'ch cymdogion

gyda'ch rhieni

gyda siopwyr

gyda phobl yn y gwaith

gyda phobl yn yr Eglwys neu'r
Capel

gyda'ch cymar

CYMRAEG BRON O HYD	CYMRAEG GAN AMLAF	TUA HANNER/ HANNER	SAESNEG GAN AMLAF	SAESNEG BRON O HYD

QUESTION 2

Pa iaith sydd well gennych:

ar gyfer darllen

ar gyfer meddwl

ar gyfer gwyllo'r teledu

ar gyfer darllen i'ch plentyn

ar gyfer siarad gyda'ch plentyn

ar gyfer gwyllo'r teledu
gyda'ch plentyn

HOLIADUR DATBLYGIAD IAITH (O.II)

CWESTIWN 3

Pa iaith mae eich plentyn yn ei chlywed ?

CYMRAEG BRON O HYD	CYMRAEG GAN AMLAF	TUA HANNER HANNER	SAESNEG GAN AMLAF	SAESNEG BRON O HYD

gennyh chi

gan ei riant/rhiant arall

gan ei ffrindiau

gan eich rhieni CHI

gan ei daid/thaid a nain arall

gan frodyr a chwiorydd

CWESTIWN 4

Pa iaith (ieithoedd) mae eich plentyn yn ei :

CYMRAEG YN UNIG	CYMRAEG A RHAI GEIRIAU SAESNEG	HANNER CYMRAEG HANNER SAESNEG	SAESNEG A RHAI GEIRIAU CYMRAEG	SAESNEG YN UNIG

defnyddio

deall

CWESTIWN 5

A ydych yn hapus gyda'r modd y mae iaith eich plentyn YDWYF___ NAC YDWYF___ yn datblygu?

Os YDYCH, beth yn eich tyb chi sydd wedi ei helpu hi neu o ? _____

Os NAD YDYCH beth yn eich tyb chi sydd wedi ei rhwystro hi/rwystro o ? _____

HOLIADUR DATBLYGIAD IAITH

ER MWYN FY HELPU I DDOSBARTHU EICH ATEBION, CEIR YCHYDIG GWESTIYNAU AM EICH TEULU A'CH PLENTYN TAIR OED.

Beth yw ei enw/henw ? _____

Beth yw ei ddyddiad/dyddiad geni ? _____

Al chi yw ei fam/mam ? _____

neu ei dad/thad ? _____

A yw eich plentyn yn byw gyda chi ? YDYW _____ NAC YDYW _____

A yw ei riant/rhiant arall yn byw gyda chi? YDYW _____ NAC YDYW _____

A oes yna blant iau yn awr yn eich ty ? YDYW _____ NAC YDYW _____

A yw eich plentyn yn mynd i :

Grwp Mam a Phlentyn YDYW _____ NAC YDYW _____ PA MOR AML _____

Ysgol Feithrin neu Feithrinfa YDYW _____ NAC YDYW _____ PA MOR AML _____

Gwarchodwr Plant YDYW _____ NAC YDYW _____ PA MOR AML _____

Unrhyw un arall sy'n gofalu amdano/amdani YDYW _____ NAC YDYW _____ PA MOR AML _____

Pa iaith a ddefnyddir ganddynt ?

CYMRAEG GAN AMLAF	HANNER CYMR- AEG HANNER SAESNEG	SAESNEG GAN FWYAF

Grwp Mam a Phlentyn ?

Ysgol Feithrin neu Feithrinfa ?

Gwarchodwr Plant ?

Unrhyw un arall sy'n gofalu amdano/amdani

A ydych chi'n gweithio amser llawn? YDWYF _____ NAC YDWYF _____

rhan amser ? YDWYF _____ NAC YDWYF _____

YCHWANEGWCH UNRHYW SYLWADAU A ALLAI FOD O DDIDDORDEB YN EICH TYB CHI.
DIOLCH YN FAWR IAWN AM EICH CYMORTH.

