"How Does Musical, Audio-Visual, Poetic and Narrative Input Help Children Acquire Language"
Sous la direction de Mr. Andy ARLEO
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Bilingualism is a singular noun for a plural experience.[*]

Thank you to Andy Arleo for his advice and guidance.

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Three enormous thank-yous to my three little guinea pigs:
so cuddly and so amazingly clever.
This is for you.

* Baker and Jones 1998:95

Abbreviations

MAPNI	Musical, Audio-visual, Poetic, and Narrative Input
ESL	English as a Second Language
CDS	Child Directed Speech
[V]	example taken from the transcription of a Video recording
[N]	example taken from Notes in language diaries
L	initial referring to the subject Loïc
M	initial referring to the subject Meriel
O	initial referring to the subject Owen
C	initial referring to the mother of the subjects, Catrin
E	initial referring to the father of the subjects, Eric
Gp	initials referring to the maternal Grandfather of the subjects
(3;6)	age of child at time of example in years and months
(*italics*)	explanations of the context of an example
[square brackets]	supposed word intended
(???)	unclear speech
underlined	code-mixed words or phrases, e.g. in L2 within an L1 utterance.

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INTRODUCTION

Aims

While bringing up my three young children, I am watching them learn to relate to the world around them and I am able to observe the rôle of language in the construction of that essential relationship[1]. I have noticed that children's songs, television programmes and films for children, rhymes, and stories play a significant rôle in this process, and I want to understand more clearly what that rôle is. I will categorise these sources of input in the following way: songs will be referred to as musical input; children's television programmes and films, including those made with human presenters and actors, as well as animation, will be referred to as audio-visual input, in this way distinguishing them from 'television' as viewing equipment, and the wide variety of adult audio-visual media that is broadcast on it; poetic input refers to rhymes, such as nursery rhymes, but can also refer to the rhyming elements in songs and narratives; narrative input refers to stories for children, with some overlap into poetic input, since many children's stories are rhyming narratives. I will use the acronym MAPNI to refer to this Musical, Audio-visual, Poetic, and Narrative Input.

My attention was initially drawn to examples of the children re-using, in everyday communication, phrases they had heard in MAPNI. I wondered why they were doing this and started by asking myself what was so special about these phrases and the texts and contexts that they came from. I also wondered about the way children acquire language and what the examples I had noticed could tell me about the acquisition process. Since my children are being brought up to be bilingual, I also wanted to understand how they were learning to organise and use their two languages, and I hoped that the study of their use of language from MAPNI could further that understanding. Another aspect of their linguistic behaviour was brought to my attention, that is the development of translation competence. I noticed the children trying to translate songs and stories, and I wondered how they were learning to do this. The following study is an attempt to achieve understanding from observations, and results in more questioning about the phenomenon of bilingual language acquisition.

The starting point of this study is the observation of the simultaneous acquisition of French and English by three young bilingual children. Following on from the subject of my Masters 1, 'The Language Choice of a Bilingual Child', this paper is a continuation of my study of French-English bilingual child language. By examining extracts from a transcribed audio and filmed corpus of the language of my own children, plus diary-style notes of their language comprehension and usage, I will try to answer some of the questions raised by my observation of the bilingual language acquisition process. My position as parent and researcher has both advantages and disadvantages. It is possible that the children are aware of my keen interest in their language development. Although I try to be discreet, they may notice me writing down things they have just done or said. Indeed, I sometimes ask them to say it again or help me remember or understand what a sibling said. They

1 Since I am both observer and participant, I will sometimes refer to my own experiences and thoughts in the first person singular. I will use the first person plural the rest of the time.

sometimes hear me talking to people about their bilingualism, their use of language, and the study I am doing. Perhaps this effects their awareness of their two languages and the use they make of them. But it is not uncommon for other parents to also keep language diaries or notes of their children's first words and funny phrases, and to tell family and friends about the adorable thing their little one said the other day. Maybe I am influenced by my study to elicit particular uses of language, or maybe I am just a mum who enjoys reading, singing and having word-play fun with her children, who also enjoy doing these things. Here, the concept of scaffolding associated with Vygotsky is relevant to our discussion. As a parent I am using conscious language learning strategies to effect the outcome of a situation where bilingualism might not occur naturally. (I discuss this further in the section on the role of input in bilingual acquisition.)

I may not be a hundred per cent impartial but I do hold a privileged position for observation which outweighs the potential disadvantages of immediate involvement. A researcher studying the language of children she sees once a week will only have access to a very limited sample of their language comprehension and usage. I am able to pick up on and note (mentally or on paper) any act or utterance relevant to my study that may occur at any time of day (or night) that they are in my care. As Snow states, 'it is clearly the child's total experience, not the possibly somewhat unnatural interaction during [an hour's] observation, that we would like to capture for descriptive and predictive purposes' (Snow 1995:192). My presence also enables me to carry out an analysis of the data with 'rich interpretation'. In other words, I am able to use contextual cues to fill in the structural elements that may be missing in a child's utterance, and to give a more precise interpretation of their intended meaning (Harris 1990:32). I also have a detailed knowledge of their experience with the world around them, with other people, and with MAPNI that they come into contact with. I often wonder if I can correctly observe a scene in which I play a major rôle, but I also believe that a case study of this kind has something to offer. Language is a social phenomenon but it is also a very individual affair. We each have our own unique experience of the world and our own way of understanding and expressing that experience. It is to be hoped that the accumulation of many individual case studies will contribute to a larger and more generalised understanding.

Hypotheses

The children are learning two languages in a monolingual community. As they are so young, I have detailed knowledge of the various sources which provide them with input in their second language, (L2). This knowledge enables me to identify the way they re-use this input in their own language production. I will examine the following hypotheses, drawn from my observations:

1. a) A lot of the L2 input they re-use comes from musical, audio-visual, poetic, and narrative sources. It is possible, then, to suggest that these sources play an important role in the children's acquisition of L2.
   b) Much of the re-used L2 input from MAPNI is formulaic. It is possible that there is something about the formulaic nature of this input that gives it an important role in the language acquisition process.

Translation is a key element of bilingual language behaviour and the children are learning how to translate

2. a) Learning how to translate MAPNI contributes to the children's acquisition of translation competence.
   b) Formulaic language helps the children to translate stories.

Methodology

The structure of the paper is built around the hypotheses. In Part One, we will first look at the process of bilingual language acquisition, including definitions of bilingualism, and the particularities of bilingual children. We will then discuss the role of input in language acquisition, before going on to investigate the role of MAPNI in that process. Extracts from the corpus presenting evidence of the re-use of input from these sources will be analysed. We will examine the notion of formulaic language, as it is presented by Alison Wray (2002 and 2008) and the presence of formulaic language in MAPNI. We will then identify formulaic language in extracts from the corpus, with particular emphasis on formulaic language from MAPNI. In Part Two we will define translation and interpreting before looking at the skills required for both. We will then examine the acquisition of translation competence by children, followed by an analysis of translation in extracts from the corpus. The specifics of narrative translation will be discussed, followed by an analysis of narrative translation in extracts from the corpus. Finally, we will identify formulaic language in corpus extracts of narrative translation carried out by the children. In the conclusion, we will re-examine the hypotheses in the light of our analysis of the corpus. Several suggestions for further research related to our discussion will be presented: the acquisition of bilingual narrative and translation competence, the fine line between translating and code-switching, and the acquisition of culture through MAPNI.

The subject of this paper falls within the scope of several linguistic sub-fields. We will draw on work done in the fields of first language, second language, and bilingual acquisition studies (Baker 2006, Clarke 1978, Dalgalian 2000, de Houwer 1990, Hamers and Blanc 1989, J. Harris 1990, Krashen and Terrell 2000). Studies relating to music, poetry, narrative, and the media are also relevant (Bettleheim 1977, Hargreaves 1996, Singer 2001). Work carried out on the acquisition of translation competence, from the field of translation studies, will be referred to (B. Harris 1980, B. Harris and Sherwood 1978, Toury 1995). Alison Wray's (2002, 2008) and Wray and Namba's (2003) work on formulaic language will provide the framework for the identification and analysis of formulas in the corpus. By collecting and analysing the data with reference to contextual cues and the subjects socio-linguistic situation and background, I am naturally taking a semantic approach to language description and analysis. Intuitively, and as a result of my observations, I agree with Bloom's (1973) idea 'that, for young children, language structure is subordinate to the child's efforts to communicate.' (Harris 1990:31) Indeed, Bloom's observation of the way young children use the same simple phrase to communicate different meanings, and that these meanings can be inferred by 'taking into account the physical and social context within which the utterance occurred' (*ibid*:32), is confirmed by my own observation of the same phenomenon. In accordance with this 'rich interpretation' approach, almost all corpus extracts are provided with an explanation of the context

in which they occurred. This form of interpretation is particularly necessary to the study of language transferred from input to output, since I attempt to identify the sources of certain phrases and language uses and the reasons why the children re-use them in the way they do.

Description of the case study

The subjects and their linguistic context

This paper is based on a corpus documenting the bilingual acquisition of my own three children. During the study Owen was aged 0;8- 2;6 Meriel 2;3 – 4;0 and Loïc 4;5 –6;2. Some examples are taken from diary entries dating from before the period of the present study. The ages of the children have enabled me to explore different stages of language acquisition while dealing with a common theme.

The children were born and live in France. They have a French father and a Welsh mother. In our home we operate on a one-person-one-language basis, where I always speak to the children in English and their father always speaks to them in French, and this regardless of who is in the home with us. Whenever they are outside of the home, I continue to use English almost all the time. Some exceptions to this rule do exist. My husband and I sometimes use the other language; in my case this can occur when other speakers present converse 'through' the child and I continue to do so in order to avoid conversational breakdown, and when conversing in French with others I sometimes forget to switch to English when addressing the child(ren). Their father has adopted a few English words and sometimes adapts them to French conjugation rules. For example, he might say, "arrêtes de whinger" or "mets ton bib". He sometimes uses English to make them laugh; Loïc finds his father's accent funny and loves to hear him saying nonsense in English. All other professional care-givers, child-minders, nursery or school teachers, babysitters, speak to the children in French. Their grandparents and other family members use their own languages respectively. The children have a French Aunt on the Welsh side of the family, who is bringing up her son as a French-English bilingual in Wales, and who speaks to them in French. They have an English Uncle on the French side of the family who speaks to them in English. My father sometimes uses Welsh with the children to say hello, goodnight, and some terms of endearment and when reading from Welsh language children's books, of which we have three. The children have spent holidays in Wales on average twice a year, at some periods more frequently. English speaking friends and relatives also visit us in our home in France. We are in regular contact with some English speaking friends of various nationalities, some of whom have children, all of whom talk to their children, and mine, in English. A detailed list of the children's contact with their two languages is provided in appendix 1.

Description of the corpus

The corpus consists of audio and video recordings of the children at play, during story-telling, song and rhyme singing, while watching television, and during everyday activities, such as meal-times. Any recorded sequences which may add to our understanding of the way the children use language from rhymes, songs, stories and television in their communication and acquisition of language, are transcribed. For example, an extract which shows the children taking a line of text from a story, song or television programme and using it in everyday conversation, or playing with it by putting it

to a tune. Some video recordings were made with the purpose of adding to the corpus examples of a particular relevance to the questions under discussion. For example, the recording of Meriel reading the story "Toutes Les Couleurs" was made in order to analyse her narrative and translation competence. The recording of Meriel, Owen, and myself watching 'Sleeping Beauty 2' was made in order to analyse our communication while watching a film together. The recording of Owen and myself reading the magnetic letters 'First Words' book, was made for the same reason.

The language diaries I have been keeping for each of the children are most valuable since I can note any interesting examples of language use or understanding. It is not always possible to note language at the moment it is produced, and some errors in transcription are possible due to the varying delays between hearing something and being able to write it down. Generally, if I could no longer recall what had been said with accuracy, I would omit it from the diary or make a general comment rather than attempt to produce an approximation. On occasion, I found myself witnessing an interesting exchange or monologue, but did not have my recording equipment at hand. At these moments I have sometimes written down what the children were saying as they were saying it, in the manner of an on the spot transcription. It is impossible to note down everything the children say, of course, and I do not intend to analyse all their language production. Rather, I have considered relevant those examples which reflect the language found in rhymes, songs, stories and television to which they are exposed, and contribute to the discussion of the link between these sources of input and the children's language development. Some corpus examples are also relevant to the discussion of the acquisition of translation competence and the role of formulaic language in acquisition and translation.

Methodology of transcription and analysis

Through trial and error, I have devised my own system of transcription. Since I am focusing on the re-use of words and phrases, and not on phonological aspects, I have not attempted to transcribe intonation. I have preferred to provide approximate pronunciations for mispronounced words, rather than use the phonetic alphabet, which I feel is an unnecessary detail here.
Video recordings are preceded by the initial V in square brackets.
Notes from the language diaries are preceded by the initial N in square brackets.
The name of the child is either written in full or represented by his/her initial.
The initial C refers to Catrin, the children's mother.
The initial E refers to Eric, the children's father.
The initials Gm refer to their maternal grandmother.
The initials Gp refer to their maternal grandfather.
Explanations of the context are given in italics in round brackets.
The actual or supposed word intended, but incorrectly pronounced, is given in square brackets.
Question marks in round brackets refer to unclear speech.
Code-mixed words or parts of sentences are distinguished from the language of the rest of the sentence by underlining. This method applies only within the speech of individual speakers and does not illustrate cross-speaker code-switching.

PART ONE

Musical, Audio-visual, Poetic, and Narrative Input in Language Acquisition

Introduction

This paper is concerned with the simultaneous acquisition of two languages by three bilingual children. We need to begin, therefore with a brief discussion of bilingualism, bilingual acquisition and the bilingual child. Since we will be analysing the role of several sources of language input, we must also take a general look at the question of the role of input in the acquisition process, before discussing each type of input that will then be identified and analysed in the corpus.

1.1 Bilingualism and Bilingual Acquisition

Hypothesis 1: The children are learning two languages in a monolingual community. It is therefore possible to identify the sources of the L2 language input they are using to acquire L2 competence.

Definitions and descriptions of bilingualism

The term 'bilingualism' has been defined in various ways by many different scholars, yet a generally accepted definition remains elusive. Definitions often reflect the approach or bias of the study in which they appear, focusing more on cognitive aspects, or more on pragmatic aspects, for example. Weinreich's definition of bilingualism as 'the practice of alternately using two languages…and the person involved, bilingual'(1968:1) is mirrored by William Mackey's 'alternate use of two or more languages by the same individual' (Mackey 1970:555) and François Grosjean's 'functional' definition of bilingualism as 'the regular use of two languages' (Grosjean 1982:230). Weinriech and Grosjean both go on to look at the complexity of bilingualism in detail, as do George Saunders (1988), Charlotte Hoffmann (1991), Josiane F. Hamers & Michel H.A. Blanc (1989). Such a definition seems over simplistic, at first. However, after extensive analysis of the issues involved in describing bilingualism, the more simple and straightforward definitions seem preferable. This is because the phenomenon is such a complex one, the types of bilingualism so various, the methods of measurement so unsatisfactory, the perspectives of each researcher often so different. It is surely better to have a general definition into which one can fit the many types of bilingual that exist, rather than a detailed and specific definition which may exclude many people who live with two languages in different ways. A definition of the bilingual as 'a person who knows two languages with approximately the same degree of perfection as unilingual speakers of those languages' (Christopherson 1948:4) expresses what Hoffmann labels a 'perfectionist or *maximalist* view' (Hoffmann 1991:21). Saunders argues that such a definition can only refer to an ideal of bilingualism which is rarely attained. If *maximalist* definitions are unsatisfactory because unrealistic and therefore too restrictive, so are *minimalist* definitions, according to which one needs only a minimal degree of competence in the other language, too broad. Hoffmann cites Haugen (1953:7) as seeing the beginning of bilingualism as "the point where a speaker can first produce complete meaningful utterances in the other language" (Hoffmann 1991:22).

Competence is a frequently cited factor in definitions and descriptions of bilingualism. It is not difficult to see why competence, fluency, or proficiency hold an important place in definitions of language use. The ability to *use* a language often implies using it well. Many people learn one or two foreign languages at school, but not many would consider themselves bilingual as a result. It follows then, that for most people, a minimal experience of another language does not constitute a bilingual state. Many of the definitions offered by linguists have a similar preference for perfection. Grosjean (1982:231-232), George Saunders (1988:7), and Charlotte Hoffmann (1991:15) all provide us with Leonard Bloomfield's (1933) competence based definition of bilingualism as having "native-like control of two languages". Saunders and Grosjean also refer to Christopher Thiéry's (1976) definition of a "true" bilingual as 'someone who would at all times be taken for a native by native speakers of both languages' (*ibid*). The definition seems riddled with complications. The competence of a native speaker can vary according to age, education, region, and other sociological factors. A four-year-old child growing up in the Dublin suburbs may have a weaker command of Standard English than a university lecturer in London, but we would not doubt the status of the four-year-old as a native speaker of English. The many varieties of English spoken throughout the world, some with very different syntactic rules, serve to complicate our native-speaker based definition. A native speaker may speak her language imperfectly and less competently than a non-native speaker of the same language. To what extent, then, can we refer to the native speaker as a measure of competence? (Peterson-Bellay 2002:13)

The term 'balanced bilingual' refers to a person who is equally competent in both languages. In reality, however, most bilinguals will often have varying competence in their two languages, with one language being 'dominant' and the other 'weaker'. The term 'dominance configuration' refers to the complex relationship between a bilingual's two languages depending on different domains and contexts of use. For example, a bilingual may feel more at ease, and have more appropriate vocabulary at his disposal, discussing technical matters in one language and emotional matters in the other (Weinreich 1968:79-80). The dominant language may not be the one learned first and may change throughout a bilingual's life as a result of changing contexts. Bilinguals also often have a 'preferred' language, perhaps with a greater emotional value, which may not be a reflection of competence in that language.

Linguists seem to agree that definitions that do not take into account the importance of the domains, or contexts, and functions of language use cannot fully describe the bilingual phenomenon. Joshua A. Fishman outlines the work of various linguists with regards to the possible categorisation of these domains, and comments that they all involve 'an interpretation of the factors of the speech event in terms of motive or purpose' (Fishman 1964:41). Among the domains he mentions, (proposed by Schmidt-Rohr and Mackey), are the family/home, the school, the street/community, the church, and the media/the press. Domains can also be formulated at a psychological level, concerning role relations such as those between a husband and wife, a pupil and teacher, etc. Mackey (1968) differentiates *external functions* (home, community…) from *internal functions* such as internal speech (dreaming, cursing…) (*cit* Grosjean 1982:236-7). As Hoffmann points out, 'just as we have to accept linguistic proficiency as something variable and unstable, we must acknowledge the existence of varying degrees of functional bilingualism' (Hoffmann 1991:24). This means that the idea of a continuum of *functional* bilingualism can also be applied. A bilingual

may be more proficient in certain domains, at carrying out certain functions, in one language than the other, and this language may change according to the domain or function concerned.

The relationship between a bilingual's two languages can be expressed in several ways. The distinction between L1 and L2 can relate to the age and order of acquisition, where L1 is the first language learned in infancy and L2 is learned later (in childhood or adulthood). LA and LB can be used to refer to two languages learned simultaneously in infancy. However, these labels may be purely practical, in order to distinguish between two languages, and make no reference to the order or context of acquisition. The dominant language is usually placed first in a description such as English-French bilingual. In this study, I use the labels L1 for French and L2 for English. This is because, even though the children are acquiring both languages simultaneously, and English is their 'mother tongue', French is the language of the wider community. The omnipresence of French becomes even more influential when the children attend daycare and school, resulting, inevitably, in a position of dominance. The children's French-language domains are more widespread than their English-language ones, which are limited to the family / home, maternal, and sometimes sibling, contexts of interaction. In the context of this study, I propose that Musical, Audio-visual, Poetic, and Narrative Input constitutes an important additional domain of language use for the children.

The notion of domains or functions of a bilingual's language use is applicable to community bilingualism, (official, frontier, or immigrant) as well as individual bilingualism. Official bilingualism is usually fostered by the state through bilingual education programmes as in Wales, Catalonia, and Canada. Communities living near geographical and linguistic frontiers may benefit from more widespread bilingual education than elsewhere. The bilingualism of immigrants is sometimes reinforced through school and / or community education. Such programmes often lead to bilingual language use within clearly defined domain boundaries, for example LA at home and in the playground, LB in the classroom. The study of community or societal bilingualism cannot ignore the individual experience, just as the individual must always be studied with the wider context in mind, particularly if the analysis of data is context-related. Each individual, whether living in a monolingual or a bilingual community, is subject to societal forces, and will present a unique balance or dominance configuration with regard to both linguistic and functional competence. No two individuals, even within the same family, experience bilingualism in the same way. (Peterson-Bellay 2002:19-20)

The bilingual child

Children can become bilingual, seemingly without conscious effort, if they are exposed to two languages from an early age. Perhaps as a result of this, a line is often drawn between natural, child bilingualism and 'true' bilingualism, in accordance with the assumption that children make better bilinguals than adults. However, this remains to be demonstrated with solid scientific proof. While we can point to differences between first (monolingual or bilingual) language acquisition and later language learning, there is no evidence that one results in a 'better' bilingualism than the other. Children may have an innate aptitude for language learning, but the adult learner has access to learning strategies and analytical abilities that are unavailable to the child. Added to this is the fact that one can learn a second language as a child and, as a result, be better equipped to learn a third or fourth language later on. Furthermore, it is perhaps a mistake to assume that such a thing as the true

or perfect bilingual exists.

The different ages and contexts of acquisition of another language can result in different kinds of bilingualism, and various terms are employed to distinguish them. The first distinction, concerning the *age* of acquisition of a second language, is the difference between *early* bilingualism and *late* bilingualism. Within early bilingualism we can distinguish between *infant* bilingualism, usually considered to occur before the age of three, and *child* bilingualism. The term *adult* bilingualism is used to describe the acquisition of a second language after puberty. The acquisition of a second language may take place in different *contexts.* We can describe as a *natural* or *primary* bilingual the infant or child who acquires two languages from the speakers around her in an unstructured way (Houston 1972). A *secondary* bilingual, on the other hand, acquires her second language through systematic or structured instruction. (Hoffmann 1991:18-19). A distinction can be drawn between children regularly exposed to two languages from birth who acquire their two languages simultaneously, and those exposed to one language from birth and the other(s) several years later, thus acquiring their languages in a successive fashion. De Houwer proposes the term 'bilingual first language acquisition' to describe situations in which a child is exposed to two languages on a regular basis and from the first week of life onwards, (De Houwer 1990:3). The age and order of acquisition of a child's two languages is seen as a factor in the type of bilingualism acquired and the acquisition process involved. The children in this study could be classified as natural, infant, bilinguals, acquiring their two languages in a context of bilingual first language acquisition. Their parents could be classified as secondary, adult bilinguals, each with a different competence and functional balance configuration.

The role of input in bilingual acquisition

As I began to notice the children's use of language they had heard in MAPNI, the first question I asked myself was "What is the link between input and acquisition?" The role of input in language acquisition, although difficult to quantify, is nevertheless undeniable; it is a key issue in acquisition studies in general, and for this paper in particular. We must look at the nature of different kinds of input and their relative influence, first in relation to language acquisition in general, and then in relation to bilingual acquisition in particular. As it constitutes an important part of the language input to which children are exposed, the nature of child directed speech (CDS) needs to be closely examined and taken into consideration. It is extremely difficult to measure with precision the exact influence of different sources of language input on the acquisition of a language, as can be seen by the lack of correlation in the results of several studies that looked for links between the nature of CDS and children's language development, (Gallaway & Richards 1994). According to Snow, much research was carried out on the nature of child directed speech (CDS) in reaction to Chomsky's (1965) contention that 'input was ill-formed, incoherent, and complex' so 'the poverty of the input had to be compensated for by the innate structure available to the language learner' (Snow 1995:180). Those studies supported the notion that 'the speech directed to young children (child directed speech, CDS), whether by adults or older siblings, differs from speech among peers on a variety of dimensions. It is syntactically simpler, more limited in vocabulary and in propositional complexity, more correct, and more fluent...such speech can be seen as a simpler, cleaner corpus from which to learn a language' (Snow 1995:180). Different features of CDS are conducive to acquisition at different ages and in different contexts.

Krashen and Terrell point to the importance of what they term '*caretaker speech*', which 'is motivated by the caretaker's desire to be understood...Caretaker speech is structurally simpler than the language adults use with each other...it appears to be roughly tuned to the linguistic level of the child.' (Krashen & Terrell 2000:34). While both caretaker speech and CDS are 'constrained to the here-and-now and related to the child's focus of attention or ongoing activity...a high proportion of at least some mothers' CDS redirects children's attention and activity, introduces non-present referents, and in other ways seems to complicate the task of language learning' (Snow 1990:180-181). What Snow refers to as complicating language learning, Krashen and Terrell identify as the natural process by which 'caretaker speech tends to get more complex as the child grows in linguistic maturity....As the children grow in linguistic competence, the input becomes more displaced in time and space...the caretaker provides the extra-linguistic support, or context that helps the children understand language that may be "a little bit beyond them" (Krashen & Terrell 2000:34). Although Krashen and Terrell maintain that 'caretakers modify their language in order to communicate, not in order to teach language' (*ibid*), their idea of presenting children with knowledge that is just a little bit beyond them, echoes Vygotsky's notion of 'scaffolding' in which learning is a metaphorical building up process, where new knowledge is built onto already acquired knowledge. Parents and caregivers are well placed to know the nature of a child's existing knowledge and then add to it, little by little, building upon what children already know. Interestingly, Krashen and Terrell refer to caretaker speech being 'roughly tuned to the linguistic level of the child' (*ibid*), whereas Snow discusses in detail the notion of 'finetuning' in CDS. Despite this difference, both seem to point to the fact that 'the relationship between the input complexity and the child's developing competence is not perfect' and is difficult to measure or confirm.

Asher adds a physical dimension to the notion of CDS, or caretaker speech, with his notion of "language body communication" (Asher 1984:1-25) which he also calls "language body interaction" (*ibid*:1-34) and "language body conversation" (*ibid*:3-71). In his second language teaching method known as Total Physical Response, Asher claims validity for the use of body movement in second language acquisition by referring to the primary role in first language acquisition of such interaction. His theory is that children acquire language thanks to the thousands of language-body conversations they share with their caregivers. 'Language-body conversations are the first and the most primary means of communication with the infant in the continual day after day transactions that number in the thousands. Examples: "Stand up...Sit down...Come here...Walk to Daddy...don't spit on your shirt...Let's go for a ride in the car..." (*ibid*:3-71). According to Asher, caregivers use a lot of imperatives and language which is a direct reflection of the activity taking place and being shared by the caregiver and the child. He states, 'the child's physical response signals understanding, which makes these transactions true conversations' (*ibid*:6-2). For Asher, it is the relationship between physical action and the words used to describe the action as it is taking place which makes these exchanges a relevant source of input for children. Further support for the primacy of physical movement in learning comes from Piaget's belief that children can learn about natural numbers by real physical activity, abstracting number patterns from movements such as picking up, putting down, moving and using objects. (*ibid*:3-90). Asher also points to the relative ease with which children will pick up the language after moving to a new country, compared with their parents' laborious efforts. He identifies the way children learn by participating in play, by receiving and acting upon commands from playmates, as being the crucial factor differentiating

their learning experience from the classroom-based, or adult conversation, experience of their parents.

Snow points to children's ability to become bilingual or trilingual as evidence that 'most children clearly receive more input than is strictly necessary to support normal language acquisition, as shown by the fact that input can be distributed over two or three languages', (Snow 1995:187). In the case of bilingual acquisition, the importance of input is also related to the balance and nature of input in each language. According to de Houwer, when looking at the role of input, the study of bilingual acquisition has advantages over the study of monolingual acquisition, 'because the input to monolingual children may be more homogeneous – in comparison with a bilingual input condition it certainly is much less varied – the precise nature of its influence is much less obvious and can be easily overlooked (de Houwer 1995:221). The importance of input in bilingual acquisition, she argues, can in turn raise questions concerning acquisition in general. 'The exact role played by the amount of input in a bilingual child's language development remains unknown', states de Houwer, and this is perhaps because most explanations of the bilingual acquisition process neglect the role of input, which she identifies as 'a major gap in the field' (*ibid*:249). De Houwer also emphasises the importance of taking into account the detailed and specific input situation of the bilingual child being studied when explaining the child's linguistic productions (*ibid*:249). This statement supports a belief in the direct relationship between the nature and amount of input in each language and the nature of the bilingual child's language production, a belief which forms a basic assumption of the present study.

Although, as stated earlier, the study of the individual must take into account the wider, social context, de Houwer believes we must concentrate on language use within the bilingual child's 'individual social network' in order to 'determine input patterns, rather than the dominance configuration in the community at large that the child's family happens to live in', (*ibid*:224). By this, she not only means we must look at the different contexts and personal relationships within which the child comes into context with each language, (who speaks to the child, in which language, where, how often, for how long, in which contexts, and so on), but we must also take into account the precise bilingual language use of each person who speaks to the child. In this way, 'an input continuum can be envisaged with one extreme end characterised by the total separation of two languages by person, and the other by the total lack of separation of the two languages by person....most actual input conditions will, of course, fall somewhere in between the two endpoints of the continuum' (*ibid*:225). As I demonstrated in my 2002 paper 'The Language Choice of a Bilingual Child', even when parents claim to be speaking only one language with the child, upon careful examination, this may prove to not actually be the case. De Houwer refers to work by Idiazabul (1984) and Goodz et al (1988) which also identify the reality of such a parental input situation (*ibid*). It is important to carefully examine the separateness of the input when considering a possible link between parental language strategies and bilingual child production. The one-person-one-language strategy, which de Houwer refers to as the "one person / one language input condition" and Clyne (1987) calls "the interlocutor principle", is frequently identified in the literature as being the best strategy to employ in order to encourage language differentiation and to achieve balanced bilingualism (de Houwer cites Bain and Yu (1980), and Kielhöfer and Jonekeit (1983), see also Grosjean (1982), Hoffman (1991), and Baker (2006)).

It has been assumed that separate contexts of acquisition, (for example, the parents adhere to the one-person-one-language principle, or one language is learnt in one country and the other in a different country), will help children to differentiate their two languages. Language differentiation can refer to the child's ability to distinguish her two languages, and to use each language separately from the other, that is, not in mixed utterances. The other interpretation of language differentiation is the way in which even very young children seem to know which language to use according to their situation and interlocutor. This is a more pragmatic approach to bilingual competence whereby it is not only the phonological and morpho-syntactic development that is of interest but also the ability to function in various monolingual or bilingual contexts. The development of a metalinguistic awareness that each language is a separate system might coincide with more general cognitive development involving aspects of pragmatic sensitivity regarding interlocutor, situation and topic. Both interpretations arguably refer to the same phenomenon, since it has been proposed that the one-person-one-language parental strategy contributes to the bilingual child's ability to differentiate her two languages both pragmatically and structurally (Baker 2006:99).

Parents can attempt to control the linguistic input their children receive, and thereby directly "guide" the children towards a balanced and separate bilingualism. The one-person-one-language strategy entails each parent using a different language when with the child, usually, but not necessarily, their native language so that communication is as natural as possible. Some parents decide to use exclusively the minority language in the home and to delay the introduction of a second language until after the first is well established. If the second language is also the majority language of the community, the child will probably come into contact with it anyway. The parents may decide to introduce the community language in the home before the child starts school in order to facilitate the transition to school life. It is assumed (for example, by Hoffmann) that with the one-person-one-language strategy, the child uses the person as a reference point for language behaviour, thus avoiding confusion and disorder. Hoffmann and Grosjean both give examples of children becoming upset or angry if parents do not strictly adhere to the one-person-one-language principle, which may indicate the impact of such a strategy on the way the child learns to organise her two languages. Inversely, parental reactions to their child's 'wrong' choice of language or mixing languages, can also influence the bilingual acquisition process.

Vedder, Kook, and Muysken (1996) point to a relationship between the extent and nature of the mother's use of the minority language (in this case Papiamento) and the child's proficiency in that language. They state, 'the fact that the mothers' use of Papiamento correlated with the children's active knowledge of Papiamento vocabulary suggests that the mothers were either adaptive or effective agents in the children's Papiamento proficiency' (Vedder, Kook & Muysken, 1996: 473). (Peterson-Bellay 2002:26). Also assuming a link between input and proficiency, Saunders states that 'most bilingual children simply do not have equal exposure to both their languages, so that usually one language will be "weaker" in some way' (Saunders 1988:24). Hoffmann holds a similar opinion, linking proficiency to exposure and context of use: 'True ambilingual speakers are very rare creatures. Who ever has identical linguistic input and output in both languages? And who would habitually use both languages for the same purposes, in the same contexts?'(Hoffmann 1991: 21) (Peterson-Bellay 2002:14).

Language differentiation, in parental / caretaker input and in the child's production, is related to the

question of cognitive language separation, a key issue in bilingual acquisition studies. Since the 1970s a major debate sought an answer to the question of whether bilingual children at first function with *a single unitary language system* which gradually becomes two separate systems, or whether children possess *two separate and independent systems* from the start. The debate was the result of observations of code-mixing in very young bilinguals gradually giving way to fewer and fewer mixed utterances. Proponents of the mixed stage / language separation hypothesis, (e.g. Volterra and Taeschner 1978), suggested that in the first stage of language development, the bilingual child 'has one lexical system which includes words from both languages' (de Houwer 1990:39). As the child develops, she distinguishes first between two vocabularies, then between two syntaxes. In the third stage of development the child has separated her two languages but associates each language with the person who uses that language. Proponents of the independent development hypothesis (e.g. Lindholm and Padilla 1978, Bergman 1976, Ronjat 1913) argued that the bilingual child develops 'two differentiated language systems from very early on in the acquisition process' (de Houwer 1990:48). De Houwer proposes the 'separate development hypothesis', according to which the bilingual child, exposed to two languages from birth, is seen as developing two distinct morpho-syntactic systems which have no effect on each other, (de Houwer 1990:66). 'Because of the bilingual situation, the bilingual child has more options than the monolingual one: from very early on, the bilingual child makes contextually sensitive linguistic choices that draw on a developing knowledge of two separate language systems. Bilingual children's earliest use of morpho-syntax appears to be language-specific from the start, and already at a very young age bilingual children are skilled conversationalists who easily switch language according to interlocutor', (de Houwer 1995:248-9). The implied link between pragmatic interlocutor sensitivity and the cognitive formal representation of two languages is, I believe, a pertinent one: 'the sociolinguistic situation is a great contributor to the actual language production of the bilingual child', (de Houwer 1995:249). According to Baker, recent research goes against the single or unitary language system hypothesis (Baker 2006:100). He cites Genessee, 'it is now generally accepted that bilingual children can use their developing languages differentially and appropriately from the one word stage onward, and certainly from the age when there is evidence of syntax in their spoken language' (Genessee 2002:173 in Baker 2006:100).

For de Houwer, the link between the one person / one language environment and language separation is a natural and predictable one. 'If one accepts that children try as much as possible to speak like the people around them, it should really come as no surprise that they develop two separate morpho-syntactic systems in a separate input condition', (de Houwer 1995:239). An interesting issue here, is whether the same is true for children who experience their two languages in a *fused* context, in which both parents use both languages, or both languages are spoken in the (bilingual or multilingual) community. It is logical to assume that mixed input will lead to mixed production. An example in support of this assumption is the community-wide English-Spanish code-mixing and code-switching in places like Gibraltar where two languages are in close contact. Here children are exposed to code-mixing and switching from birth since Gibraltarians have developed this language habit over generations. As a result, children in Gibraltar acquire the 'Llanito' dialect, which is a mixture of English, Spanish and some Genoese. De Houwer claims that 'reports on children whose input conditions were not necessarily of the one person / one language kind still speak of separate development', (*ibid*:240). But she states that more research needs to be carried out on the 'virtually complete lack of separation of the two input languages on the

developmental process', in such "native bilingual communities", (*ibid*:226).

The actual nature of the language systems concerned is another important factor to be considered. 'Language typological effects on acquisition can be documented, effects not of variation within a language community in types of input offered, but of variation between language communities', (Snow 1995:192). 'The universal biases and strategies that we once assumed drove language acquisition, and ultimately succumbed to the idiosyncrasies of specific languages have been hard to find. Children in Israel do not persist very long in thinking they are learning words as isolated units – they start out almost immediately exploiting the complex morphological possibilities a Semitic language offers, in which word forms are marvellously variable ...these effects of language structure on children's language systems suggest an enormous susceptibility on the part of the language learners to the effects of input' (*ibid*:193). Such a statement implies that we must also take into account the nature of a bilingual child's two linguistic systems. It is possible that the combination of particular languages may influence their cognitive organisation. According to Genessee, (2002:158 in Baker 2006:100) 'the languages of the bilingual child are represented in fundamentally differentiated ways. The two languages develop autonomously and inter-dependently, and this is partly a function of transfer between types of language combination (for example, French – English compared with Mandarin – English)'.

We can sum up by asserting that parental linguistic input and wider community input play a fundamental role in bilingual language acquisition. Bilingual language use is subject to societal forces, and the input and production of a bilingual's two languages are related to competence and functional configurations which may change over time. Parents who wish to help their bilingual children achieve and maintain as stable and balanced a bilingualism as possible, must therefore try to ensure the 'continual use of both languages in communicative naturalistic settings', (Kessler (1984:35) in de Houwer 227). As a parent consciously employing a language strategy to help her children become bilinguals in a monolingual community, I am, in a way, putting myself in the language teacher's role. Although I am aware of the children's innate capacity to acquire two languages simultaneously, I do not expect the process to take place on its own, without a little strategic effort on my behalf. I am acutely aware of being their main source of direct language input and find statements like the following fairly reassuring: 'When we "just talk" to our students, if they understand...we will be supplying input for acquisition. With roughly tuned input we are assured of constant recycling and review' (Krashen & Terrell 2000:35). Although Asher, Krashen and Terrell attempt to apply observations from first language acquisition to the elaboration of a successful method of second language teaching, their comments often ring true when applied to the bilingual first language acquisition of this study.

1.2 The role of MAPNI in acquisition

If, as we have seen, the immediate input environment of the bilingual child is a defining feature of bilingual acquisition, parents can make use of all relevant and available sources of language input as part of a bilingual language strategy. Since bilingual children growing up in a monolingual community may have limited contact with their L2 and its related culture, MAPNI can provide valuable linguistic and cultural input in that second language. The attitudes of the wider family and community is also influential; a bilingual's two languages rarely benefit from equal status or usage

in the community and, as a result, special effort has to be made to ensure that L2 is accessible, meaningful, and perceived as valuable, particularly during the acquisition of that language.

The example of Wales is relevant to this study not only because the children concerned are half Welsh, but also because increasing numbers of children are being brought up bilingually there, often by monolingual parents. Those in Wales who promote the Welsh language and the benefits of bilingualism, or who wish to bring their children up bilingually, even if the Welsh language is not spoken in the home, recognise the value of Welsh language MAPNI in providing early contact with the language. At Welsh language Toddler groups rhymes and singing form a regular part of activities. The website of the Welsh Language Board encourages parents to read to their small children in Welsh, even if the parents themselves don't speak the language. In their document entitled 'Raising Children Bilingually – advice for parents', they stress the benefits of reading to children and singing nursery rhymes. They also advise parents to watch Welsh language children's television with their children, with English subtitles so that the parents can follow too. Their *Twf* scheme is designed to encourage parents to read to their children in Welsh, and their document 'Come and Read with your Child' includes comments by parents about the way stories and nursery rhymes help bring the Welsh language into the family or provide support for a Welsh speaking parent bringing their child up bilingually. The Welsh Language playgroups have also created a scheme to help parents to do this called *Cynllun Cymraeg i'r Teulu* (Welsh for the Family).

From a practical viewpoint, focusing on MAPNI is a way to provide a framework within which the relationship between input and acquisition can be observed as (bilingual) children play with language, and use input of this kind to create language of their own. This section will look at the various different characteristics of MAPNI that enable these sources of input to contribute to children's development. In this section, we will examine the functional roles of MAPNI with respect to the bilingual acquisition process (communicating and accompanying other activities; joining in and singing along; imitation and role-play; understanding themselves and the world). We will also look at aspects of the nature of MAPNI which make it relevant to language acquisition (gestures, actions, and movements; sounds, music, and rhythm; narrative input; audio-visual input). In this study, the children are exposed to CDS while listening to songs, rhymes, and stories, and discussing books and films, or television programmes, being watched. Since a lot of MAPNI, other than audio-visual input, is conveyed to pre-literate children in the speech of adults, it could be considered a sub-section of CDS.

Communicating and accompanying other activities

Eve Clark stresses the importance of conversation in language acquisition, (Clark, 2003: 47). I believe that MAPNI for provides limitless alternatives to the very limited nature of 'real' conversation with infants and small children. Elaine Danielson's (2000) article on the beneficial role of nursery rhymes and stories on literacy acquisition is one of many on the same theme. In addition to playing this important role, MAPNI provides infants with a way into language before the appearance of their first identifiable words. Music and rhymes, (with their accompanying gestures), stories, picture books and children's television programmes are an important framework within which parents, siblings, and caregivers can begin to communicate with even pre-linguistic infants. Songs and rhymes can be a form of conversation with infants and small children at an age when

adult-like conversation, that is the exchanging of information and opinions, is not yet possible, or very rudimentary. An important aspect of this type of communication is the way story books, song and rhyme books, and television provide a source of joint attention for parent and child. The small child's attention span is limited and so books which contain many short rhymes, for example, provide regularly renewed sources of interest as the parent and child move swiftly from one rhyme or song to the next. It is through this joint attention on the same subject that the parent and child are able to create and inhabit their own verbal world in which communication can begin to take place. In the case of collective child care, such as playgroups or nurseries, songs and rhymes can also be used to focus the attention of the whole group on the same activity. Very small children will sit for a surprisingly long time to share songs together, whereas their play is more often solitary. Songs and rhymes are therefore a first step towards participating in group communication.