APPENDIX VIIIb : QUESTIONNAIRE II (English Version)

LANGUAGE DEVELOPMENT QUESTIONNAIRE (Q.II)

THIS QUESTIONNAIRE IS ABOUT YOUR CHILD WHO IS NEARLY THREE

Please write M if you are his/her Mother
or F if you are his/her Father

QUESTION 1

At present which language do you use :

- with your three year old
- with older children
- with younger children
- with close friends
- with neighbours
- with your parents
- with shopkeepers
- with people at work
- with people in church or chapel
- with your partner

ALMOST ALWAYS WELSH	MOSTLY WELSH	ABOUT HALF & HALF	MOSTLY ENGLISH	ALWAYS ENGLISH

QUESTION 2

Which language do you prefer:

- for reading
- for thinking
- for watching television
- for reading to your child
- for talking to your child
- for watching TV with your child

LANGUAGE DEVELOPMENT QUESTIONNAIRE

QUESTION 3

Which language does your child hear :

from you

from his/her other Parent

from his/her playmates

from YOUR Parents

from his/her other Grandparents

from Brothers and Sisters

ALMOST ALWAYS WELSH	MOSTLY WELSH	ABOUT HALF & HALF	MOSTLY ENGLISH	ALMOST ALWAYS ENGLISH

QUESTION 4

What language(s) does your child :

use

understand

ONLY ENGLISH	WELSH & SOME ENGLISH WORDS	HALF WELSH & HALF ENGLISH	ENGLISH & SOME WELSH WORDS	ONLY ENGLISH

QUESTION 5

Are you happy with the way your child's language is developing? YES___ NO___

If YES, what do you think has helped him or her? _____

If NO, what do you think has hindered him or her? _____

LANGUAGE DEVELOPMENT QUESTIONNAIRE

TO HELP ME CLASSIFY YOUR ANSWERS, THERE ARE A FEW QUESTIONS ABOUT YOUR FAMILY AND YOUR THREE YEAR OLD.

What is his/her name? _____

What is his/her date of birth? _____

Are you his/her Mother? _____

or his/her Father? _____

Does your child live with you? YES _____ NO _____

Does his/her other parent live with you? YES _____ NO _____

Are there now younger children in your house? YES _____ NO _____

Does your child go to :

a Mother and Toddler Group? YES _____ NO _____ HOW OFTEN _____

a Playgroup or a Nursery ? YES _____ NO _____ HOW OFTEN _____

a Childminder? YES _____ NO _____ HOW OFTEN _____

anyone else who looks after him/her? YES _____ NO _____ HOW OFTEN _____

What language do they use?

Mother & Toddler Group?

Playgroup or Nursery?

Childminder?

Anyone else who looks after him/her?

MOSTLY WELSH	HALF WELSH & HALF ENGLISH	MOSTLY ENGLISH

Do you work full time? YES _____ NO _____

part time? YES _____ NO _____

PLEASE ADD ANY COMMENTS YOU THINK MIGHT BE INTERESTING.
THANK YOU VERY MUCH FOR YOUR HELP.

APPENDIX IX : TABLES OF LANGUAGES USED

i) By each subject at each session

a) NERYS- WW

		I	II	III	IV	V	VI	VII	VIII
MU	%W	79	80	73	75	81	83	82	85
	%C	16	18	24	23	17	15	17	15
	%E	5	2	3	2	2	2	1	0
MW	%W	70	69	80	76	85	88	87	91
	%C	26	25	15	19	13	10	9	8
	%E	4	6	5	5	2	2	4	1
ChU	%W	50	15	47	42	64	67	81	83
	%C	50	85	36	36	32	29	16	13
	%E	0	0	17	22	4	4	3	4
ChW	%W	60	45	50	35	65	70	83	86
	%C	40	55	34	38	30	27	11	9
	%E	0	0	16	27	5	3	6	5