Songs and rhymes can also accompany other activities, often in a relevant way in terms of the vocabulary content or the subject of the song. For example, saying the 'Five Fat Sausages' rhyme while eating sausages. Parents and children may simply sing or say rhymes for pleasure while walking in the park or driving in the car. When no particular activity is under way, but children need to be occupied, songs, rhymes and stories help can perform a filling-time function, for example, while waiting for the doctor or waiting for dinner to be ready. They can relieve tension and resolve conflicts. For example, if a child is crying or complaining, or even arguing or fighting, singing a song can produce immediate and radical mood changes. Whereas repeating "Calm down" to an upset child may be futile, singing a song or doing an action rhyme will capture the child's attention and entice them away from their distress. In this sense, songs and rhymes can be a more effective form of communication with very small children than simply talking to them. This is confirmed in Papousek's statement, 'music has commonly been conceptualized in an intimate connection with emotionality because musical experience, perceptual or productive, can mediate human feelings even in cases where a verbal mediation fails', (Hanus Papousek 1996:40). Children's television, when watched with the child, is another source of joint attention; parents, siblings and small children can 'converse', share experiences, make comments, and learn new songs and rhymes together.

Joining in and singing along

Successfully communicating with children thanks to MAPNI inevitably derives from, and results in, children's natural desire to join in. Children can easily participate in a song even if they only know a few words. It is easier to join in someone else's song than to sing alone. Children can join in reading a favourite book before they can ever truly read alone, especially a rhyming book where rhyme and rhythm give clues as to what comes next, thus aiding memorisation. Language which has, in this way, been memorised and given meaning thanks to pictures, actions, and even intonation and facial expressions, can then be re-used in new or similar contexts. Sometimes, children prefer to just listen and then try to sing or tell the story themselves when they are on their own. Care givers who observe children not wanting to join in at nursery or playgroup, are often told that the same children sing merrily to themselves when at home. Here we are reminded of Krashen and Terrell's notion of a 'silent period' in which second language learners 'build up competence by active listening, via input....speaking ability emerges after enough competence has been developed by listening and understanding', (Krashen & Terrell 2000:36) Another common observation is that children's

participation in song-time will increase steadily over time as the children hear the same songs and rhymes over and over again.

Children can also be encouraged to join in with a television programme. For example, Miss Hoolie, the principal character in the Cbeebies (the BBC's young children's channel) television programme, 'Balamory', directly greets her viewers at the beginning of each episode, and often elicits a response by saying something like, "I know you, don't I? What's your name? ...Ah, that's right." The presenters of 'Tickabilla' talk directly to their audience and encourage their viewers to sing along.

Imitation and role-play

The notion of convergence, the idea that children will imitate members of the surrounding speech community, motivated by a desire to sound like them and be recognised as belonging to that community, becomes particularly apparent in children's role-play games. The notion of convergence is applicable to language acquisition in general, but here its relevance can be applied to the way children will assign roles to themselves and others in order to act out scenes from daily life and from MAPNI. Children's stories, and particularly television, can provide models for role play, in which the model may or may not be adapted to the child's own life. If we consider that L2-speaking film and television characters represent the L2 speech community, and that L2 films and television are a proportionally major source of children's contact with that community (in lieu of regular 'real' physical contact), then it is not unreasonable to suggest that when children imitate those characters and adopt their manners of speech, they are identifying with the represented speech community and wishing to be a part of it.

We can distinguish imitating the speech and actions of characters from MAPNI, from role-enactment or acting games, as defined in Bishop and Curtis (2001:16-17). Here, role-enacting is defined as 'being someone else' (Sarbin 1954) and 'the general ability and disposition to "take the role" of another person in the cognitive sense, i.e. To assess his/her capacities and tendencies in a given situation' (Flavell 1975:5) (in Bishop and Curtis (2001:17). Role-enactment games can involve the improvisation of characters, plot, and dialogue within a defined context, for example a game of Doctor, or the improvisation of dialogue only, in a game where the characters and plot are fixed. This second kind of role-enactment game, which Bishop and Curtis classify as 'acting games' (ibid), could involve assigning players characters from a television programme or film and then acting out the story.

Understanding themselves and the world.

Despite their young audience and the informal, unprestigious, context of their telling, the stories, songs and rhymes that are part of MAPNI can sometimes be considered as having certain literary and cultural qualities. The fact that nursery lore is passed on from generation to generation attests to this. Iona and Peter Opie explain that 'a nursery rhyme passes from a mother or other adult to the small child on her knee' (Opie and Opie 1959:1) and 'is not usually passed on again until the little listener has grown up, and has children of his own, or even grandchildren' (*ibid*:7). Bettelheim describes fairy tales as works of art (Bettelheim 1977:12) and the Opies state that 'the most memorable verses (of children's folklore) turn out to be the work of professional humorists and

song-writers' Opie and Opie 1959:14). The passing on of these stories and rhymes hints at their capacity to provide small children with information that is relevant to them, in a way that they can understand and make use of. Bruno Bettelheim invests fairy tales with the power of helping children to find meaning in their lives. For Bettelheim, 'the impact of parents and others who take care of the child' and 'our cultural heritage' are 'experiences in the child's life... most suited to promoting his ability to find meaning in his life...When children are young, it is literature that carries such information best', (*ibid*:4). Since language and culture are intimately linked, folklore and nursery lore that provide small children access to both is of primary importance. This is arguably even more the case if one considers MAPNI to be a valuable source of L2 cultural input for bilingual children living in a monolingual community. Sharing and talking about MAPNI is a context within which parents and children can address issues of different beliefs and practices, and different language uses.

Gestures, actions, and movements

In his explanation of the role of social contact in language acquisition, Vygotsky claims that laughter, babbling, pointing, and gestures are used by babies as a means of social contact during the first months of life (1997:168). Gestures, or actions, are a major element of many rhymes and songs for children. Songs and rhymes with actions offer children a way into language and communication other than vocalisation. Parents and siblings give communicative meaning to noises and gestures produced by babies, thereby helping them take a communicative role that they didn't realise they could have, or perhaps didn't intend to have. Songs and rhymes can help infants by providing a favourable context for them to practise with language in a repetitive, context-based way. And because the context is easily recognised by family members and care-givers, it then leads the infant into a communicative role. This argument could be applied to many communicative (gestural or speech) acts drawn from songs, stories, and so on, in which children find a way to participate in communicative exchanges despite their very limited acquisition of language.

Songs, rhymes, some books and television programmes often incite children to take immediate physical action. This can be in the form of gestures, as in the song 'Ainsi font font font les petites marionettes', or physical movements, such as hand clapping in the song 'If you're happy and you know, it clap your hands'. Sharing a book with children may involve encouraging them to touch different textures, lift flaps, or point at and name pictures. The presenters of the Cbeebies television programme, 'Tickabilla', after inviting their viewers to sing along to a colours song, then get them to point to different coloured objects they can see. Another CBeebies programme 'Boogie Beebies' is entirely based around the viewer's active participation in order to learn and perform a dance based on a theme, such as going shopping, or space travel. All these forms of children's media are helping children to acquire language by encouraging physical interaction and participation. This is probably only successful, however, if combined with the participation of a caregiver, at least for the initial introduction to the activity. I have observed my own children sitting passively in front of 'Boogie Beebies' until I came along and encouraged them to join in and we learned and performed the dance together. The next time they watched the programme, they knew that they could join in if they wanted to and didn't necessarily need to be shown how to do it.

Sounds, music, and rhythm

Sanches and Kirshenblatt-Gimblett identify phonological and rhythmic/structural qualities in children's word play, including rhymes and riddles, that make them particularly salient for young children. They put the phonological level of language at the head of a list of children's concerns, which 'shift from phonological to grammatical to semantic and finally to the sociolinguistic level of language' (Sanches and Kirshenblatt-Gimblett 1976:102). They also point out that 'for a young child...the *phonological* component of language is much more strongly organized than the syntactic, semantic, or sociolinguistic' (*ibid*:77). The primacy of the phonological features of language begins even before birth, 'the two day old newborn shows preference for his mother tongue, probably because of prenatal experience of intonation patterns', (Hanus Papousek 1996:54). Parents are instinctively aware of their children's phonological preference and therefore 'finetuning of CDS begins in infancy. An early and oft-noted characteristic of CDS is its high pitch and exaggerated intonation pattern', (Snow 1995:182). (It is interesting to note, however, that despite the remarkable convergence in CDS across languages, 'culture can always override linguistics... For example, the Qu'iche Mayan cultural prescription that high pitch be used to persons of high status conflicts with the otherwise universal use of high pitch to (low status) infants, and wins out'. (Snow 1995:185)) When reading a story or saying a nursery rhyme to a young child, it is common for adults and older children to use exaggerated intonation patterns and high pitch, to the same extent as in CDS, if not more.

Rhythm and melody are key to the acquisition of language as well as musical competence. Hanus Papousek explains that during the pre-verbal phase of development, the small child is able to imitate songs and to improvise her own melodies. When she begins to produce words and simple phrases, she will learn the lyrics and the melody at the same time. When babies move on from the production of syllables and the segmenting of the vocal stream into syllables, they will then produce syllables "en canon". 'The mother helps this development by encouraging rhythmic games and progressively associating them with superpositions of rhythmic melodies. This kind of intuitive intervention contributes to the acquisition of language and the development of musicality' (Papousek 1996:54). When discussing the acquisition of musical competence, David Hargreaves identifies contour as 'a critical feature of early musical perception' (Hargreaves 1996:158). In their earliest perceptions of music, 'infants seem to use a 'global' processing strategy in which the broad shapes of melodies are extracted from their local details... this contour information seems to be extracted from melodies regardless of variations in intervals and exact pitches... as with melodic memory, infants also seem to be able to recognize basic similarities between rhythmic sequences,' (*ibid*). Infants' ability to recognise rhythmic sequences precedes their enjoyment of rhythm as part of their own experiments with sounds when babbling, and later in speech play. It is relevant to note here that, despite their reservations concerning his methods in the selection and analysis of examples, Sanches and Kirshenblatt-Gimblett mention 'R.Burling's (1966) cross-cultural analysis of the meter of nursery rhymes, and his conclusions that 16-beat verses are extraordinarily widespread if not universal', (Sanches and Kirsehnblatt-Gimblett 1976:75).

Hargreaves lists five phases of musical development, the first three of which are relevant to our subjects and their musical production: (Hargreaves 1996:156)

Singing:
Sensorimotor: (0-2 years) Babbling, rhythmic dancing
Figural: (2-5) 'Outline' songs; coalescences between spontaneous and cultural songs Schematic: (5-8) 'First draft' songs

Composition:
Sensorimotor: Sensory, manipulative
Figural: Assimilation of cultural music
Schematic: 'Vernacular' conventions

Hargreaves states that 'infants in their first year of life engage in a good deal of vocal play and babbling, and... this forms the basis for recognisable musical singing', (Hargreaves 1996:158). Hargreaves describes Davidson's 'developmental view of children's ability to reproduce songs of the culture within the figural phase, and he uses the nursery rhyme 'Twinkle twinkle little star' as an example. His view is that the typical 3-year-old relies on the words of the song and that she can produce distinct pitches, but that these have no interval stability or tonal coherence... By the age of 4 years, Davidson suggests that the child still relies on the text of the song, and that, whilst the reproduction of its melodic contour is improving in accuracy, it still does not yet possess overall coherence. Towards the end of this phase, by the age of 5 years or so, individual contours and intervals are reproduced accurately, but it is not until the schematic and rule systems phases that the parts of a song are organized into coherent wholes." (*ibid*:162)

Audio-visual input

The visual images in television programmes or films can help children map the meaning of, for example, body vocabulary and movement verbs, onto the sounds they hear representing them, much in the same way as action rhymes. (On this point we can wonder to what extent we should consider the importance of the child actually physically moving as being essential to the acquisition process, as in Asher's theory. From my own observations, I believe it can be helpful but is not essential.) If the television is being watched with an adult, then children can ask questions about what they see and hear, just as they do when listening to a story. These experiences all help them to build up their store of vocabulary by relating words to things they have seen and heard. According to Clark, 'parents offer children pragmatic directions about language use as they talk to them' (Clark 2001:49). They help children establish links between form and meaning, and how each combination 'differs from its neighbours and how it is related to any neighbours in the same semantic domain...adults can offer very young children explicit information about what distinguishes one term from another – for instance, they may identify one or more properties that distinguish the referents: sound or shape can distinguish a duck from an owl (e.g. quacking versus hooting); type and speed of motion can distinguish dancing from jumping' (Clark 2003:50). The audio-visual moving images on a television screen can be particularly helpful to parents as they do this, more so than looking at a silent and immobile illustration in a book. It is arguably clearer and less ambiguous to the child viewer what is meant when her parent comments on the people dancing on the screen, as compared to a photograph or drawing of dancers in a book. This can be even more the case if the child, who is watching dancers on the television, then proceeds to dance herself in imitation of them, and her parent comments on her lovely dancing. Talking about illustrations and

text is certainly important, but talking about moving images with accompanied sound and voice recordings is arguably even closer to actually seeing the real thing (which might not be possible if it takes place in a very different place, such as a jungle, or with dangerous characters, such as tigers!).

Rice (1984) and Rice and Haight (1986) studied educational television programmes, such as *Mister Roger's Neighbourhood* and *Sesame Street*, to assess whether audio-visual shares with natural language input properties that facilitate language acquisition and development. When looking for input that facilitates grammatical development, they reported the presence of yes-no questions, repetitions, "event casts", or descriptions of ongoing events visible on the screen, overall rate of speech similar to that found in naturalistic mother-child storytelling situations, speech whose meaning was immediately represented in the context. The obvious drawback they identified was that the language was not constructed jointly with the child viewer. (in Naigles and Mayeux 2001:139). However, at the time of writing, not enough detailed studies had been carried out, so Naigles and Mayeux concluded that 'television input has little influence on children's grammatical development' (*ibid*:141). When looking for properties that facilitate lexical development, Rice and Haight reported that the prosody in such programmes was similar to that of CDS, 60% of utterances referred to objects or events immediately present on the screen, and the visuals of television can provide additional clues because of the camera's ability to zoom in on, or switch over to, a specific aspect of an object or event that is being talked about. For example, the camera can zoom in on soup to eliminate *bowl* and *plastic* as possible referents; the screen can display cut after cut of objects that differ in every dimension except their *redness* (*ibid*:143). Naigles and Mayeux state that studies (Rice (1984), Rice and Haight (1986), Huston, Truglio and Wright (1990)) provide strong evidence that children can begin to learn about a word from television input and they can extend, enhance, or restrict the meanings of words they have already heard via the input of television (*ibid*:147). They even suggest that, according to the data available so far, 'when the language of television is pitched at the level of the child who is viewing, adult co-viewing is not necessary for word acquisition to occur' (*ibid*:149)

The question of whether television is harmful to children's development is frequently raised in the press. Abbie Wightwick, (Education Editor) in the *Western Mail*, reports on statements by Dr Aric Sigman, associate fellow of the British Institute of Biology, in favour of 'an "early years buffer zone" that would ban all electronic media to protect developing brains'. According to Dr Sigman, 'television viewing among children under three was linked to poor mathematical ability, reading recognition and comprehension in later years', 'and screen viewing at all ages from one to 14 was associated with attention damage'. In the same article, Professor Judy Hutchings (Bangor University) stated that 'time spent interacting with their parents is more valuable to children' than time spent watching television. Despite such assertions concerning the negative effect of television on small children, I would argue that in the case of a bilingual family it has an important role to play. When children learning a minority language in the home have only one parent providing input in that language, television is a valuable source of alternative input in the minority language. The crucial point here is that audio-visual input may be more or less beneficial according to the social context, and the interactions with other children and adults (Arleo: personal communication).

Narrative input

Very young children, who have not yet learned to read to themselves or still enjoy being read aloud more complex texts than those they can read alone, begin to acquire textual competence, that is the ability to extract meaning from a text, thanks to the many stories, rhymes, songs and picture books that they share with adults and other children. (Dalgalian 2000:69). Children experience text in its oral form, which Dalgalian calls "oralised text" (*ibid*). In this way, he argues, stories are the child's first 100% linguistic experience, in that they are not embedded in the concrete world. Children's understanding can be helped by the storyteller's words, intonation, vocal effects, facial expressions and gestures, but ultimately, all the information is in the words and their ability to listen to them. Dalgalian does concede that illustrations can add to a child's first textual experience, which is otherwise lacking in material or contextual support. However, he emphasises the differences between daily speech and text of this kind which refers to new words outside the child's experience, such as witches and cats in boots, the use of synonyms and anaphora, and longer, constructed, sentences (*ibid*:70).

The nature of language input children receive when reading books with parents also has an influence on language development, particularly the 'skills associated with producing extended discourse' (Snow 1995:1990). Snow reports on several studies pointing to such a link. 'Peterson and McCabe (1992) report that the kinds of questions asked by mothers during children's personal event narrations predicted the kinds of information children came to include in their narratives... Sorsby and Martlew (1991) report that four-year-olds responded more accurately to high level requests for information and that their mothers engaged in more abstract [conversation?[2]] during book reading than during a play-doh modelling task... Watson (1989) showed effects of parental use of cognitive verbs and superordinate labels while reading books with two-year-olds on the sophistication of children's definitions and understanding of taxonomic relationship a year later. The kinds of relatively sophisticated, abstract, and decontextualized talk possible during book reading with even quite young children may promote both linguistic and cognitive sophistication... In a longitudinal study of CDS as related to language outcomes of low income children, amount of talk during book reading that went beyond the immediate content of text and pictures at three and four related to skill at extended discourse when children were five (De Temple and Beals, 1991)', (*ibid*:190-1).

1.3 Analysis of Examples from the Corpus

Hypothesis 1a) The children re-use language from MAPNI in their own linguistic output.

General observations

While observing my children, I noticed the following aspects of their linguistic behaviour which led me to explore further the process of (bilingual) language acquisition. The children respond physically to language long before they are able to produce coherent language of their own. They quickly understand that they can cause others to respond physically to their language, even in its most basic form. Their first successful communicative acts are vocal *and* physical. Their physical communication, in the form of actions and gestures, develops earlier than their vocal

2 word missing from original text

communication. The children will go to great lengths to attract and hold the attention of their carers. Their efforts can be interpreted as motivated by a desire to communicate their basic needs, but can also be interpreted as a desire to create a moment of shared attention on the same activity. It is this need for the attention of their carers, and the desire to participate in the same activity as others, that motivates them to enter language. The children repeat what others around them do and say. Sometimes this repetition seem to be a form of imitation. Sometimes it seems to be a form of ratification. The children want to sound like other people around them, so will imitate words, expressions, and accents. In families such as ours, children may be exposed to a variety of accents and vocabulary from the wide spectrum of English language speakers they may meet and interact with, for example, British English, Irish English, Canadian English, American English, English as a second language. This is not forgetting other languages with which they come into contact, including French, Welsh, Breton, and Irish. It is interesting to note here, the way Loïc will quickly adopt the vocabulary and even accent of the speakers with whom he is interacting, perhaps in an attempt to identify with them as members of the same English-speaking speech community.

The children enjoy listening to rhymes, songs, and stories and try to join in, either vocally, by trying to say the words, or physically, by performing appropriate actions and gestures. They like to recite rhymes, sing songs, and tell stories to themselves, and sometimes to others. They enjoy watching children's films and television programmes and imitating the speakers, joining in songs, acting out scenes, and dancing. The language they hear in MAPNI is re-used in other situations. They repeat this language and they recombine it with other linguistic elements to create new combinations, or novel utterances. Sometimes they do this while communicating with others, sometimes when they are playing alone. When aged about 5 years old, Loïc began to wonder about the meaning of some expressions he had heard in MAPNI. The children manipulate translation equivalents in their two languages before they start to notice or wonder about them.

The children's exposure to MAPNI has been very variable, and each child has received a different exposure pattern. In very general terms, it is possible to note that the ratio of songs, rhymes, and stories to television viewing tends to shift depending on how much television the children are allowed to watch, and their age-related ability to engage in other social activities, such as board games, for example. The children have always had lullabies sung to them since they were born. Bedtime stories and, at their request, songs, are a consistent, nightly ritual. We may also look at books, and sing songs with or without books and CDs, during the day. For the first year and a half of his life, Loïc didn't watch any television at home, only at the child-minder's house or at his grandparents' houses. Meriel and Owen have experienced regular exposure to television since birth. Since the ages of (L) 5,1, (M) 2,11, and (O) 1,4, the television has only been used for watching videos and DVDs, since we no longer have an aerial and so don't watch any television channels. For the preceding two month period, they watched no television at all. The children watch an average of 1 ½ to 2 hours of television a day, which is always in the form of children's videos or DVDs. The children have a huge collection of vidoes, DVDs, audio cassettes, CDs, and children's books, some of which I have kept since my own childhood. Most of the books and videos and audio cassettes were presents and donations from friends, and so include some Canadian and American examples. The videos are all in English. The DVDs almost all present a choice of language, of which French and English are the most common options. The children like to choose which language to watch in, and at age 6,1 Loïc began to prefer French. I encourage him to watch in English by telling him

when English is the original recorded language of a film with actors, and by reminding him that he needs to practise his English in the same way as he practises drawing, in order to improve.

Communicating through MAPNI

When Loïc was a small baby, (between 0 and 0,5) I would often lie him down and sing to him or do little action rhymes (such as R*ound and Round the Garden*), I didn't know how else to fill the time with him and I soon tired of one-sided conversations along the lines of 'let's go for a walk, look at the flowers, oh look at the bird', etc. Stories, songs, and rhymes are great for passing the time and helping children to be patient while waiting for the next activity or event. When travelling with a baby, I find that the best thing to pass the time is a song and rhyme book. During take-off or landing on a plane trip, for example, singing helps enormously to calm and settle a child who doesn't want to be strapped in with a seat belt. I once sang all the way from Nantes to London! As soon as Loïc was able, (around 0;6) we spent a lot of time looking at books together, often rhymes or songs in books, picture books, books with flaps, and so on. As he didn't start watching television until the age of about 1;6, and only a little a first, books and songs were our main form of 'conversation', of common interest. Even if he had a choice of things to play with, books would often come first, and for a long time his favourite book was one of songs and rhymes (Meriel also greatly enjoyed this book). Owen, from the age of 9 months, already loved to look at 'Siarad Babi' (a bilingual Welsh - English lift-the-flap book) and 'Baa, who's on the farm?' which combine the *peepo* game with subjects that interest babies, namely other babies and their daily activities, and animals and the noises they make.

Communicating with gestures

Several extracts from the corpus show the way that gestures or actions associated with songs and rhymes are often assimilated and re-used long before the child can say the corresponding lyrics or text. This is a powerful example of the way songs and rhymes can help children enter language. Owen's use of the hand movement from the song 'Ainsi font font font' when aged 0, 8 was his first noticeable communicative gesture, (preceding head-shaking for "no" which began at 0, 9):

1)
[N] O (0, 8): (*I am changing Owen's nappy and talking to him. He suddenly lifts up an opened hand and turns it from left to right and right to left*)

This gesture was not only used in the context of that one song, but was also extended to other songs and other communicative uses. He was usually rewarded with a rendition of the song to accompany his gesture and was congratulated. Sometimes we elicited the gesture by singing the song and saying "come on Owen, you do it / Owen do it / Owen move his hands", and so on. Shortly after, the other children introduced the song 'Twinkle Twinkle Little Star' as an English accompaniment to this gesture, so we then did both. With encouragement from adults, Owen began to use the gesture to 'say' goodbye. He sometimes used this gesture to signify singing or music generally. When he made the gesture for the first time, was Owen trying to communicate or did we turn it into a form of communication by our reaction to it? Was he just repeating, practising, something he had experienced and enjoyed during his day, like babbling to practise sounds? The subject of the song is

"marionettes" but for Owen it was "hands" or "music" or "singing", but this doesn't matter because the ultimate goal of communication and sharing of attention had been achieved. For a baby of that age, in the very early stages of lexical and semantic development, the semantic meaning of his communicative act was secondary to his pragmatic communicative goal. It was the act itself which was important, not the various semantic interpretations that his family and carers gave to it, because it enabled him to capture the attention of those around him and cause them to have a positive reaction to what was perceived as an attempt to communicate in a new way. The reaction to a gesture may be more powerful than to facial expressions or different cries, since it is a simple representation of an accepted form of linguistic communication, sign language. Also the gesture was not communicating a basic physical or emotional need, as is often the case with cries or the reaching out of arms. It was either just for fun, or an attempt to express something else. The novelty of this addition to Owen's communicative repertoire may also account for the snowball effect of its communicative function, since at that point, his only vocalisations were: /da/ /dada / /pa/ /papa / /mmm mu mu mu/ and blowing air out.

Similarly, at about the same age (0;10) Owen also once tapped the middle of one hand with the fingers of other hand. As I didn't recognise the gesture, I asked his child-minder who said it was from a rhyme about a spider tickling his hand. At this age he also liked to 'dance' to music by moving from side to side, while sitting, showing another way that movement can precede speech as a response to songs and rhymes.

In the following example, Meriel communicates with the gesture from a song when she is unable to tell us about it verbally:

2)
[N] *(at lunch)*
C: Did you sing any songs today, Meriel?
M(2;5) : Oui
L (4;7): I sang a new song *(L had already sang his new song twice)*
C: What did you sing, do you know?
M: *(Rubs fingers of right hand on palm of left hand)*
C: What song could that be? Do you know Loïc?
L: A song about hands
M: Non

Communicating through books

Looking at a book together often leads to the children's first real conversations as the pictures and text can act as a sort of trampoline, providing a context within which to talk about real feelings and events. On the cover of the book *Four Pigs and a Bee*, the use of illustrations is explained in the following way, "An adult, reading the book to a child, can use the illustrations with their mirror images and left to right progression, as an aid to visual perception, and as a stimulus to discussion." The following example, transcribed from a video recording when Owen is aged 2;5, shows how, when looking at a picture of a bear eating honey, in the magnetic 'First Words' book, Owen and I were able to converse about his own food preferences (see Appendix 2 for the full transcript).

3)
[V] O (2;5):

1. C: the crocodile has a long tail
2. O: a long tail
3. C: and a big mouth
4. O: a big mouth
5. C: with lots of teeth
6. O: lots of teeth
7. C: and the bear likes eating honey
8. O: likes eating 'oney
9. C: Honey, hhoney
10. O: 'oney
11. C: Hhhoney
12. O: Honey
13. C: Good boy! Honey, honey
14. O: Honey
15. C: Do you like honey, Owen?
16. O: Yeah, I like honey
17. C: Do you? What else do you like?
18. O: Um sandwich
19. C: Do you like honey sandwiches?
20. O: umunney sandwiches
21. C: What do you like in your sandwiches?
22. O: Saucisson
23. C: Saucisson!
24. O: Yeah
25. C: What else do you like in your sandwiches?
26. O:um ... pain
27. C: What? *(I really didn't understand because I wasn't expecting it)*
28. O: pa... I eating the pain
29. C: Bread?
30. O: Yeah bread
31. C: Bread. Bread and saucisson sandwiches
32. O: Bread an sauci..sson..san(???)
33. C: And what do you like for dessert?
34. O: Petit filous!
35. C: Petit filous!
36. O: *(laughs)*
37. C: Shall we have sandwiches for our lunch? ...Shall we have sandwiches for our lunch, hmmm?
38. O: There he is *(pointing to book again)*
39. C: Would you like a sandwich for your lunch, Owen?
40. O: There he is
41. C: There he is, yeah

We can see from this extract that Owen was only willing to talk about something else for so long and then decided to get back to the book (lines 38 and 41) and repeats himself until I accept to join in again. Lines 7 to 15 illustrate the way a child can practise pronunciation while sharing a book, and throughout the whole recording (8 minutes long) there are numerous examples of Owen repeating what I say, as if he is consciously practising saying it himself, as in lines 1 to 8. This repetition appears to serve the function of learning new vocabulary. There are also many examples where I repeat what Owen says (lines 23, 31, 35, which appears to be a way of checking, confirming, and acknowledging what he said. In this way we ratify each other's contribution and

construct the dialogue together. In lines 7 to 14, I manage to 'teach' Owen the correct pronunciation of 'honey' by getting him to repeat after me while I add emphasis to the 'h'. Sometimes, no amount of encouraged repetition will make any difference, particularly with structural corrections. (For example, Meriel (3;11) was unable to exchange her question, "It's when I'm going to be four?" for the correct "when am I going to be four?", despite repeated drilling as a whole phrase and in separate parts, and her own motivation to succeed.) Looking at the book together was also an opportunity for me to help Owen with his English vocabulary and language differentiation. Owen's use of the French word, *pain*, (line 26) is an example of code-mixing to fill a lexical-gap in his short term memory. He knows the English equivalent but the French word came out first, probably because he had just mentioned *saucisson*, a French word which has been assimilated into our shared English lexicon, as has *Petit Filous*. Since we have adopted some French terms like this, which are brand names or products that don't really have an English equivalent, these words can act as trigger words, causing a switch or interference. Owen needs to learn which French words are 'acceptable' and which are not.

A story can provide a context to talk about emotions:

4)
[N] Loïc (4;11): (*I am reading 'Goldilocks and the Three Bears' as a bedtime story. Baby bear discovers his broken chair*) This is the sad part of the story.

Communicating through audio-visual input

Television can also be a stimulus for discussion, and an opportunity to learn and confirm new words, as in the following example:

5)
[V] (*watching 'Sleeping Beauty 2' with Meriel (3; 11) and Owen (2;5))*
lines 21 to 25
M: ow
O: ow
C: What did he do then?
M: Just like me...because me got a very big bump
C: Oh yeah, you bumped your head as well didn't you? You've got a bump.

6)
Lines 104 to 124
C: hooray, fireworks
O: fireworks
C: that's pretty
M: We've already seen fireworks
C: have we?
M: yeah
C: do you remember?
M: with Shane
O: with Shane
C: that was a long time ago, wasn't it?
M: Yeah
C: you remember it, do you?

M: and when we were a very tiny baby
C: well, you were two
O: a tiny baby
C: no, you were three
M: yeah
C: only just though, it was nearly a year ago. Did you like it?
M: mm, I were a bit scared and a bit cold so we put a blanket on me
C: a bit scared and a bit cold, because it was late at night, wasn't it, we had to wait until it was night time so was really late, do you remember?
M: Yeah

(The full transcript of this shared television viewing is provided in Appendix 3. There are many examples of repetition for ratification and learning.)

For a bilingual child, watching a film with his parents can be a way to check on vocabulary. It is useful to place the next example in a slightly broader context than usual. Upon our return from a five-week visit to Wales, without Eric, Loïc was having some difficulty with French vocabulary, for example, saying to his father :

7)
[N] L (4;10): Il y a beaucoup de hair.

While watching 'Return of The Black Stallion', and wanting to describe what was happening, Loïc's question about vocabulary took the form of a code-mix:

8)
[N] L (4;10): C'est quoi en français, Papa, sandstorm?

Talking about language encountered through television can also be a way of helping children to understand and acquire new structures and expressions:

9)
[N] L: (5;11) What does "who d'ya think ya foolin'" mean? (*from a song in the Muppets' fairy tales video*)

10)
[N] L (5;11): (*watching 'Barney and Friends'. Barney is singing: "...I think a flower is most beautiful when it is given away"*) what does "given away" mean?

Musical, Poetic, and Narrative input

The examples grouped under this heading show how children appear to progress from joining in to adapting to inventing. They can begin to participate in songs or rhymes by doing gestures and movements or saying / singing one or two words, before going on to make up their own versions of existing rhymes and songs, and inventing new musical and poetic creations. All the examples concerning songs are taken from diary entries. It is therefore impossible to analyse the musical aspect of the children's productions; we will focus on their use of words. The children also find it noticeably easy to join in and memorise rhyming narratives. Non-rhyming narrative is open to participation when it involves the repetition of formulaic dialogue.

Joining in songs and rhymes with gestures

11)
[N] When aged 2;2, Meriel rapidly learned and enjoyed saying and doing the following Irish Gaelic action rhyme, (that was being said by an Irish mother to her son while staying with us for two days):
Roly Roly, Suas Suas, [Suas = Up] (turn hands around each other, then lift them up)
Roly Roly, Shíos Shíos, [Shíos = Down] (turn hands, then lower them down)
Roly Roly, Amach Amach, [Amach = Out] (turn hands, then put them out to sides)
Roly Roly, Isteach Isteach [Isteach =In] (turn hands, then put them in towards chest)

At first I wondered how much Meriel actually understood while she was joining in the rhyme, and to what extent understanding plays a role in acquisition. After reading about Total Physical Response in James J. Asher's *Learning Language through Actions* (2003) I realised that the rhyme in question was pure language in action and she surely understood what she was doing and therefore "internalised", to use Asher's terminology, the language that accompanied those actions.

12)
[N] Loïc (5;8) Meriel (3;6) Owen (1;11)
I invented a song to the tune of Frère Jacques :
Peepo Owen (or Meriel, or Loïc) Peepo Owen
Where are you? Where are you?
Are you hiding? Are you hiding?
I can see you! I can see you!

Owen and Meriel love it and hide behind their hands or behind furniture, and so on. It is a good distraction technique when they're crying.

Joining in: existing songs

The children try to join in with traditional songs from a very early age. Their participation will often take the form of a key word or phrase in the song, or the last word(s) of each line.

13)
[N] Owen (0;11 – 1;3) started joining in the song 'Bâteau sur l'eau' by saying 'âteau' with a singing intonation. He then went on to 'ask' for the song with the same sound which quickly became the word 'bâteau'. Aged 1;3 he tried to sing the song using repetition of this one word and singing babble and a downward intonation with the sound 'ah' to represent the 'plouf!' ending.

14)
N] Owen (1;5): *(When I sing 'Old Macdonald had a farm', Owen joins in)* e-i-e-i-o

15)
[N] When aged 2;5, Meriel liked songs as bedtime and daytime reading. For a few days it was 'The wheels on the bus' book, then it was back to 'Les plus belles chansons de toujours', which she really loved, especially 'Mon âne, mon âne' and 'Il était un petit homme'. She liked to join in when she could, for example:

C: Il était un petit homme, pirouette,	cacahuète.
M:	cacahuète.

C: Elle descend de la montagne à cheval
Singing | I, I, youpee, youpee I
M: | I, I, youpee, youpee I

C: | Mon âne, mon âne, à bien | mal à sa tête.
M: | Mon âne, mon âne, à | mal à sa tête.
C: Madame lui a fait faire
C: un bonnet pour sa fête
C: et des souliers | lilas, la, la, et des souliers | lilas.
M: | lilas, la, la | lilas.

Joining in: adapted songs

The children can be creative with songs and rhymes, even when very young, by getting others to produce the new versions they want but are perhaps unable, or unsure of being able, to produce themselves. For example:

16)
[N] O (1;1): Owen gets me to create new bedtime songs:
At bedtime I sing 'Lullabyes' to Meriel and Owen then 'Go to sleep my baby'. From the age of 1;1, Owen wanted me to go back to him and sing 'Frère Jacques', which he sang along to. He then started asking for 'Maisy', the theme song to a cartoon, to which he also sang along. The lyrics are simply the repetition of the name 'Maisy', ending with the word 'mouse', His request then became creative when he said "Charlie", who is a character from the 'Maisy' cartoon. I began to sing the word 'Charlie' to the 'Maisy' tune, this time ending with the word 'crocodile' (which is what Charlie is). Owen then wanted me to extend the pattern to other characters from the cartoon, including Eddie the Elephant. This time the word with which he requested was 'elephant', and not the name 'Eddie', so the lyrical pattern was changed. In order to fit the rhythm of the song, I include the name 'Eddie' three times, instead of just once at the end. (Incidentally, when Loïc once sang 'Eddie elephant' with the name being repeated instead of the animal word, Owen got very angry.) When he asked for 'Chick', I decided bed-time singing was getting a bit long, so encouraged him to sing it himself, which he does by repeating only the word 'chick'. Although inconsistent with the pattern we had established, it is not surprising that Owen doesn't include the chick's name in the song, since it doesn't have one in the cartoons!

Owen may have been confident that I would adapt the 'Masiy' song for him because adapting lyrics to the tunes of existing songs is something I enjoy doing and which occurs fairly frequently. No specific examples are available from the corpus, but a typical occurrence would be as follows:

C: (singing to the existing tune) Oh dear what can the matter be, Owen is crying because he is hungry, we'd better sit down and have our tea, what can the matter be now!

This game of inventing a new song to fit a familiar melody is one enjoyed by the children as well. Loïc, in particular will often try to join in. For a bilingual child the extra dimension of code-switching, by inventing English lyrics to the melody of a French song, may add to the challenge and fun of such a game. It is easier and more satisfying to invent new lyrics to the melody of a well known song, rather than to translate the original lyrics. We have fun doing this together to the melodies of both English and French songs.

Joining in: invented songs

Sometimes we communicate through song, using melodies we know, or melodies we invent, in which case the constraints of metre and rhyme are less restrictive. This is a good way of getting children's attention and keeping it, and often helps to distract a child who is having a tantrum! No specific examples of this are in the corpus, however a typical occurrence would be something like this:

C: (singing to an existing tune, or an invented one) Oh, Meriel, would you like some bread? Why don't you sit down and be a good girl, I know you can.
L: (singing) Oh, Mummy, I'd like some bread. I'm sitting down and being a good boy!

Singing alone: existing songs

17)
[N] The children all enjoy singing their father's version of 'Au Clair de la Lune', version we could classify as an 'entertainment rhyme', that is a parody of a nursery rhyme (Bishop & Curtis 2001:28):(cf. Bishop and Curtis' categorisation of rhymes, 2001:28) :
Loïc (5;4) & Meriel (3;2):Au Clair de la Lune, j'ai peté dans l'eau.
Ca faisait des bulles, c'était rigolo.
Ma grandmère arrive avec des ciseaux.
Elle me coupe les mmm! Au ras des noyaux!

Owen (1;8)sings "la la la" to the tune adding "mm!" and "noyaux!" at the appropriate moments. The tune is so recognisable that people comment on it, for example the librarian: "Je sais ce que tu chantes, c'est Au Clair de la Lune, n'est ce pas? Tu chantes bien, dis-donc."

18)
[N] O (1;8) (*sings*) e-i-e-i-o (*followed by*) la la la (*to tune of 'Au Clair de la Lune's second line*)

19)
[N] The children also enjoy their of his father's 'entertainment rhyme' version of 'Frère Jacques'. Owen (2;1) likes to sing and repeat the first two lines. :
Frère Jacques, Frère Jacques,
Où vas-tu? Où Vas-tu?
Je vais à la messe
Draguer les gonzesses
Ding, dang, dong
Ding, dang, dong

20)[N] Owen (2;1) also sings:
Cherchez-moi, coucou coucou
Je suis caché sous un chou
(*and hides his face in his hands*)
And he repeats:
Meunier, tu dors,
Ton moulin, ton moulin,
Va trop vite
If I sing with him he joins in with the rest of the song, but on his own he just repeats the first three lines. He sings this in the bath while playing with a toy water mill. Meriel sang the same at 2;5.

21)
[N] Owen (2;5) sings lyrics from songs he has heard at playschool and on the television, for example:

a) Bâteau sur l'eau, la [r]ivière, la [r]ivière *(repeats over and over)*
b) Mr Sun, sun, Mr golden Sun, hidin' behi' a tree
c) The more we play together, together, together *(mumbles the rest)*

Examples b) and c) come from an episode of 'Barney and Friends' that we have on DVD.

At age 2;5, Meriel sometimes tried to sing on her own and mumbled most of the words, inserting the ones she knows. She often just repeated one or two lines that she knew. Owen also did the same thing at the same age. During our 5 week stay in Wales and England, there was a very noticeable shift towards English in Meriel's (2;8) language. When spontaneously singing, however, it was always French songs (eg 'Alouette', 'Cherchez moi coucou coucou je suis caché sous un chou', (with the words only half pronounced correctly)) with the exception of 'Happy Birthday' which she sang throughout our visit, no doubt because of Owen's, Grandpa's and Granny's birthdays all in quick succession.

22)
[N] M (2;8): Appa birday to you
Appa birday to you
Appa birday dear Ganny / Owen / Ganpa
Appa birday to you

23)
[N] A family friend gave the children a DVD of the film 'Mary Poppins' and Loïc (4;10) watched it that very morning. By the afternoon he was already singing "Chim chimney, chim chimney, chim, chim chimree". The following day he asked me if Daddy had a chimney sweep in the new house.

Singing alone: adapted songs

When the children play with language and create their own versions of songs by inventing new words and new uses of existing words, it can appear to be for the enjoyment of hearing sounds:

24)
[N] L: (2;0): Daddy's gone to work. Un, deux, trois, (*drinks*) bravo Loïc! (*Drinks and talks to himself, sings*) Bâteau sur l'eau….hot…un, deux, trois, there he is butterfly (*unclear babble*) house, bird, boat, bâteau, star, twinkle star, twinkle twinkle little star, one, two, three, un,deux, trois, cinq, bravo, show Daddy.