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

b) IWAN - WW

		I	II	III	IV	V	VI	VII	VIII
MU	%W	88	70	87	87	88	90	92	95
	%C	11	18	12	10	12	10	6	5
	%E	1	12	1	3	1	0	2	0
MW	%W	89	71	82	84	86	89	92	89
	%C	11	14	17	15	13	10	6	11
	%E	0	15	1	1	1	1	2	0
ChU	%W	24	53	85	85	82	86	86	92
	%C	76	47	14	14	16	12	7	8
	%E	0	0	1	1	2	2	7	0
ChW	%W	14	35	77	79	82	81	87	87
	%C	86	65	17	15	12	17	7	13
	%E	0	0	6	6	6	2	6	0

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

c) BECKY WM

		I	II	III	IV	V	VI	VII	VIII
MU	%W	78	66	65	88	81	76	76	75
	%C	14	12	24	10	15	18	18	17
	%E	10	22	11	2	4	6	6	8
MW	%W	73	52	71	83	81	76	73	79
	%C	18	21	15	15	15	15	17	14
	%E	9	27	14	2	4	9	10	7
ChU	%W	50	23	71	73	79	86	81	82
	%C	37	74	25	23	19	12	16	14
	%E	13	3	4	4	2	2	3	4
ChW	%W	43	35	73	73	78	86	74	79
	%C	44	64	25	21	20	11	20	15
	%E	13	4	2	6	2	3	6	6

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

d) EMYR WM

		I	II	III	IV	V	VI	VII	VIII
MU	%W	79	83	75	87	85	88	86	83
	%C	17	11	14	9	8	10	12	14
	%E	4	6	11	4	7	2	2	3
MW	%W	70	76	72	82	85	86	85	79
	%C	25	19	14	15	7	9	14	18
	%E	5	5	15	3	8	5	1	3
ChU	%W	26	53	46	74	85	85	80	77
	%C	74	38	47	23	13	15	15	18
	%E	0	9	7	3	2	0	5	5
ChW	%W	37	55	51	70	83	80	81	75
	%C	63	36	44	26	12	15	14	20
	%E	0	9	5	4	5	5	5	5

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

e) GARETH MM

		I	II	III	IV	V	VI	VII	VIII
MU	%W	79	-	90	82	90	76	63	64
	%C	14	-	5	15	9	12	12	4
	%E	9	-	5	3	1	12	25	32
MW	%W	63	-	85	81	88	74	63	67
	%C	25	-	9	15	10	15	12	6
	%E	12	-	6	4	2	11	25	27
ChU	%W	42	-	79	89	84	50	56	43
	%C	50	-	13	9	15	12	6	5
	%E	8	-	8	2	1	38	38	52
ChW	%W	35	-	73	83	70	54	53	46
	%C	57	-	17	11	16	12	11	8
	%E	8	-	10	6	5	34	36	46

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

f) DAVID MM

		I	II	III	IV	V	VI	VII	VIII
MU	%W	1	-	-	0	0	0	0	0
	%C	4	-	-	3	8	2	5	4
	%E	95	-	-	97	92	98	95	96
MW	%W	2	-	-	0	1	0	0	0
	%C	8	-	-	11	11	6	7	6
	%E	90	-	-	89	88	94	93	94
ChU	%W	14	-	-	0	2	0	0	43
	%C	14	-	-	17	34	20	15	15
	%E	72	-	-	83	64	80	85	85
ChW	%W	17	-	-	1	1	0	0	0
	%C	30	-	-	23	27	17	14	8
	%E	70	-	-	76	72	83	86	92

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

g) NIA WF

		I	II	III	IV	V	VI	VII	VIII
MU	%W	21	3	24	0	0	4	0	0
	%C	23	9	17	3	2	4	8	3
	%E	56	88	59	97	98	92	92	97
MW	%W	21	1	20	1	0	2	0	0
	%C	15	15	8	7	6	6	6	6
	%E	64	84	72	92	94	92	94	94
ChU	%W	19	2	3	1	0	0	0	0
	%C	33	22	24	14	3	19	4	16
	%E	48	76	73	85	97	81	96	84
ChW	%W	17	2	2	1	0	0	0	0
	%C	31	21	23	16	6	12	10	12
	%E	52	77	75	83	94	88	90	88