Adapted songs are often a form of child humour:

25)[N] L (2;6): Old MacDonald had a chair, e i e i o, with a sit down here and a sit down there, here a sit, there a sit, everywhere a sit sit."

Loïc would find making up nonsense like this funny:

26)[N] L (2;6): This is the way we clean the cake! (*to the tune of 'Here we go round the mulberry bush'*)

Singing along to an activity: existing songs

The children often sing to themselves while they are doing something else, and sometimes the songs they choose are linked to whatever activity they are engaged in. It is as though they are singing along to life. Here are some examples:

Every morning, at the same time, our neighbour Jacques parks his van in front of the house of another neighbour, Lucien, who lives opposite us. Owen recognises the engine noise, and one day he started singing:

27)
[N] Owen (1;11): (*sings*) Jacques, Jacques,eh eh ay eh eh, haricot magique

This is from a song from the previous summer's school play (six months earlier). At the time of the play, we sang the song a lot. Since then, we had sung it occasionally, sometimes with reference to our neighbour, Jacques, but mostly just for fun.

28)
[N] O (2;5): *(Sitting at the table and mixing up his food, sings)* When you mix bu an ed i makes bu [When you mix blue and red it makes blue] *(from the song about mixing colours in the 'Barney and Friends' episode 'A perfectly purple day' which we have on DVD)*

29)
[N] (*Meriel skips to the potty. While she's skipping I say*)
C: skip, skip, skip,skip...
M (3;9): (*sings*) skip, skip, skip to my lou (*and we finish the song together*)

She is definitely singing "lou" and not "loo", because, even though Granny sometimes uses this word for toilet, I am pretty certain that Meriel does not. If she had been familiar with that meaning of the word, the association would have been very comical indeed, and would certainly have made her laugh!

Singing along to an activity: adapted songs

30)
[N] L (2;2): (*After making an elephant with his construction kit, Loïc sings*), Oh do you know the muffin elephant, the muffin elephant the muffin elephant? Oh yes I know the muffin elephant, a lives on Drury Lane!

31)
[N]
C: (*at lunch, to Owen*) eat it nicely
M (2;8): be good (*then singing to the tune of the French song 'Un Crocodile'*) be good, be good, be good, be good, be good.

In this example Meriel was expanding on the "sit up nicely now, be good" text of the 'Time for Dinner' board book and using the melody from a French children's song.

32)

[N] *(We are staying in Cardiff. Putting on socks in Bedroom)*
C: come on let's put your socks on
L (4; 3): Socks, pocks, put your pocks on, socks, pocks, locks, *(laughs). (Sings)* thirsty flowers drink it up, then they drink some more. *(Then his own words to the same tune)* putting socks on pocks and bocks more.

The song Loïc sings and then reinvents comes from the 'Rosie and Jim' video, which he had started watching the day before. It is a video the children like to watch when staying with their Grandparents in Cardiff. In the video, Rosie and Jim are two rag dolls who live on a canal boat. In one episode they go through a lock and visit a water treatment plant. It seems that Loïc began by playing with sounds, and his singing was triggered by the word 'locks' which reminded him of Rosie and Jim. He then went on to combine the melody of the original song, with his own word-play lyrics. This example illustrates the emergence of rhyming competence, prelude to the development of poetic competence.

Singing along to an activity: invented songs

33)
[N] Meriel (3;8) plays on her own at the little table, singing nonsense words to a repetitive little tune while Loïc (5;5) plays with his castle and shouts/sings war type songs.

34)
[N] The chanting of number sequences to an unspecified tune while playing or moving about the house is a sort of musical and poetic invention which Meriel did at 3;11.

Joining in rhyming narrative

35)
[N] When aged 1;7, Loïc would give the last word of each line in the rhyming stories 'Four pigs and a bee' and 'Giraffes Can't Dance' .

Four Pigs and a Bee (6 verses of four lines, all with the same metre, as in the following example)
C: One pig in a
L: pigsty.
C: Two pigs by a
L: tree.
C: Three pigs on the
L: pavement.
C: Four pigs and a
L: bee.

36)
Giraffes Can't Dance (22 verses of four lines, all with the same metre, as in the following example)
C: Gerald was a tall giraffe
Whose neck was long and
L: slim,
C: But his knees were awfully bandy
And his legs were rather
L: thin.

The main differences between the two stories are that 'Giraffes Can't Dance' is much longer than

'Four Pigs and a Bee', and is a story with one illustration for every verse, or two verses. Four Pigs and a Bee is short and is not really a story. There is a simple illustration for each line which gives the child much more guidance as to the meaning of the words. As it says on the cover of the book, "Heather Melville is an experienced children's speech therapist, and she has devised this book as an aid to language programmes for pre-school and immigrant children with late speech development. The rhymes and pictures are intended to make young children aware of the use of prepositions, and concepts such as big or little, same or different." It is very easy to get children to join in the telling of 'Four Pigs and a Bee' as the text and illustrations are so directly descriptive and inter-related. There is no ambiguity of meaning. The reader can point to the object to be named and can use finger movements to elicit, or demonstrate, the preposition. It was no surprise, therefore, that Loïc quickly learned to join in the story. It is more surprising that, at such a young age, he was able to do the same with 'Giraffes Can't Dance' which is much longer and which has a more complex narrative text. It is possible that in this case, while the illustrations probably helped, it was mostly a trick of memorisation, thanks to repeated readings, which enabled Loïc to join in reading in this way.

37)
[N) The children's maternal grandfather loves to recite poems and rhyming narratives. Loïc (4;10) joined in Grandpa's recital of 'The Owl and The Pussy Cat' rhyme (without looking at a book). When Grandpa changed the words, Loïc would laugh and correct him:
Gp & L: The Owl and the Pussy Cat went to sea
In a beautiful pea-green boat.
They took some honey and plenty of money
Wrapped up in a five-pound note.
They sailed away for a year and a day
Gp:To the land where the oak tree grows.
L: (*laughs*) No! Bong tree!
Gp:To the land where the bong tree grows.

Other changes made by Grandpa included "the giraffe [turkey] that lives on the hill; by the light of the sun [moon]". While Loïc's participation was occasionally hesitant, he didn't fail to spot a change to the original text.

38)
[N & V] Loïc (5;10), Meriel (3;8) and Owen (2;2) like to join in 'Chocolate Mousse for Greedy Goose' from the 'Animal Antics' edition which combines this story and 'Hippo Has a Hat' by the same author and illustrator. The stories are simple narratives made up of one double page illustration for two short pairs of sentences containing their own internal rhyme and the same metre:
"Where's the meal?" asks hungry Seal. "It's coming now," says busy Cow.
"What can I smell?" asks shy Gazelle. "Macaroni," says Shetland Pony.
"Too hot for me!" says chimpanzee. "Blow on it, then," says Mother Hen.
"Carrots – yuck!" says fussy Duck. "They're good for you," says Kangaroo.
"Chocolate mousse!" says greedy Goose. "Don't just grab it," says angry Rabbit.
"I'll lick the bowl," says furry Mole. "I'll lick it cleaner," laughs Hyena.
"It's all gone," says sad white Swan. "I'll eat the cloth," says happy Moth.
"Let's wash up," says helpful Pup. But lazy Sheep says, "No, let's...
...sleep!"

Together, they can recite the whole story. The book was a Christmas present and by February they knew the first story by heart but not the second, despite always having both stories read together,

since they form a single book, and therefore having had the same exposure to each. When joining in the second story, 'Hippo Has a Hat, although the pairs of sentences are remembered together, they have more trouble remembering the correct order in which to place them. This is probably because the story does not have the same narrative quality as 'Chocolate Mousse for Greedy Goose', but is more like a list of animals and clothing items:

Lots of clothes! Let's try them. Maybe we can buy them.
Tiger tries a shirt. Leopard likes this skirt.
Hippo has a hat. A cardigan for Cat.
Camel finds a coat. An anorak for Goat.
Toad's tracksuit is too big. These jeans are tight on Pig.
Zebra's zip has stuck. "This can't be right!" says Duck.
Shoes for caterpillar. Slippers for Gorilla.
Flamingo buys a bag. A string of beads for Stag.
Now everyone looks smart...
...So let the party start!

These contrasting examples demonstrate that relevant illustrations, regular metre, and predictable rhymes, help children to memorise the pairs of sentences which are connected by contextualised meaning as well as rhyme, while narrative content plays a role in aiding the memorisation of a whole story. In both cases, the children participate. In the case of 'Chocolate Goose for Greedy Goose' they are able to recite the whole story with no, or a little, help. Their greater sense of achievement in doing so is visible, and is mirrored by the more rewarding reactions of listeners.

Joining in non-rhyming narrative

39)
N] Meriel (2;5) wants 'The Three Little Pigs' every night at bedtime. She tries to join in when the wolf says 'little pig, little pig, let me come in' and 'not by the hair of my chinny chin chin'.

The children love to listen to stories while travelling in the car. We have several story cassettes, one of which is the Canadian author Bob Munsch telling his own favourite stories to an audience of children. Munsch invites the children to join in with telling the stories, which they do, both on the cassette and in the car. The participation is in the form of voice or hand-clapping effects and exclamatory phrases, such as "Mortimer, be quiet!" or answering a question, "do you think that was a good idea? Nooooo!" The punch line of the story, 'The Paper Bag Princess' is "you are a bum!" The children, particularly Loïc and Meriel think this is hilarious, since "bum" in British English means "bottom". Owen joins in the general hilarity for the sake of joining in, as he can see it is considered funny by the others, so he thinks he should laugh, too. (In the section 'Transferring input to output', is an example of how he uses this phrase to get my attention.)

The children also try to join in with the few Welsh language books we have, and acquire a little Welsh within the context of the story and story telling, as in these examples:

40)
[N] L (1;11): (*choosing a book*) What shall I read? (*picks up Welsh alphabet book*) <u>mochyn yn y llaid</u> (*pronounced like the English 'slide'*)? ["pigs in the mud" from the book 'Y fferm'].

41)
[N] When I read 'Siarad Babi' in Welsh and English, Loïc (4;10) tries to repeat the Welsh, and does quite well. Unfortunately, I'm not sure of the pronunciation myself, and tell him so.

In the following example, Loïc seems to think the sentence is unfinished and feels he should complete it:

42)
[N] C: (*Reading 'Mr Snow' at bedtime*) When morning came it was quite amazing to see just how much snow had fallen. All the houses, all the trees, all the roads and all the fields were covered.
L (5;7): in snow (*as if finishing an unfinished sentence*)

Telling adapted/invented rhyming narratives

In this example, Loïc adapts his own version of Dr Seuss' 'Green Eggs and Ham':

43)
[N] Loïc (5;5): *(playing in the sand pit)*
Would you like it in the dark?
Would you like it in the park?
Would you like it with Clark?
I do not like green eggs and ham
I do not like green eggs and ham
That's another version, Mummy

Telling existing/adapted non-rhyming narratives

So far the children are unable to tell a non-rhyming narrative in its original form. Since they cannot yet read, their telling of a story is dependent on their memorisation of it and the absence of rhyme and rhythm is clearly a barrier to this memorisation. Usually, some elements are missing or altered. It is possible that the huge variety of books available to them means that they do not memorise non-rhyming narratives because they are not exposed to enough repetition of the same stories. Perhaps we (the children and I) also have a preference for rhyming narratives, so we choose to read them more often than other kinds of story. This does not mean that the memorisation of non-rhyming narratives by small children is impossible. My father tells me that when my brothers were small, they would request the same story, a non-rhyming narrative, every bedtime and they knew the text so perfectly that if he changed one word they would complain. (The result of reading the same story over and over is that he can still recite the text forty years later!) Nevertheless, thanks to illustrations, children can 'read' stories to themselves by combining what they remember of the actual text, and their experience of reading it with an adult, with their own commentaries or inventions, as in the following example. It is Owen's use of the expression "Oh" and his surprised, 'discovery' intonation that indicates he is telling the story, rather than simply naming objects. The way in which he returns to the last page and makes a comment, possibly indicates he has not yet acquired the notion of temporal linear narrative.

44)
[V] (*Owen (2;1) reading 'Sizzles is completely not here'. He lifts the flaps and comments on each picture he finds under*

a flap with surprise as we do when reading the book, looking for Sizzles the dog.)

1. A plane. Oh, a [unclear] Oh, a flower! Oh, a giraffe! Oh, a cat! Oh, a bear! Oh, un autre boy! (*it's a girl*) There.
2. (*New page*) A bee, un autre bee! Oh no! Oh yeah! Un, un autre bee! Oh, yeah! Un orange (*they're hedgehogs*) Un oiseau! A balloon! (*it's a ball*) A plane, a aeroplane!
3. (*New page*) A book. A [unclear] in the caterpillar (*it's a wardrobe with clothes on hangers, shoes on shelves and some toys. There is a Humpty Dumpty toy and some shoes with antennae),* um [unclear] Oh, mummy! (*it's a mermaid doll with long hair)* Oh, a giraffe! Oh a things, elephant, panda (*it's a black and white football)* Oh, a cat! Oh, yeah! There.
4. (*Closes book then opens it at last page*) A bed.
5. (*Then he turns pages backwards to beginning*)

In another example, Owen (2;5) 'reads' to himself from 'Aaaarrgghh, Spider!':

45)
[N] O (2;5): Aaaarrgghh, Spider! Out you go!

This was followed by unclear speech but his intonation indicated he was reading aloud from the book. I was too far away to hear clearly if he was saying real words or just babbling. As he turned the pages he said, "Aaaarrgghh, Spider! Out you go!" several times, possibly at the appropriate moments of the story (these lines occur three times in the story and constitute its *leitmotif*).

46)
[N] Loïc's favourite soft toy was a cat called 'Kitty'. When Loïc was 4 years old, I started making up stories about her for him. I made up a new Kitty story for Loïc (4;10), in which Kitty goes to North America and meets a bear and lives with the Indians. The next morning, he wanted to hear it again but I was busy, so I told him to tell me a story. He told the same one, in his own words, and although I wasn't really able to listen, he bravely continued to the end.
(Loïc's narration of 'The Sleeping Beauty' is discussed in the section on translation competence, as is his and Meriel's narration of 'Toutes Les Couleurs')

Telling invented narratives

At what age can we identify the emergence of narrative competence? Is is when children tell stories they have heard, or when they invent their own? We could point to their first inventions as the beginning of the acquisition of narrative competence. Owen began telling stories, of his own pure invention, at the age of 1;11. He told me the story of the spider who hurt his leg:

47)
[N] O (1;11): (*to Mum*) a hurting a 'pider [=spider].
C: A spider? Hurting you?
O: Yeah.
C: Where?
O: hurting a leg a 'pider.

Owen's story could be classified as 'proto-narrative'. The interpretation we give to the expression "telling stories" could effect our judgement here. To what extent is Owen inventing a simple narrative, within the limits of his age and level of acquisition, or is he just telling a white lie to distract and amuse his parent? What, if any, is the difference? The children like to tell stories using their finger puppet theatre. Sometimes, the stories they tell are adapted versions of existing stories,

sometimes they are pure invention.

At a later stage, a child's own drawings and coloured-in pictures can inspire the creation of a narrative, providing evidence of the development of narrative competence. In the following video transcript, recorded two weeks after Halloween, Loïc invents a story to go with his own illustrations:

48)
[V] L (4;7):

1. L: Once upon a time, uh, one summer, it was Halloween. One cat was standing on a, on a, er what's it called, already?
2. C: Pumpkin?
3. L: Was standing on a pumpkin. A cat was standing on a pumpkin. And one day he grooowwled at people and and they all had a, a Halloween fight, and one of them went fffeuurrruhhhh weeuuuhhhh !!! And
4. (*New picture*) And the boss said, with two eyes, (*shouts*) "stop fighting!" and they stopped.
5. (*New picture*) Now, this one was a boy one, but actually he's Yu, Yuno's cousin. He had eleven eyes, one skull attached to him and lots of letters and a cat[unclear = drawing?] a scary cat, with, and he's ssprrre and a dog attached with a lead uuueerrrgghh.
6. (*New picture*) And then the Bolgo, his cousin, is reeaallly strong. He said "what are you doing? This is my house. Ehh! Poum! Ouch.
7. (*New picture*) (*high pitched whiney voice*) "uehh nyauh nyauh nyuh nyuh [unclear] Are you gonna play with me-uh?" (*growly voice*) "No." "Nnnyhh."
8. (*New picture*) (*high pitched voice and squeal*) "ueh, are you gonna play with me?" (*growly voice*) "Nooo!" That was the end of this story.

We can see that Loïc has already mastered a story-telling intonation style, and sound effects, including changing his voice for the dialogue of different characters. The story, which could be interpreted as two stories (story 1: lines 1-4, story 2: lines 5-8), is (unlike Owen's in the previous example) presented in a temporally linear style, with a time setting, (one summer, Halloween) characters, an event (a Halloween fight), and dialogue. Loïc also makes use of a traditional storytelling formula, "Once upon a time", used here to introduce his monologue as a narrative, as a way of signalling "I'm going to tell you a made-up story".

A couple of weeks later, Loïc (4;7) spent the whole evening drawing pictures, filling A4 sheets with lots of little pictures on the same theme. He drew a page of Halloween pictures, monsters, pumpkins, himself, Eric and me dressed up for Halloween. He told me all about it in detail. It was an exciting new discovery for him that he could invent his own drawings that really look like something and then tell a story with them. This is still at 6;1 a favourite occupation from which he clearly gets a lot of satisfaction.

Imitation and Role-play

Loïc seems particularly sensitive to the speech mannerisms of people he comes into contact with. For example, following his return to school after the summer holidays, he quickly started saying 'purée' more frequently and re-adopted the deeper tone of voice and turn of phrase which seems to characterise his French speech:

49)

[N] L (5;5): T'es fou ou quoi!

This sort of imitation also occurs with the influence of audio-visual input, and is used appropriately:

50)
[N] C: Loïc, it's time for bed.
L (6;0) Oh, man! (*with an American accent, from the 'Ben Ten' cartoons*).

In its simplest form, the 'acting game', for very young children, could consist in the assigning of character roles. This could range from encouraging small children to pretend they are a particular animal, (by making noises or movements when looking at a book, saying a rhyme, or singing a song), to the children themselves assigning character roles from a favourite film or book to members of the family. The children love doing this, for example deciding who is Red, Blue, Pink, (and so on) Power Ranger (from the Power Rangers films) or:

51)
[N] O (2;4): (*pointing to illustrated characters in the book 'We are wearing out the naughty step'*) That's Owen. That's Meriel. That's Loïc. That's Mummy. That's Daddy.

When aged two and a half, Loïc began to play his own role-enactment games, based on television characters:

52)
[N] L (2;7): I'm fixing the table, Wendy
C: Am I Wendy?
L:Yes
C: And are you Bob?
C: Yes, and she's tiny scoop (*touching Meriel*)

53)
[N] L: (2;9) What have Norman to do? Fireman Sam's got his big axe. He must chop the wood. Chop, chop, chop! Who came with the fire engine? Who came with it? It's Fireman Sam! So, I'm telling you a story about fireman Sam. Norman has to stand back out of the fire. Oh No! The monkey's stuck. The monkey has to stand back out of the way. I have to chop the wood. Oh no! I made a mess. Oof! Yes I'm tired. I have to put the fire out. Quick! This this.

Another form of character assigning is when I would sing my own adapted version of the theme tune to the Cbeebies television programme *Big Cook Little Cook* while cooking with the children, and Loïc would join in:

54)
[N] C and L (3;4): (*sing*) big cook, little cook, and teeny tiny baby cook

The original version only includes 'Big Cook' and 'Little Cook', the characters in the television programme. Loïc and I assigned ourselves the roles of 'Little Cook' and 'Big Cook' respectively, and for Meriel, I invented 'Teeny Tiny Baby Cook'.

Another form of role-play involves quoting a character from a story at an appropriate moment:

55)
[N] L (5;4): (*running round the kitchen*) I've got to have another helping

This is a quote from Roald Dahl's Revolting Rhymes, the story of 'Little Red Riding Hood and the Wolf', in which the wolf, "ran around the kitchen yelping, I've got to have another helping!"

56)
[N] L (4;6): And if I see a piece of grandma, I eat it before she runs away!

We had been reading 'George's Marvellous Medicine' and grandma tells George, "Whenever I see a live slug on a piece of lettuce, I gobble it up quick before it crawls away." This is in the first chapter which we had read a few nights previously. I think Loïc was pretending to be a giant when he said this.

57)
[N] C: Do you want the last piece of cake, Loïc?
L (5;4): I'm going to eat it up in one big gulp. Owp!

This is an adapted quote from 'The Tiger Who Came to Tea'. The original version is, "He took all the sandwiches on the plate and swallowed them in one big mouthful. Owp!"