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

h) MATTHEW WF

		I	II	III	IV	V	VI	VII	VIII
MU	%W	0	0	6	3	0	2	6	2
	%C	16	18	14	6	4	5	9	9
	%E	84	82	80	91	96	93	85	89
MW	%W	0	0	5	2	0	2	2	2
	%C	16	13	9	14	7	9	8	9
	%E	84	87	86	84	93	89	90	89
ChU	%W	0	0	6	4	0	1	10	0
	%C	56	41	41	27	21	14	10	9
	%E	44	59	53	69	79	85	80	91
ChW	%W	0	0	4	4	0	2	8	1
	%C	57	32	47	26	19	18	11	5
	%E	43	68	49	70	81	80	81	94

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

j) LLYWELA EE

		I	II	III	IV	V	VI	VII	VIII
MU	%W	0	0	0	0	1	0	-	0
	%C	1	5	9	6	5	4	-	1
	%E	99	95	91	94	94	96	-	99
MW	%W	0	0	0	0	0	0	-	0
	%C	4	5	9	8	8	5	-	6
	%E	96	95	91	92	92	95	-	94
ChU	%W	0	0	0	0	0	0	-	0
	%C	25	9	21	5	5	9	-	15
	%E	75	91	79	95	95	91	-	85
ChW	%W	0	0	0	0	0	0	-	0
	%C	18	13	16	6	7	7	-	4
	%E	82	87	84	94	93	93	-	96

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

k) MICHAEL EE

		I	II	III	IV	V	VI	VII	VIII
MU	%W	0	0	0	0	0	0	0	-
	%C	3	6	6	5	15	5	6	-
	%E	97	94	94	95	85	95	94	-
MW	%W	0	0	0	0	0	0	0	-
	%C	4	3	10	11	8	5	3	-
	%E	96	97	90	89	92	95	97	-
ChU	%W	0	0	0	0	0	0	0	-
	%C	64	31	31	14	12	6	6	-
	%E	36	69	69	86	88	94	94	-
ChW	%W	0	0	0	0	0	0	0	-
	%C	33	32	23	21	9	6	9	-
	%E	67	68	77	79	91	94	91	-

MU= Mother Utterances
ChU= Child Utterances

MW= Mother Words
ChW= Child Words

APPENDIX IXb) : Tables of Languages Used by All Subjects at each SESSION

SESSION I; PERCENTAGES OF LANGUAGE USED

		NER	IWA	BEC	EMY	GAR	DAV	NIA	MAT	LLY	NIC
		WV	WV	WM	WM	MM	MM	WP	WP	EE	EE
MU	UV	79	88	78	79	77	1	21	0	0	0
	UC	16	11	14	17	14	4	23	16	1	3
	UE	5	1	10	4	9	95	56	84	99	97
MV	UV	70	89	73	70	63	2	21	0	0	0
	UC	26	11	18	25	25	8	15	16	4	4
	UE	4	0	9	5	12	90	64	84	96	96
ChU	UV	50	24	50	26	42	14	19	0	0	0
	UC	50	76	37	74	50	14	33	56	25	64
	UE	0	0	13	0	8	72	48	44	75	36
ChV	UV	60	14	43	37	35	17	17	0	0	0
	UC	40	86	44	63	57	13	31	57	18	33
	UE	0	0	13	0	8	70	52	43	82	67