58)
[N] The children are not very enthusiastic about the soup I've made. They can see that I'm disappointed and try to make me feel better:
L (5;5): Thank you for my nice dinner. It was very nice.
M (3;3): Thank you for my nice dinner. I'd better go now.

These are also adapted quotes from 'The Tiger Who Came to Tea'. The original version is: "Thank you for my nice tea. I think I'd better go now."

In the last example of this kind, quoting, and role-enactment and role-assigning all take place within the context of bedtime storytelling:

59)
[N] We are reading 'Little Miss Twin'. The Little Miss Twins repeat the last word in every sentence. Eric comes in to say goodnight:
L (5;5): Goodnight, goodnight, Daddy, Daddy

Then we read 'Mr Muddle'. When it's time to go to sleep, Loïc puts his feet on the pillow and his head under the duvet:

L:I'm Mr Muddle
M (3;3): (*showing me the 'Mr Sneeze' book that was in her bed*) Mr Cough was in my bed.
C: I've got Mr Muddle over here and Little Miss Muddle over there! Now I want you all to be Mr Quiet and Mr Sleepy!
M: Who are you, Mummy?
C: I'm Little Miss Mummy
(*lots of laughter from Loïc*)

Transferring input to output

Some of the most fascinating corpus extracts are those miscellaneous examples which demonstrate the way the children transfer, or reuse, language from MAPNI in their own output, in ways which are difficult to fit into any of the categories used above. As soon as the children start to produce their first words and short sentences, they use language from MAPNI to communicate with the people around them, without necessarily having just listened to, or looked at, the original versions. In other words, the language seems to have been internalised and is then reused in a different context, as a kind of 'wild card' that can be thrown down at a relevant point in a conversation or exchange. The phenomenon is best illustrated with examples.

In the first example of this category, kindly related by a friend, we can see that gestural input can be recycled at a moment the child perceives to be appropriate, when triggered by a familiar word that is related to the gesture:

60)
[N] Anouk: On va faire un petit tour
Yumi (1;0): (*does the 'mill' action*)

Yumi was reminded of the song, by the words 'petit tour': 'Ainsi font font font, les petites marionettes, ainsi font font font trois petits tours et puis s'en vont'. In the next example, a year later, she is reminded of another song and tries to sing it:

61)
[N] Anouk: Toi, tu bois du Rooibos parce qu'il n'y a pas de théine
Yumi (2;1): (*sings*) t'es in, t'es bath *(From the song "T'es ok, t'es bath, t'es in")*

Similarly, the word 'boutons' reminds Meriel of the word 'moutons', and triggers a song:

62)
[N] L (5;10): Papa, tu connais 'La guerre des boutons'?
M (3;8): *(sings)* Il pleut, il pleut bergère, rentrez tes blancs moutons, etc

And Owen is reminded of another song while looking at pictures in a book with me:

63)
[V] C: oh. And what's this?
O: uh a soleil
C: a what?
O: a soleil
C: a soleil?
O: yeah
C: a sun
O: (*sings*) Mr Sun, Sun, Mr golgen [golden] sun, iydeeiy [hiding behind] a tree

The following three examples demonstrate Owen's overextension of the phrase (spoken, not sung) taken from the 'Old MacDonald' song. He seems to have applied the phrase to refer to all animals and farm-related vocabulary, including the farm itself:

64)
[N] O (1;5): (*Holds animal and farmer finger puppets saying*) e-i-o
(*When we talk about farm animals, the farm and the farmer.*) e-i-o
(*While on holiday, when I said that Loïc was at the farm next door*) e-i-o

At the same age, Owen also overextended the name 'Nina', the name of the neighbour's dog that he could see from his bedroom window, and the proto-word 'wah-wah', (based on the sound of a dog's bark), to refer to animals in general. He occasionally referred to cows with a 'moo' sound. Perhaps he considered 'e-i-e-i-o' to be a more satisfactory overextension, since it could include both large and small four-legged animals as well as other kinds of farm animals and the place they lived in.

Sometimes, the children are reminded of a song or rhyme, in this case by hearing a phrase that is also part of the rhyme, and use that input to talk about an ongoing event:

65)
[N] *(It's raining as we get out of the car to go to playschool)*
C: Put your hood up. It's raining.
O (2;2): It's pouring? *(from the nursery rhyme, 'It's raining, it's pouring, the old man is snoring...')*

Here, Loïc reuses the lyrics of a song in a conversational way:

66)
[N] (*We are watching 'Something Special' on Cbeebies.*
We see a little boy go out in the rain.)
L (4;3): (*says not sings*) Raindrops keep falling on his head.

The children can also be reminded of stories and will use words from that story in a conversational way, or might even quote fairly long extracts of text:

67)
[N] (*Owen really liked the story 'Chocolate Mousse for Greedy Goose' at the time of this example, and when at the table, would start reciting if he heard related words*)
C: Be careful, it's hot.
O (2;1): Too hot for me says chimpanzee. Blow on it then says mother hen. *(His actual pronunciation is very babyish ,but we understand because we know what he is saying.)*
O (2;1): Puck [yuck] *(transferred from "Carrots, yuck! Says fussy Duck")*
O (2;1): Macaroni! (*When presented with any kind of pasta, except spaghetti. I know he is reusing the word from the story because of the intonation, which copies that used when telling the story.*)

In the following example, Owen seems to say a funny line from a story in order to get my attention and engage in a little conversation:

68)
[N] O (2.5): (*Reading to himself from a toy catalogue, babbles, then says*) You are a bum! You are a bum! (*Now he's got my attention.*) You are a bum, Mummy, you say that.
C: You are a bum!
O: You eat that? (I'm eating breakfast)
C: Yeah.
O: You like it?

C: Yeah.

The next extract is an example of collaborative verbal creativity which is triggered by the transfer of MAPNI to output:

69)
[N] The lines "Sit up nicely now, be good" and "oops a daisy, mop it up", from the baby board book 'Time for Dinner' were frequently reused by Meriel, when aged 2;8. During and after intensive reading of the book, which was a favourite for a few months, these lines quickly became mealtime usage, clearly with reference to the story we had shared. Whenever I asked a child to "sit up" or "sit nicely", Meriel would invariably add "be good", echoing the line from the book. Meriel did not content herself with merely echoing the text of the story. Her repeated use of the line "oops a daisy, mop it up" when a drink was spilled, enabled her to then move on to her own creation, "oops a daisy, pick it up" which she said when an object was dropped on the floor.

The associations between MAPNI and output are sometimes very direct:

70)
[N] Loïc (1;7): go away *(from the story 'Sharing a Shell').*

And sometimes a little less direct:
71)
[N] Loïc (4;3) surprised me by saying that he didn't want to go to sleep because he was afraid of not waking up in the morning. I didn't know what he meant and asked him to explain. 'It's raining', was his reply. I thought for a bit and asked him 'like the old man in the song?'. 'Yes' he said. It had been raining a lot and we had been singing:

'It's raining, it's pouring, the old man is snoring.
He went to bed and bumped his head
And couldn't get up in the morning.'

72)
[N] E: Vas-y dehors Doolin (*family dog*), vas nous chasser un sanglier
L (5;7): Elle va nous chasser un sanglier dans la foret lointaine (*from the French nursery rhyme, 'Dans la forêt lointaine'*.)

Reuse of MAPNI can be comical:

73)
[N] (*Eric did something to Loïc which backfired on himself and we laughed*).
C: That'll teach you.
L (4; 6): (*laughing*) That'll teach him a lesson

From the intonation and stress he used, I could tell that Loïc was reusing the phrase from the story 'Thomas and James' in which Thomas says to the trucks "This'll teach you a lesson, this'll teach you a lesson", and the trucks reply, "Yes, it will. Yes, it will." When I read the sentences, I use intonation and stress to make them sound like trains clanking along the tracks (which I believe was the author's intention).

The day after I overheard Owen reading 'Aaaarrgghh, spider!' to himself, I overheard this conversation between Owen and his father:

74)
O (2;5): (*pretending his hand is a spider walking up Daddy's arm*) Spider.
E: Spider.
O: Aaaarrgghh, spider! Out you go!

The word 'spider' acted as a 'trigger word' for Owen, reminding him of the line from the story.

Reuse of MAPNI is often very creative:

75)
[N] L (1;9): "Do you like ketchup your yoghurt?"

In this example Loïc, is reusing language from the book 'Ketchup on your cornflakes' in which the top half of each page (divided into two flaps) contains the same combination: 'Do you like + Noun' while the bottom half contains a 'Preposition + your + Noun?' combination. The effect is to be able to produce a wide variety of questions with different noun phrase and preposition combinations. Here, although he forgot the preposition, Loïc actually created his own combination, not a copy of one from the book, and asked me the question in context, while I was putting honey into yoghurt at the dinner table. It is unlikely that, at 1;9, Loïc would have acquired this structure without being exposed to it in such a manner, in a way which involved a lot of repetition combined with the awareness that some phrases within the structure were variable.

The transfer of MAPNI to output is sometimes a little off the mark:

76)
[N] L (4;6): It's a very particular necklace.

This sentence is an adaptation of a line of text from the audio story of 'The Princess and the Pea', on a cassette that we listen to in the car. In the story, Nanny Petunia says to fussy Prince Jabalad "Very particular, aren't we. It's top brick of the chimney or nothing for you, isn't it?". Loïc is referring to a necklace that I made for him by cutting out the lion picture from a box of cereal. It was a favourite necklace for a long time. In this example, he seems to think 'particular' means 'special' rather than 'fussy'.

In the next example, Loïc reminds himself of a line from the story 'Hippo has a hat' ("this can't be right, says duck"), and changes his wording to match the phrase from the story, complete with the intonation usually used when reading it out loud:

77)
[N] L (5;10): (*playing with the Rubik's cube*) That can't be right. That can't be right. This can't be right.

Audio-visual input is also re-used in output. In the next example, it is not so much re-used, as referred to:

78)
[N] C: Owen's very handsome with his new haircut.
M (3;8): he's handsome like Nick. (*from Barney and friends "You're very handsome Nick"*)

In this example, Owen is reminded of, and quotes, a phrase he has heard in a cartoon:

79)
[N] (*I get the cheese out of the fridge. Loïc hates cheese and always makes a fuss about the smell.*)
C: This smells interesting!
L (5;11) : Aargh! Ca pue!
C: You can say "ça sens mauvais" or "je n'aime pas cet odeur".
L: Je deteste cet odeur (*with exagerated emphasis*)
C: You can say that if you want to be really, really silly!
O (2;2): Really, really stuck (*from the cartoon 'Oswald' in which Oswald and his friends get stuck together while making super sticky honey buns. They repeat and expand on the words," And now we're really stuck....really, really stuck...really, really, really stuck", and so on.*)

Some adaptations from MAPNI are very poetic:

80)
N] I got into Loïc's bed at night, to comfort him after a nightmare. When I moved to get up he said:
L (5;4) : Come back, come back, wherever you are!

This example seems to be adapted from the phrase 'Come out, come out, wherever you are'; I'm not sure where he had heard this, possibly a television programme or film.

This MAPNI-related output, was only possible in a bilingual context:

81)
[N] Loïc had been watching 'Babar' in French on television at his child minder's house. I couldn't remember that in the English version the character Fleur is called Flora; I had been calling her Fleur too. Loïc knew that 'fleur' could be translated as 'flower'. We had done some baking together, so Loïc was familiar with basic cake ingredients, including 'flour'. The result is the following translation to homophone confusion:
C :Babar's children are called Alexander, Pom and Fleur
L (1;11): butter and sugar

Triggered references to MAPNI can be produced in a translated form:

82)
[N] (*The children are all excited at dinner and shouting. Eric says something like they'd better calm down or the police will come. They talk about weapons.)*
Meriel (3;8): J'ai un fusil dans ma culotte *(like Roald Dahl's 'Red Riding Hood' who "whips a pistol from her knickers")*

French-language MAPNI can be inserted into English-language output, and preferred to the possible English equivalent:

82)
[N] Just before Christmas, Owen and Meriel were introduced to, and became fans of, the Christmas special 'Charlotte aux Fraises' cartoon. Owen (1;11) adopted the name of the cartoon character "Charlotte aux Fraises" to refer to strawberry yoghurt, then to any kind of fruit yoghurt.. He may have been trying to say *yaourt à la fraise*, or may have thought *yaourt* and *Charlotte* were the same, or too similar to distinguish. The whole family has now adopted this term to refer to fruit yoghurt, particularly since if offered a "strawberry yoghurt", Owen will refuse, but if offered a "Charlotte aux Fraises", he will accept happily! I am certain that, if I offered him a "Strawberry Shortcake", (the

English name for this cartoon character), Owen would have no idea what I meant and would also refuse.

The last example of MAPNI influencing children's output, is a comment by Loïc which demonstrates the importance of the *relevance of the input to the ongoing situations*, relevance which seems to be behind all the examples of MAPNI in children's output:

83)
[N] C: (*singing to Christmas CD*) Let them know it's Christmas time
L (4;7): *I* know it's not Christmas time
(*Earlier I had said, "Isn't mummy silly listening to Christmas songs when it's not Christmas? I just fancied listening to them."*)

1.4 FORMULAIC LANGUAGE IN ACQUISITION

Hypothesis 1b) Much of the re-used input from MAPNI is formulaic.

In this section we will examine some of the examples that we looked at in 1.2 with the aim of identifying them as formulaic sequences. The reason for doing this is to suggest MAPNI is rich in formulaic language, and it is for this reason that children borrow and adapt whole sequences from MAPNI. In this way, MAPNI contributes to children's holistic language processing and production, particularly at a stage in their development when the balance of holistic to analytic processing is tipped towards more holistic processing. Alison Wray defines the formulaic sequence as:

> a sequence, continuous or discontinuous, of words or other elements, which is, or appears to be, prefabricated: that is stored and retrieved whole from memory at the time of use, rather than being subject to generation or analysis by the language grammar. (Wray 2002:9)

According to Wray's 'Needs Only Analysis (NOA), we break down linguistic material only when we need to in order to access or create new meaning' (Wray 2008:189). In other words, the default strategy for humans is 'to engage in the minimal possible processing capable of matching forms with meanings' (*ibid*:202). Formulaic language, which Wray has also termed multiword morpheme equivalence units (MEUs), is therefore the default processing option.

Wray identifies three populations as especially fruitful for exploring the nature and role of formulaic language: young children, foreign/second language learners, and code-switchers (Wray 2002:39). Our subjects fit into all three categories. Wray proposes that formulaic language serves the function of promoting children's social and physical interests, as well as supporting language acquisition. In fact, according to Wray, language acquisition is a natural consequence of this function and is achieved by children's use of large units with complex meaning, which are analysed as little as possible, according to the principle of NOA, (Wray and Namba 2003:35). 'The principle holds that children attempt, by default, to understand input holistically, grounding the meaning of the form by using context, pragmatics, and whatever linguistic knowledge has so far been accumulated. Children only break input down further when they need to – that is, when they cannot derive sufficient detail by the default route, and/or when they need a component in order to formulate output' (*ibid*). 'Wray proposes that the child uses formulaic sequences to support four key agandas...a) getting things done (meeting physical, mental and emotional needs through the agency

of another person), (b) expressing individuality (being noticed and taken seriously), c)social integration (feeling part of the group), and (d) gaining control of processing (language acquisition)' (*ibid*:36)

.

Patterns of formulaicity in child language include fused strings, which the child has constructed and stored for subsequent retrieval. These strings may or may not be grammatical, and they will probably be used repeatedly. Also present are under analyzed strings, such as *cup of tea*, which have a more complex structure than the child thinks they have, and display grammatical and/or lexical knowledge beyond the child's current generative capacities, (Wray 2002:106-7). 'Some underanlayzed strings are specifically memorized, as opposed to just picked up, and they play a particular role in the linguistic behaviour of the child and its carers,' (*ibid*:108). Such strings are rhymes, songs, chants, and socializing institutionalized routines. 'In the case of songs and rhymes, having realized that the most important thing to do is reproduce the material as closely as possible to the original, the child may even fail to perceive it as message-carrying at all, or, at least, may consider the message incidental to the purpose of the learning. In this respect, the child is right, of course.' (*ibid*:109). In their analysis of formulaic sequences in a corpus of Japanese-English bilingual child language, Wray and Namba mention imitating and imaginary role-play as functions of a formulaic sequence, and television as a source of input (Wray and Namba 2003:39). So, not only do we have suitable subjects, we also have a pertinent theme. And this is probably not a coincidence.

Snow also touches on the subject. 'The major dimension of individual differences which has been related to aspects of CDS is the expressive / referential distinction...it is possible to relate children's relative early preference for nouns to characteristics of the input' such as 'a relation between expressiveness and maternal directiveness', (Snow 1995:186) 'The distinction between referential and expressive children can be better expressed as a distinction between children who prefer common nouns versus frozen phrases (see also Peters, 1983). The tendency to acquire and use frozen phrases has not been related to specific aspects of the input in large-scale studies, though it has been noted as a characteristic of blind children (Andersen et al., 1993), and it clearly relates to certain interactive contexts – routinized games, recurrent interaction frames, and speech that is difficult to map onto external referents (see Snow, Perlmann, and Nathan, 1987)', (*ibid*:187).

One of the main problems with formulaic sequences, from a research point of view, is the difficulty of their identification. 'The main reason for this difficulty is that the majority of formulaic sequences are, to the casual ear or eye, indistinguishable from novel strings because they are grammatically unexceptional and their meaning is entirely predictable' (*ibid*:26). Wray and Namba's response to this problem is to propose a criterion-based approach to identification, with the aim of enabling the researcher 'to explore why he or she feels that a particular wordstring is formulaic, by establishing reliable justifications for that intuitive judgement' (*ibid*:27). There is not room here to describe in detail the eleven proposed criteria which 'aim, between them, to capture the major externally detectable features of formulaic sequences' (ibid:28). I will simply refer to the criteria for which selected examples receive 'strongly agree' or 'agree' judgements, or in other words, those which enable a positive identification of a selected string as formulaic. Another advantage of being a parent/researcher is that I am able to make judgements based on detailed knowledge of the children's linguistic capacities and their input experience, something which helps particularly with

the identification of formulaic sequences.

We will classify the examples in this section with letters of the alphabet, in order to differentiate them from those analysed in Part1.3 and Part 2.2.

A)
Meriel's reuse of the formula "Oops a daisy, mop it up" demonstrates the ease with which such formulas are acquired from MAPNI and applied to the equivalent real-life context, particularly when the context is relevant to the child and forms a regular part of their personal experience. The first part of the expression is grammatically unusual, resulting in "strongly agree" to criterion A: By my judgement, there is something grammatically unusual about this wordstring. I also "strongly agree" with criterion B: By my judgement, part or all of the wordstring lacks semantic transparency. Again, I strongly agree with Criterion C: By my judgement, this wordstring is associated with a specific situation and/or register. The situation being 'something has been spilled' and the register being 'language used with a small child'. I strongly agree with Criterion E: By my judgement, this precise formulation is the one most used by this speaker when conveying this idea. I agree with criterion F: By my judgement, the speaker/writer has accompanied this wordstring with an action, use of punctuation, or phonological pattern that gives it special status as a unit, and/or is repeating something s/he has just heard or read. Meriel has learned the formula through imitation, so I strongly agree with Criterion H: By my judgement, based on direct evidence or my intuition, there is a greater than chance-level probability that the speaker/writer will have encountered this precise formulation before in communication from other people. Meriel's ability to then move on to create her own version, "Oops a daisy, pick it up", is a lovely example of the way children learn that it is possible for a formula to have 'gaps' within the formulaic frame which can be filled according to the context. This example is a case of Wray and Namba's second kind of three possible types of variation: limited lexical variation: closed sets such as pronouns or a small group of interchangeable words.

B)
In the video transcript 'Watching Sleeping Beauty 2' there are many occurrences in Owen's and Meriel's speech of the following sequence variations:

A naughty cat
a naughty cat again
there's that naughty cat
there's that naughty cat again

The same phrase was used when reading a book:

[N] (*reading 'Four Pigs and a Bee', Owen sees a picture of a cat*)
O (2;5.17) a naughty cat
M(4;0) a naughty cat
C: a naughty cat?
O: Yeah! A naughty cat.
C: Why is he naughty? What did he do?
O: scratched me
C: That cat? Scratched you?

O: Yeah. Scratched me a naughty cat.

We have a cat and Owen often gets scratched by it because he is very rough and clumsy with it. I have clearly responded to Owen's complaints, or upon seeing scratch marks on him, by saying things along the lines of "What a naughty cat!" Also, the cat really *is* naughty. It jumps on to the table and steals food, so I am often declaring how naughty it is. No wonder, then, that Owen and Meriel have acquired the formulaic string "naughty cat". The example receives a "strongly agree" judgement of criterion E: By my judgement, this precise formulation is the one most commonly used by this speaker when conveying this idea. This judgement is not only possible thanks to my detailed knowledge of Owen's and Meriel's language use, but also since the sequence appears so many times in one extract, and then again on a separate occasion. These examples do not constitute the re-use of MAPNI in output, but MAPNI as a context within which children learn to communicate, thanks to the joint attention of speakers and the construction of shared relationships.

C)
Example 53, in Part 1.3, Loïc (2;9) provides us with the sequences:
Norman has to stand back out of the fire.
The monkey has to stand back out of the way.

These are examples of lexical variation within the same sequence. Loïc is adopting a power role in play. The expression is a command, so receives an 'agree' judgement for Criterion D: By my judgement, the wordstring as a whole performs a function in communication or discourse other than, or in addition to, conveying the meaning of the words themselves. It is specifically associated with a situation and register (Criterion C), and Loïc learned the expression from a children's cartoon (H).

We can also use Wray and Namba's functional categories for children's use of formulaic sequences ('four key agendas' mentioned above). Example 50 from Part 1.3 demonstrates how Loïc uses a formulaic sequence, learned from MAPNI, to express his individuality:

D)
C: Loïc, it's time for bed.
L (6;0): Oh, man!

Detailed knowledge of Loïc's language at the time supports the belief that he has used the expression before (E), and similar knowledge of his input enables us to be sure that he heard it from a children's cartoon (H). The expression is used in a situation and register-specific way, even if it is a bit cheeky to use the expression with his mother, rather than with friends (C). It is phonologically demarcated because pronounced with an American accent (F). The expression contains semantic hyperbole, since the addressee is not a man (B).

'As a counter-balance to children's drive to draw attention to themselves, and thus maximize their opportunities for interaction, comes the desire to conform. Wray (2002) observes that "institutionalised routines, such as thank you and bye-bye, set up significant social signals of the child's compliance with the expectations of the adult world" (p.18). Learned holistically, these formulaic sequences act as "magic words", particularly in rituals related to politeness (pp. 109-110)'

(Wray and Namba 2003:39). The following example demonstrates the children's use of formulaic sequences, learned from MAPNI, for social integration:

E)(Example 58)
L (5;5): Thank you for my nice dinner. It was very nice.
M (3;3): Thank you for my nice dinner. I'd better go now.

The first part of the two utterances receive strongly agree judgments on criteria C, D, F, H. The second part of Meriel's utterance also receives an 'agree' judgement on criterion B, and "strongly agree" judgements on criteria A and K: By my judgement, this wordstring contains linguistic material that is too sophisticated, or not sophisticated enough, to match the speaker's general grammatical and lexical competence.

Idioms appear to be the most obvious form of formulaic sequence. Nevertheless, creativity, resulting from analysis of the component parts, is possible:

F)
[N] *(staying in Ireland, next to a dairy farm)*
C: It's raining cats and dogs
L:(2;7) and cows!

In this example, Loïc seems to have analysed the components of an idiom, and believed it possible to complete the idiom with a grammatically, semantically and pragmatically salient addition. The formulaic string 'it's raining cats and dogs' had not yet been acquired by Loïc as a formulaic sequence, since at his young age he probably hadn't heard it often enough on different occasions which shared the one same condition of 'it's raining a lot', while eliminating other, irrelevant factors. Using the grammatical, lexical and pragmatic knowledge at his disposal, he generates a very logical, and comical, addition! Creativity in idioms is not impossible; 'it is possible for a speaker to contemplate the form of an idiom, and to see creative potential in it' (Wray 2008:32). What makes a variation an accepted idiom is whether or not it has been encountered in a real communicative context, and to what degree it is familiar. Learning about idioms and either their fixedness or their potential for creative adaptation, is just one of the challenges facing all language learners, and children are no exception.

In the next example, we see that Loïc, now three years older, has learned this fixedness lesson, and will not tolerate deviation from it:

G)
[N] (*Reading poem from 'Two Minute Kitten Tales'*)
C: ...a pain in the head
L (5;8): a pain in the *neck*.

Conclusion to Part One

In Part One we have examined the nature of bilingualism, and bilingual acquisition, with particular reference to the role of input. We looked at some of the features of musical, audio-visual, poetic and

narrative input which make them relevant to children's acquisition of language, including the acquisition of musical competence, poetic competence and narrative competence. We then analysed examples of the way MAPNI can provide a focus of joint attention and a context for communication, and the children's re-use of MAPNI in their own linguistic output.

As a result of this examination and analysis, we can make the following conclusion. It seems to be particularly important to children to communicate in a way that is relevant to the ongoing activity. This echoes the 'here and now' nature of CDS. The children's re-use of MAPNI demonstrates the importance of the 'here and now' and the way MAPNI can be relevant to children, even if the subjects explored in MAPNI are sometimes very different from children's personal experience. Children seem to make associations, either linguistic, pragmatic, or contextual, between ongoing activity and MAPNI, and these associations trigger the re-use of language encountered in MAPNI into children's own utterances.

In the final section of Part One, we examined some examples for evidence of formulaicity, using the criteria-based approach proposed by Wray and Namba (2003). We demonstrated the positive identification of a selection of examples with the aim of highlighting the link between children's reuse of MAPNI and holistic processing in bilingual first language acquisition. MAPNI is rich in formulaicity and provides children with a context within which they can become familiar with formulaic sequences of different natures and serving a variety of functions.

PART TWO

The Acquisition of Translation Competence

Translation is a key element of bilingual language behaviour and the children are learning how to translate.

Introduction

One of the advantages of studying the language acquisition of bilingual children is their ability to manipulate two languages. An important, and often daily, aspect of bilingual linguistic behaviour is translation, and bilingual children are no exception. In fact, by looking at the acquisition of translation skills in young bilinguals, we can learn a lot about the way they learn language, the way they cognitively store and retrieve each language, and the way they handle translation equivalents. By analysing examples of their translation of stories, we can identify key linguistic elements, such as formulaic language, which help children to memorise and tell stories. In this section we will look at the nature of the translation task, some of the aspects of translation that are discussed in the fields of bilingual and acquisition studies, and the notions of "natural" and "native" translator presented in the field of translation studies. I will then present and discuss some examples of translation from my corpus of bilingual child language, including examples of the way the children translate stories.

The pertinence of a bilingual case study.

The most significant thing that a bilingual child instinctively learns about language is that the symbol is not the concept. This means that for each concept (object or idea) he encounters he realises there are at least two, and by extension probably more, language-related symbols (words), and in this way he learns to distinguish the nature of the concept from the nature of the symbol. To be completely transparent, when a bilingual child understands that "apple" and "pomme" are two different words, from two distinct languages, which both refer to the same object, he realises that objects have names which are independent of their existence as an object. In the spirit of René Magritte's beautifully illustrated "Ceci n'est pas une pipe", the bilingual child will learn more naturally and earlier than his monolingual counterpart, that the word is not the object, only a phonological, and then written, representation of it. Of course, he may not be capable of analysing or expressing this inherent truth about language which demands a certain level of meta-linguistic awareness and philosophical detachment. Nevertheless, that which a monolingual child one day realises with amazement upon hearing people speaking another language and receiving an explanation from an adult, the bilingual child just takes for granted.

Translation, and other aspects of bilingual language such as codeswitching, borrowing, and interference, can tell us much about the bilingual acquisition process, and the bilingual's cognitive organisation of his two languages. Bilingual language usage can shed light on issues such as formulaic language and the holistic acquisition process. Translation can give clues as to the way children understand what they hear and say. It is particularly useful for identifying

misunderstandings if, for example, a child translates something and gives it a different meaning in the other language. With reference to bilingual studies, the examination of children's command of translation equivalents, from a very early age, can give weight to the argument against the Single System Hypothesis. Volterra and Taeschner's claim that very young bilingual children use no translation equivalents was questioned by Quay's demonstration of her Spanish / English bilingual subject's use of crosslinguistic equivalents from the beginning of interpretable speech onwards (18 out of 47 word types at age 1;5, 13 formed nine translation pairs) (de Houwer 1995:231). This section of my own study of bilingual language provides further evidence to refute the 'no translation equivalents' claim. In fact, it lends itself to further discussion of the separateness of the bilingual child's organisation of her two languages.

It is possible that the strategy employed in the up-bringing and/or education of young bilinguals may have an impact on their awareness and manipulation of translation equivalents. With particular reference to the one-person-one-language strategy, Baker (2006) refers to a 1998 study by Nicoladis, who found that "Children 's understanding of the appropriate social use of their two languages may lead to an understanding that the translation equivalents in their vocabulary belong to two distinct input languages" (Nicoladis 1998:105 in Baker 2006:99). Similarly, 'Clyne (1987) sees as a particular advantage of the one person / one language input condition the early development of a high degree of metalinguistic awareness, which in turn he sees as a good basis for developing translation skills.' (de Houwer 1995:225)

2.1 The Acquisition of Translation Competence

Definitions: translation and interpreting

We must start this section with a definition of the term "translation". Usually, in the field of Translation Studies, a distinction is drawn between written translation, or the translation of text, and oral translation, or the translation of speech, (referred to as interpreting), with an apparent academic preference for the study of the translation of written texts. In addition studies of the acquisition of translation competence most frequently refer to the training of professional translators and interpreters, and concern questions of a pedagogical nature such as the most effective way to *teach* translation skills.

Our study is different in that its subjects are young, pre-literate, natural translators / interpreters. For our analysis, translation and interpreting can be placed on a continuum, of written and oral translation, upon which the bilingual child is placed between these two extremes. The young bilingual child deals with spoken language, including spontaneous speech, which is characterised by "a greater use of contextualised language, hesitations, pauses, and unfinished sentences" (Hamers and Blanc 1989:245). Spoken texts, which are examples of decontextualised language which has been "constructed, reread, [and] reconstructed" (*ibid*) are accessible to the pre-literate bilingual thanks to other readers around her. The pre-literate bilingual child can produce a translation of a written text when that text has been read aloud to her in one language, and the child in turn tells the same story in another language. In this case, the young translator uses skills other than those used for the interpreting of spoken, conversational-type language acts, since she is truly translating a text, with all its textual specificities, even if the translation is presented in a spoken form. However, the

child is not able to go through the construction and reorganisation process carried out by the literate translator, and the translation will remain spontaneous and instinctive. The translation of spoken language, or interpreting, is differentiated from written translation, by its simultaneous or consecutive, and often rapid, nature. The bilingual child is particularly adept at this sort of translation and practises this form of message transmission in a natural and regular way.

The translation of a spoken text is a form of consecutive interpretation in which "long-term memory plays an important role...particularly concerning the content of the message" (Hamers and Blanc 1989:249). The recall of a story that was previously read aloud, may be greatly aided by looking at the book and it's illustrations, which may act as triggers for the long-term memory. Despite the many differences between translation and interpreting, both activities "share a general mechanism of bilingual processing and can only be performed by bilinguals who process the language in such a way that the message remains intact while the code is changed" (Hamers and Blanc 1989:248). This leads us to speculate on what that process is, and how young, untrained bilinguals carry it out.

For Catford (1965 in Kaya 2007), "translation implies the substitution or replacement of textual material in one language by equivalent textual material in another language". The search for equivalence can be problematic if we consider the relationship between language and thought, language and culture. Van Hoof describes the translation act as the reformulation of a text in Language A into a text in Language B (lecture notes). Reformulation can be considered as both a pragmatic and creative process, and the notion of reformulation is useful to describe the often creative transmission of messages by the bilingual child, from one language into another. The bilingual child does not concern herself with theoretical questions about the validity of reformulation. Her translation is instinctive and target-oriented, reflecting the oral nature of her translation acts. When she translates, it is not an exercise in translation, but an attempt to transmit information in a comprehensible way. It is the transmission of meaning, idea for idea, not word for word. If, by accident, she finds herself translating word for word, in a way that her co-speakers find incomprehensible or unacceptable, she will correct her error (if she perceives it to be one).

Competence and quality

The notion of linguistic competence is an important one when considering translation skills. We have already seen, in Part 1.1 how difficult it is to apply competence-based definitions of bilingualism. It is generally assumed that, in order to be a competent translator, one must be very skilled in both languages. Following the reasoning that all bilinguals have a dominant or preferred language, it is also believed that the ability to successfully translate into a language is directly linked to the dominant status of that language. "Long and Harding-Esch (1978) demonstrated that unbalanced bilinguals produce lower quality summaries and do not recall texts in the second language as accurately as in the mother tongue" (Hamers and Blanc 1989:250). Not surprisingly, then, professional translators generally translate into their first language. Hamers and Blanc's claim that "high competence in L2 is a prerequisite for ensuring high quality in the processing of L2", could be adapted to young bilingual children by removing the adjective "high". Young translators will be able to produce a translation or interpretation that corresponds to their overall language competence. As Harris puts it "The language quality of natural translation must of course be judged according to the translator's age and environment" (Harris 1980:379). Whether we judge the quality

of the translation to be "high" depends on our expectations of the child's ability in relation to the relative difficulty of the translation task. It can be argued, and I'll make a case for this later, that a very young bilingual is capable of producing a *relatively high* quality translation despite very limited language competence.

Code-switching or translating?

Code-switching is a common feature of bilingual language behaviour, and young bilinguals are no exception. Code-switching is defined as 'the alternate use of two languages or linguistic varieties within the same utterance or during the same conversation' (Hoffmann 1991: 110). Code-switching may be intra-sentential (within a sentence) or inter-sentential (between sentences). Intra-sentential code-switching, when it consists of switches that occur at the lexical level within a sentence, is sometimes referred to as code-mixing. Code-switching can occur over phrases and sentences, including tags and exclamations (Hoffmann 1991: 104). Code-switching can, therefore, range from the transfer of single words into a sentence in another language to the constant switching between languages within and between sentences in the same conversation. Colin Baker lists twelve uses of code-switching among bilinguals and suggests that code-switching in two-year-olds can be context sensitive (Baker 2006:111-114):

1. emphasize a particular point
2. substitute for an unknown word
3. express a concept with no equivalent in the culture of the other language
4. reinforce a request
5. repeat to clarify a point
6. express identity, communicate friendship or family bonding
7. relate a conversation
8. interjecting
9. ease tension and inject humour
10. signal a change of attitude or relationship
11. exclude people from a conversation
12. according to topics and their specific vocabulary

There seems to be a fine line between code-switching and translation when the bilingual changes language to emphasize a particular point, to clarify a point, to reinforce a request, or to relate a conversation, since there is an element of repetition involved, repetition which is formulated through translation.

Child interpreters

Baker analyses the role of bilingual children as interpreters and "language brokers", particularly in the case of immigrant or minority families where the parents may depend on the children to play this role (Baker 2006:113-115). Referring to studies by Valdès (2003) and Tse (1995,1996), he explains that children don't just transmit information, they also ensure the message is "culturally translated" as in the following example:
Father to daughter in Italian: '*Digli che è un imbecille !*' (Tell him he's an idiot!)
Daughter to trader: 'My father won't accept your offer.'

Dalgalian (2000:18) gives a comparable example and explains that the young interpreter does not mechanically translate sentences. He is, above all, concerned with the meaning of what is being said. He reformulates the message before passing it on, rather than simply translating it, so as to ensure it is appropriate and native-like. According to Baker, linguistic, emotional, societal and attitudinal "pressure is placed on children during language brokering" (Baker 2006:114). Exact translation may be difficult since their languages are still developing. The information to be translated may be related to adult concerns (e.g. medical questions, conflicts). Children may be expected to behave in an adult manner when interpreting, but still be treated as children at other times. They may see their parents' inability to speak for themselves as a sign of inferiority, resulting in a negative image of their minority language and culture. "Bilinguals are not necessarily good interpreters" (*ibid*) since successful interpretation requires identical vocabularies in two languages, whereas bilinguals usually develop situation-specific lexicons. Some metalinguistic awareness, which might be beyond the developmental capacity of the child, may also be necessary in order for the young interpreter to correctly understand and transmit the message. Despite these difficulties, Baker believes "language brokering" or interpretation can have "positive outcomes" for children (*ibid*). Not only will children's self confidence and status benefit, but also their linguistic awareness of the "problems and possibilities when translating words, figures of speech, and ideas". Bilingual children faced with interpreting and translation tasks at an early age will realise that "one language never fully parallels another" and that it is "hard to translate exactly the inner meanings of words and metaphors" and "may lead children to be more introspective about their languages". The conclusion is that "interpretation may both require and stimulate metalinguistic awareness" (*ibid*: 115).

The cognitive organisation of two languages and translation

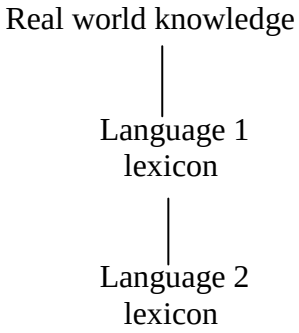
"The question of 'two systems or one' resurfaces at each level of analysis of bilingual language behaviour" (Obler & Gjerlow 1999:128). Weinreich introduced the categorisation of different types of mental organisation of the speech of bilinguals, regarding the relationship between sign and meaning:

> Once an interlingual identification has occurred between semantemes of two languages in contact, it becomes possible for the bilingual to interpret two signs whose semantemes, or signifieds, he has identified as a compound sign with a single signified and two signifiers, one in each language. Instead of treating the English *book* and Russian *kniga* as two separate signs *(A)*, he could regard them as a compound sign *(B)*:

(Weinreich 1968: 9-11).

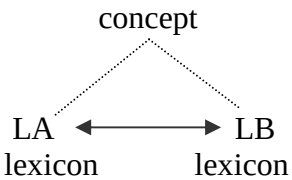
Linguists have developed this idea by distinguishing between compound bilingualism and co-ordinate bilingualism. The compound bilingual is said to have 'a single cognitive representation for

two translation equivalents', whereas the co-ordinate bilingual has a separate cognitive representation for each translation equivalent, (Hamers & Blanc 1989: 8 - 10). According to Hamers and Blanc, different forms of bilingualism can be placed on a compound/co-ordinate continuum, and a bilingual can be at the same time more compound for certain concepts and more co-ordinate for others. Compound bilinguals learn languages in the same cultural and social contexts; compound bilingualism is sometimes said to be the bilingualism acquired by a child who 'grows up in a home where two languages are spoken more or less interchangeably by the same people and in the same situations' (Fishman 1964: 40). Coordinate or bicultural bilinguals learn their languages in distinct contexts resulting in fully distinct representations corresponding to their two languages (Pavlenko 2005:8) Co-ordinate bilingualism is said to be the bilingualism acquired by a child who learns one language at home with her parents and the other at school. Each type of bilingual acquisition supposedly leads to a different type of cognitive bilingual functioning. Fishman refers to the co-ordinate bilingual as the 'true' bilingual (Fishman 1964: 40), perhaps because he considers co-ordinate bilinguals as having a more ordered bilingualism, and as being less prone to interference. We can add to the compound/coordinate distinction a subordinate bilingual lexicon in which "the words in the lexicon of one language are associated with concepts. The words in the other language derive their meaning from their translation equivalents. No differences in associations" (Obler & Gjerlow 1999:129).

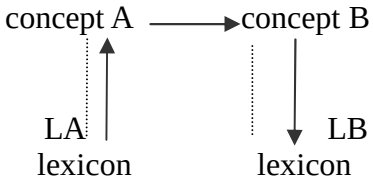


The discussion of the cognitive organisation of a bilingual's two languages becomes relevant to our study at this point due to the importance of bilingual memory in translation. We can question the link between this organisation and the process of translation.
By giving the compound and coordinate theories visual form, we can represent, with dotted lines, the relationships between concepts / signifieds and lexicon / signifiers, and with arrows the possible translation routes in each case (in the case of coordinate processing, only the LA to LB translation route is shown in the diagram).

Compound Bilingualism



Coordinate Bilingualism



We can question whether the compound bilingual can translate directly from one lexicon to the other without going via the shared conceptual store, or whether a process of lexical encoding takes place whereby the "mentalese" of the conceptual store is encoded into either LA or LB. We can also wonder whether the coordinate bilingual has to translate the concept in order to find the lexical equivalent. At a glance, the compound bilingual would appear to need less effort when translating. We can also wonder about the existence of true equivalents, in the case of coordinate bilingualism. Perhaps we could envisage a combination of both systems, with a compound organisation for simple, universal, concepts, such as *hand / main*, and a coordinate organisation for more complex concepts, such as *upbringing / education*. For the storage and manipulation of simple concepts, one conceptual store may suffice, whereas for more complex concepts each language and its corresponding culture will develop a specific concept with its own related signifier. The learning of abstractions requires the cognitive language map to be advanced, be it because children are not developed enough to comprehend abstractions, or that abstractions can only be fully understood in the language they are expressed in. The result is that the translation of abstractions can be difficult because of the lack of real translation equivalents. In her work on bilingualism and emotions, Pavlenko states that 'recent research has convincingly demonstrated that [the compound / coordinate distinction] was an oversimplified approach to the bilingual mental lexicon, and that different types of representations may coexist within the same lexicon, depending on the speaker's individual trajectory....the distinction between naturalistic acquisition contexts and classroom contexts still holds, because only naturalistic exposure and second language socialization lead to development of coordinate - distinct and language-specific – representations, while classroom learning results in subordinate representation- mapping of new linguistic items onto the pre-existing conceptual system' (Pavlenko 2005:8- 9). Learning L2 while still acquiring L1 may lead to coordinate representation, since the child is still mapping all representations. Adults can acquire new concepts in L2 (without equivalents in L1) when exposed to them in L2 context and through the medium of L2 (cf. Pavlenko's discussion of emotions words and concepts acquired by adult bilinguals living in L2 context for long time; my own experience of acquiring French notions that don't exist in English and are difficult to translate; the increased difficulty in translation when living for long time in an L2 environment and internalising L2 concepts which take on their own representations and are no longer dependent on L1). Therefore, it is possible to have a combination of compound and coordinate representations with some concepts becoming more coordinate over time.