MU= Mother Utterance MV= Mother Words
 ChU= Child Utterance ChV= Child Words

SESSION III; PERCENTAGES OF LANGUAGE USED

		NER	IWA	BEC	EMY	GAR	DAV	NIA	MAT	LLY	NIC
		WV	WV	WM	WM	MM	MM	WP	WP	EE	EE
MU	UV	73	87	65	75	90	-	24	6	0	0
	UC	24	12	24	14	9	-	17	14	9	4
	UE	3	1	11	11	8	-	50	80	91	94
MV	UV	80	82	71	72	85	-	20	9	0	0
	UC	15	17	15	14	9	-	8	9	9	10
	UE	5	1	14	15	6	-	72	86	91	90
ChU	UV	47	85	71	46	79	-	3	6	0	0
	UC	36	14	25	47	13	-	24	41	21	31
	UE	17	1	4	7	8	-	73	53	79	69
ChV	UV	50	77	73	81	73	-	3	4	0	0
	UC	34	17	25	44	17	-	23	47	16	23
	UE	16	6	2	9	10	-	75	49	84	77

MU= Mother Utterance MV= Mother Words
 ChU= Child Utterance ChV= Child Words

SESSION II; PERCENTAGES OF LANGUAGE USED

		NER	IWA	BEC	EMY	GAR	DAV	NIA	MAT	LLY	NIC
		WV	WV	WM	WM	MM	MM	WP	WP	EE	EE
MU	UV	80	70	66	83	-	-	3	0	0	0
	UC	18	18	12	11	-	-	9	18	5	4
	UE	2	12	22	6	-	-	88	82	95	96
MV	UV	69	71	52	76	-	-	1	0	0	0
	UC	25	14	21	19	-	-	15	13	5	3
	UE	6	15	27	5	-	-	84	87	95	97
ChU	UV	15	53	23	53	-	-	2	0	0	0
	UC	85	47	74	38	-	-	22	41	9	31
	UE	0	0	3	9	-	-	74	59	91	69
ChV	UV	45	35	35	55	-	-	2	0	0	0
	UC	55	65	61	34	-	-	21	32	13	32
	UE	0	0	4	9	-	-	77	68	87	68

MU= Mother Utterance MV= Mother Words
 ChU= Child Utterance ChV= Child Words

SESSION IV; PERCENTAGES OF LANGUAGE USED

		NER	IWA	BEC	EMY	GAR	DAV	NIA	MAT	LLY	NIC
		WV	WV	WM	WM	MM	MM	WP	WP	EE	EE
MU	UV	75	87	88	87	82	0	0	3	0	0
	UC	23	10	10	9	19	3	3	6	6	5
	UE	2	3	2	4	3	97	97	91	94	95
MV	UV	76	84	83	82	81	0	1	2	0	0
	UC	19	15	15	15	15	11	7	14	0	11
	UE	5	1	2	3	4	89	92	84	92	89
ChU	UV	42	85	73	74	89	0	1	4	0	0
	UC	36	14	23	23	9	17	14	27	5	14
	UE	22	1	4	3	2	83	85	69	95	84
ChV	UV	35	79	73	70	83	1	1	4	0	0
	UC	38	15	21	24	11	23	16	26	6	21
	UE	27	6	6	4	6	74	83	70	94	79

MU= Mother Utterance MV= Mother Words
 ChU= Child Utterance ChV= Child Words

SESSION V; PERCENTAGES OF LANGUAGE USED

		NER	IWA	DEC	ENT	GAR	DAV	NIA	MAY	LLY	NIC
		WW	WW	WH	WH	WH	WH	WF	WF	EE	EE
NW	NW	81	88	81	85	90	0	0	0	1	0
	NW UC	17	12	15	8	9	8	2	4	5	15
	NE	2	1	4	7	1	92	98	96	94	85
NW	NW	85	86	81	85	88	1	0	0	0	0
	NW UC	13	13	15	7	10	11	6	7	8	8
	NE	2	1	4	8	2	88	94	93	92	92
NW	NW	64	82	79	85	84	2	0	0	0	0
	CHU UC	32	16	19	13	15	34	3	21	5	12
	NE	4	2	2	2	1	64	97	79	95	88
NW	NW	65	82	78	83	79	1	0	0	0	0
	CHU UC	30	12	20	12	16	27	6	19	7	9
	NE	5	6	2	5	5	72	94	81	93	91

NW= Mother Utterance NW= Mother Words
 CHU= Child Utterance CHU= Child Words

SESSION VII; PERCENTAGES OF LANGUAGE USED

		NER	IWA	DEC	ENT	GAR	DAV	NIA	MAY	LLY	NIC
		WW	WW	WH	WH	WH	WH	WF	WF	EE	EE
NW	NW	82	92	76	86	83	0	0	6	-	0
	NW UC	17	6	10	12	12	5	0	0	-	0
	NE	1	2	4	2	25	95	92	89	-	94
NW	NW	87	92	73	85	83	0	0	2	-	0
	NW UC	9	4	17	14	12	7	6	0	-	3
	NE	4	2	10	1	25	93	94	90	-	97
NW	NW	81	84	81	80	86	0	0	10	-	0
	CHU UC	16	7	16	15	4	15	4	10	-	4
	NE	3	7	3	5	28	85	96	80	-	94
NW	NW	83	87	74	81	83	0	0	0	-	0
	CHU UC	11	7	20	14	11	14	10	11	-	9
	NE	6	6	6	5	26	86	90	81	-	91

NW= Mother Utterance NW= Mother Words
 CHU= Child Utterance CHU= Child Words

SESSION VI; PERCENTAGES OF LANGUAGE USED

		NER	IWA	DEC	ENT	GAR	DAV	NIA	MAY	LLY	NIC
		WW	WW	WH	WH	WH	WH	WF	WF	EE	EE
NW	NW	83	90	76	88	76	0	4	2	0	0
	NW UC	15	10	18	10	12	2	4	5	4	5
	NE	2	0	6	2	12	98	92	93	96	95
NW	NW	88	89	76	86	74	0	2	2	0	0
	NW UC	10	10	15	9	15	6	6	9	5	5
	NE	2	1	9	5	11	94	92	89	95	95
NW	NW	67	86	86	85	50	0	1	0	0	0
	CHU UC	29	12	12	15	12	20	19	14	9	6
	NE	4	2	2	0	38	80	81	85	91	94
NW	NW	70	81	86	80	54	0	0	2	0	0
	CHU UC	27	17	11	15	12	17	12	18	7	6
	NE	3	2	3	5	34	83	88	80	93	94

NW= Mother Utterance NW= Mother Words
 CHU= Child Utterance CHU= Child Words

SESSION VIII; PERCENTAGES OF LANGUAGE USED

		NER	IWA	DEC	ENT	GAR	DAV	NIA	MAY	LLY	NIC
		WW	WW	WH	WH	WH	WH	WF	WF	EE	EE
NW	NW	85	95	75	83	84	0	0	2	0	-
	NW UC	15	5	17	14	4	4	3	9	1	-
	NE	0	0	0	3	32	94	97	89	90	-
NW	NW	91	89	79	79	67	0	0	2	0	-
	NW UC	0	11	14	10	0	4	4	9	6	-
	NE	1	0	7	3	27	94	94	89	94	-
NW	NW	83	92	82	77	83	0	0	0	0	-
	CHU UC	13	0	14	10	9	15	16	9	9	-
	NE	4	0	4	5	52	85	84	81	81	-
NW	NW	86	87	79	75	46	0	0	1	0	-
	CHU UC	9	13	15	20	0	14	12	9	4	-
	NE	5	0	6	5	46	86	88	94	94	-

NW= Mother Utterance NW= Mother Words
 CHU= Child Utterance CHU= Child Words

APPENDIX Xa);

OPINIONS about WELSH abstracted from notes made at
i) INITIAL INTERVIEW and ii) thereafter.

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APPENDIX XI; Parental Reasons for wanting or not
wanting children to learn Welsh;
QUESTIONNAIRE TWO.

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