Hatzidaki and Pothos (2007:126) begin their analysis, 'Language representation in translation' by stating the agreement of linguists concerning the existence of a single cognitive "storage space" for all the possible meanings that can be conveyed by a word or image, and two separate lexical stores, one for each language. They then discuss the "Revised Hierarchical Model" (or RHM) proposed by Knoll and Stewart (1994) which claims that the links connecting each of the three stores (one conceptual and two lexical) depends on the direction of translation, either from L1 to L2, or from L2 to L1. The theory proposed by Knoll and Stewart states that the connections between L1 and L2 are more conceptual than between L2 and L1, and that translation from L1 to L2 goes through the conceptual store, whereas translation from L2 to L1 is possible via direct lexical retrieval, making it easier and faster. Le Heij et al (1996) propose that the differences in speed between the two translation directions is not the result of different translation routes, but because conceptual activation is easier from L1 to L2, and lexical retrieval is easier from L2 to L1.

The question of the balance of a bilingual's two languages is also identified as a decisive factor in the translation act. Long and Harding-Esch ((1978) in Hamers and Blanc (1989:250)) demonstrated that unbalanced bilinguals are less skilled at summarizing and recalling a text in L2 than in L1. Hatzidaki and Pothos sum up Kroll and Curley's (1988) study which confirmed the hypothesis of a link between competence in L2 and treatment routes. They showed that weak command of L2 forces translation to go through L1 to access the conceptual store, whereas with a stronger command of L2 it is possible to have direct access to the conceptual store without going through L1. Here, the problems lie in how one defines "bilingual", since a minimalist definition will allow for the identification as bilingual of second language learners with limited skills in L2. If this is the case, the conclusion of the study is useful when assessing the translation skills of language learners, but less so for the analysis of more balanced, natural translators.

Bilingualism and biculturalism

Kaya claims that translation is an "everyday activity for many bilingual children" (Kaya 2007). She goes on to assume that the advantage of being bilingual is accompanied by the advantage of being bicultural, that membership of two linguistic communities implies membership of two cultures. "Culture plays a leading role in translation", and the bicultural bilingual can "adjust the meaning" of a translation to render it understandable to the other culture (*ibid*). In the case of very young children, we can agree that bilingual children can be perceived as being members of two linguistic communities, by the members of those communities. However, for young children, the notion of dual cultural *knowledge*, which is assumed in Kaya's argument, is open to discussion (and provides a question of interest for future research into bilingual child identity). She cites Koler's interesting observation: "our words are commonly used in contexts, in situations that are defined both by their physical characteristics and by our habits, attitudes, dispositions, and intentions towards them. These cognitive and emotional conditions affect the way we interpret a word when we hear it or see it; they affect the meaning we give the word" (Kolers 1978:283). From this, Kaya goes on to explain that words denoting objects often have similar meanings in translation, whereas words denoting ethical or political ideas or emotions usually have different meanings in different languages. In some respects, dealing with emotion terms, for example, the bilingual child may indeed be better equipped to provide culturally appropriate translations for ideas and terms whose subtleties may remain more elusive to the adult bilingual (in the sense of a person who became bilingual as an adult). Obviously, words denoting ethical and political ideas will not be internalised until later in childhood or adolescence, and it is more appropriate to talk of the advantages of being a child bilingual, that is someone who became bilingual in childhood, than a bilingual child. Whether this awareness of two separate, possibly corresponding notions, across languages can be identified as being bicultural will depend on looking more closely at what the term "bicultural" actually implies.

"Natural" and "native" translators

Discussion of the nature of biculturality and its possible implications for translators, must be reserved for future research. Nevertheless, we can continue our discussion of the acquisition of translation competence by examining the notions of natural translator and native translator proposed

by Harris and Sherwood (1978) and Gideon Toury (1995) respectively. Harris and Sherwood believe that all bilingual children translate, and as a result, claim that translation is an innate skill, that bilingual children are predisposed to translate, and that "translation is coextensive with bilingualism" (Harris et Sherwood 1978:155). Brian Harris refers to "what untrained translators do" as "natural translation", and to "very young bilinguals" as "natural translators" (Harris 1980:370). For Harris, professional translation is only "the tip of the iceberg...the educated refinement of the translating done all around us by untrained people whom circumstances, mostly fortuitous, have rendered bilingual" (*ibid*).

In their 1978 article "Translation as an innate skill" Harris and Sherwood provide a description of "the stages that a young natural translator goes through" (p.155). According to their "tentative model of how translational behaviour evolves...three main types of behaviour...are acquired one after the other, in a strict order" (Toury 1995:243). *Pretranslation* is the first, unconscious, phase of translation carried out by infants still in the one word stage of acquisition. *Autotranslation* is the act of translating what one has just said in one language into another; (i) to oneself (*intrapersonal autotranslation*) and (or: and then) (ii) to others (*interpersonal autotranslation*). *Transduction* is where "the translator acts as intermediary between two other people" (Harris and Sherwood 1978:165), (i) within the family (*intrafamily transduction*) and later on (ii) out of it as well (*extrafamily transduction*) (Toury 1995:244). Harris and Sherwood's claim that translation is coextensive with bilingualism is dependent on their supposition that the age of bilingualism coincides with the biological age of the bilingual, which is the case for infant bilinguals such as those concerned by Harris and Sherwood's, and Harris' study. Indeed, the age at which a person became bilingual can be proposed as a factor influencing their translation competence, for example the speculation that infant bilinguals prefer the semantic processing of language, whereas adolescent or adult bilinguals prefer phonetic processing (Hamers and Blanc 1989:253). The suggestion that the translator's personality can play a role in their translation competence remains to be empirically demonstrated. We can, nevertheless, imagine that certain characteristics may be useful, such as the ability to work under pressure and within the time constraints of simultaneous interpretation, for example (Gerver 1976 in Hamers and Blanc 1989:254).

The skills required for translation

It is difficult to refute the notion of the predisposition of natural child bilinguals to translation. However, it is not a very useful notion, argues Toury (1995:245), if we don't explore the question further. Even though bilingualism is a necessary condition for the translation act, it is not sufficient to make a competent translator (Kaya 2007). Natural bilinguals are not necessarily good translators when compared to secondary bilinguals who have received specific training in this highly skilled technique. As Shreve et Koby (1997:xiv) point out "there are processes and cognitive structures at work that go beyond those present and active in bilingualism". We must first distinguish between the cognitive operations involved in translation and interpreting and those involved in language processing. Hamers and Blanc (1989:252) describe the cognitive and verbal skills necessary for translation which are not related to linguistic competence in each language. The list cognitive factors, a verbal intelligence factor, a general culture factor, and verbal-fluency factors. Verbal-fluency factors concern, for example, the ability to store, recall and manipulate elements of information, such as the ability to remember ideas and rapidly reformulate them with the

appropriate wording.

Memory

Among the specific skills required in translation are the cognitive operations necessary for the recall and summary of a text. Memory, particularly long-term, plays and important role in consecutive interpretation, especially concerning the contents of the message: "Memory for prose is not a simple passive reactivation from memory traces but calls on an active reconstruction process from units stored in a conceptual form", Hamers et Blanc (1989:249). It is worth noting that, where the professional interpreter takes notes to aid recall, and Hamers and Blanc state that the translation process takes place during note-taking (*ibid*), the pre-literate bilingual child can only rely on her memory. Here we see the importance of bilingual cognitive language organisation in the translation process. Hamers and Blanc refer to Moser's 1978 semantic organisation model. This model explains how phonological information is grouped into "information segments which lose their verbal characteristics and are processed at the semantic-conceptual level" (*ibid*:251). Semantic organisation involves an interlingual "conceptual basis" which contains concepts and relationships between them. "A concept is neither a word, nor the definition of a word. Concepts contain semantic information which is independent of language and sensory, phonetic, and syntactic information which is language-dependent.

Interlingualism

If translation is a skill distinct from the natural predisposition to translate, we must try, states Toury (1995:245) to observe and explain its emergence and development. Kaya identifies the need to acquire a metalinguistic awareness in order to develop translation competence. Toury presents a theory of "interlingualism":
"[The **emergence** of translation **as a skill**] should be taken as coextensive with the ability to establish similarities and differences *across* languages, which may be termed 'interlingualism'. The unfolding of this skill, in turn, hinges upon the presence of a kind of transfer mechanism, which makes it possible to actually *activate* one's interlingual capacity and apply it to utterances in one or another of one's languages. It stands to reason that these added capacities are inherently different in different people, part of different mental structures, one possible factor still being the pertinent type of bilingualism and/or bilingual age. At the same time, these facilities seem to be *trainable* too, at least up to a point, a training which involves actual practice in translating in context, along with the reactions one may receive to one's behavior. What the developmental model we endorse thus involves is a consequential extension of the notion of norm from translational performances of an individual to the very acquisition of the skill. » (Toury 1995:248)."

According to Toury, the development of a "native translator" is the result of "environmental feedback", of a socialisation with regards to the translation act. The emerging native translator assimilates the reactions of those around him to the translations he produces and integrates them in his translation skill. "At every phase of its development, a native translator's 'competence' therefore represents a characteristic blend of nature and nurture, of the humanly innate, the individually assimilated and the socially determined" (Toury 1995:250).

2.2 Analysis of Examples from the Corpus

Hypothesis 2. a) Learning how to translate MAPNI contributes to the children's acquisition of translation competence.

Because of the one-person-one-language strategy that we have adopted, the children find themselves daily in situations that require or encourage translation and are often presented with translation equivalents. I do not force the children to speak English, but I do try to encourage them to do so, and one effective way of prompting a switch to English is to provide the English equivalent for what they just said, in other words by giving them a translation of their own speech. Their father does the same but to a lesser extent since the children are more likely to speak to me in French than to their father in English, probably because French is the dominant community language.

Daily translation

Our bilingual family strategy leads us to experience real moments of bilingual conversation when we are all together, for example at the dinner table. It is perfectly normal for the children to switch continually from English to French when talking to one parent and then the other. We can distinguish between code-switching, changing language between or within sentences, and autotranslation and transduction. In the bilingual family context, a child's reformulation of a request, from one parent to another, will result in a translation and the search for equivalents. It is thanks to their manipulation of their two languages in this way that we can notice the children's ability to differentiate the languages of their co-speakers according to the languages they use with each speaker. The examples from the corpus indicate that the first occurrences of translation are relatively precocious and are directly linked to the one-person-one-language strategy.

84)
[N] *(At the dinner table)*
L: (1; 4): (*showing Mum his empty beaker*) thirsty. (*turns to Dad*) soif.

85)
[N] *Owen is lying in bed between his parents. He has just woken up.*
E: Tu as fait caca?
O: (1; 5): caca (*turns to Mum*) pooh

At this stage of acquisition, we can wonder to what extent the child knows he is manipulating two distinct systems. He uses two different signifiers for the same signified, and the choice of signifier is determined by the co-speaker. In the first example, Loïc doesn't name the object he is showing (the act of showing is part of his communication), but he is communicating his state in order to ask his parents to respond to a need which he is unable to satisfy himself. The two signifiers used are true equivalents and their use corresponds to a repetition in order to satisfy a need, which is typical behaviour for a young child, with the added particularity of bilingual discourse. In the second example, Owen doesn't need to satisfy a need since his nappy is not dirty. His first repetition in

French serves to ratify his father's speech, showing that he is attending to it (Clark. 2008). His second repetition is necessarily a translation (with an equivalent signifier) since it is addressed to Mum, either to invite me to participate in the conversation, or to take a turn. In both examples, the translation is communicative and pragmatic. According to Harris and Sherwood (1978), these are examples of *pre-translation*, produced by a natural translator (or very young bilingual) still at the one word stage of acquisition. If we follow Toury's (1995) reasoning, the children had considered the potential responses of their co-speakers and chose a translation equivalent hoping to receive a positive reaction for correct linguistic behaviour, in this case the correct choice of language. In other words, the children already knew, at such a young age, that the word *soif* with Dad and the word *pooh* with Mum would result in a positive response (satisfaction of a need, or a smile and participation in the conversation), and the words *thirsty* with Dad and *caca* with Mum would have been less successful, maybe even resulting in "sanctions" in the form of a proposition of the correct word, or rather use of the correct language.

When the bilingual child starts to produce more complex sentences, he moves into Harris and Sherwood's stage of *autotranslation*. He translates his own words for others (*interpersonal autotranslation*) or for himself (*intrapersonal autotranslation*).

86)
[N] *(Dad has gone to work)*
L: (1;11) Papa parti.
C: Who's gone?
L: Daddy gone.

In this example, I incited the translation by asking the question in English as if I hadn't understood the French sentence. This is a strategy that I use sometimes to encourage a child to choose the "right" language. In the following example, Loïc chose, himself, to translate:

87)
[N] E: Passe-moi le tournevis.
L: (1;11) Tournevis. (*to Mum*) Screwdriver

In the next example, it is as if Loïc "corrected" a mixed sentence by choosing to reformulate his sentence in one language:

88)
[N] *Loïc is talking to himself while choosing a book.*
L: (2;0) choose a story. *Prends* this one. Prends celui-là.

In the third phase of natural translation, *transduction*, Wills (1982 in Toury 1995:245) distinguishes between translating within the family, *intrafamily*, and translating outside the family, *extrafamily.* At the same age at which he translated his own speech, Loïc began to translate the speech of others, but only within the family, and only at his own initiative.

89)
[N] E: Je vais faire un tour au bateau.
L:(1.11) (*to Mum*) go on a boat?

90)
[N] E: Allez, je vais me coucher. (*he leaves the room*)
L: (1;11) (*to mum*) he go a bed

Extrafamily translations only began when Loïc started school at the age of 3;5. He had refused requests to translate from his carers at nursery before then. Even now, he does not always provide a translation of the speech of others when asked to do so by people from outside the family. It is reasonable to assume that the desire, or not, to produce extrafamily translations is linked, not only to feelings of shyness, but also to a limited metalinguistic awareness. If the child has not yet understood that he is dealing with two separate language systems called "English" and "French", he will not know what is meant by "How do you say that in English?". In the bilingual family, operating the one-person-one-language strategy, translation and the use of translation equivalents to talk to people associated with each language makes translation an automatic and natural occurrence, which is possible before the child has reached a stage of bilingual metalinguistic awareness. Furthermore, it is probably thanks to this manipulation of his two languages that the child reaches the stage of metalinguistic awareness earlier than his monolingual counterparts. Malakoff and Hakuta (1991 in Kaya 2007) maintain that translation is a communicative and metalinguistic skill which requires bilingual and metalinguistic competence, but we cannot talk of linguistic competence in the bilingual child who transmits a message without being able to produce correct sentences and syntax. They suggest, therefore, that the result of natural translation may be grammatically incorrect and can be done without metalinguistic awareness.

Relating speech acts and translating

It is interesting to note that the numerous examples of intrafamily translation are rarely, if ever, necessary. I often find myself thanking Loïc (with a little smile) for a translation that I didn't need, since I was present at the time the original message was spoken, for example by his father, or they are my own words:

91)
[N] *(At the dinner table)*
E: Loïc, après manger, nous irons dans le jardin avec tes jumelles pour regarder les oiseaux.
L (5;8): (*to Mum, excited*) Mummy, Daddy said that after dinner we're going to go in the garden and look at the birds with my binoculars!

92)
[N] *(I am on the phone with Loïc's headmaster. I tell him that Loïc has been ill and ask if he can be allowed to stay indoors during playtime the following day because he has a cough. When I hang up, Loïc says:)*
L (5;8): I know what you said. You asked if I could stay inside because I've got a cough.

Why does Loïc translate examples like these, since he hears me speaking French with his father (and everyone else) every day and knows that I speak it well? In fact, in the first example, he is not translating but code-switching. Loïc changes language to relate something nice to me. This is linguistic behaviour that I encourage. Indeed, when the children return home from school or nursery, I ask them to tell me about their morning or day. Since everything they experienced was through the medium of French, each time they relate a conversation, or some new knowledge they

have acquired, it will be a translation. If the children want to tell me about an event, they need to find words other than those used at the time. This may not be a simple task for children who are still acquiring language all the time thanks to the experiences they have during the day. I sometimes need to provide them with the relevant vocabulary in English, and together we are able to translate what they have experienced. In the second example, it seems that Loïc would like to be congratulated for his understanding and translation skills, which shows how important it is for children to receive positive reactions to their linguistic competence. My own interest in bilingual acquisition has no doubt contributed to the recognition the children receive for their language skills, and as Toury (1995) points out, native translators respond to feedback to learn how to translate successfully through an interactional phenomenon of socialisation.

In the following example, Meriel translates my words in order to relate them to her brother:

93)
[N] M (3;6): Mummy, Loïc said he was going to take my picture.
C: Well he can't. You tell him it's your picture and he can't have it.
M: (*to Loïc*) C'est mon dessin, tu peux pas le prendre, Loïc!

Once again, the translation is unnecessary; Loïc would have understood the original message. Here, Meriel code-switched because she was changing co-speaker. Nevertheless, she provides a translation that reproduces my message, changing the pronouns *your* to *mon* and *he* to *tu*. She reformulated the message to adapt it to a situation of direct speech. Harris provides an example like this in his article "How a Three-Year-Old Translates", and describes it as a 'transformation ...common in natural translation, especially if the source sentence is governed by a performative verb like "tell" or "ask" in the imperative'(Harris 1980:387). What's more, she retained her original, and more appropriate, *take* with her own translation, *prendre*, rather than translating my *have.* The result is a sort of combination of autotranslation and intrafamily transduction.

Sometimes a code-switch and, in this example a translation, can be the result of a change of place:

94)
[N] L (5; 8): (*shouting from downstairs*) Maman! Maman! C'est Prêt!
L: (*he has come upstairs to talk to me in person*) Mummy, dinner is ready.

In the following example, Meriel (3;5) produces an extrafamily translation. The example also illustrates another way of communicating through stories, this time with strangers:

95)
[N] *(We are all waiting in the doctor's waiting room. Also present is a young girl (about six) and her mother and two ladies. When the girl hears me speaking English to the children she asks her mother about it. To calm mine down I tell them a story in English, 'reading' a French children's book in the waiting room. Owen and Meriel talk about the story and pictures in English, Loïc in French.)*
O (1;11): *(points to a man in the book)* Daddy
M (3;5): *(seemingly to the other people in the room)* Il dit que c'était Papa! *(laughing because Owen's comment was funny)*

This example shows that the children are very aware of the other people present, despite no real

direct communication with them, result of the awkwardness of the doctor's waiting room. The assumption that people communicate through children usually breaks down because we are using another language (people do occasionally talk to the children in English). People do often show interest in the children's bilingualism, usually covertly by looking and smiling, but also sometimes overtly by asking questions. The children assume the other people present don't speak English but they are also aware of the possibility of shared communication within the waiting room context. This awareness is demonstrated by Meriel's translation and Loïc's language choice.

Hypothesis 2b) MAPNI is participating in the children's acquisition of translation competence

The translation of poems.

The translation into English of stories, poems, or songs learned in French at school can not be classified in the same category as the translation of dialogues or experiences. Firstly, I do not expect to hear translations of poems, and do not ask for them. It is usual for the children to perform recitals of poems in French. However, while reciting a poem he had learned at school, Loïc stopped mid-sentence to translate a word for me:

96)
[N] L: (5;5) Ven, ven, vendredi, ils se dandinent comme ça. That means 'dance'.

Having stopped, he then found he had to start again from the beginning. I believe it was not so much a translation as an explanation of the word *dandinent*, just as he had probably had the new word explained at school while learning the poem. His stopping to communicate something to me resulted, as it usually does, in a code-switch.

The translation of songs.

The translation of songs is one of the little linguistic games we play together. The children love to look for equivalents in one language that can be transposed on to the melody of a song in the other language. Sometimes, it is not too difficult to do this, but we often have to adapt the lyrics of the original in order to meet the constraints imposed by metre and rhyme.

97)
[V] *(Loïc sings "Il était un petit homme" in English)*
L(4;7) : There was a little man, pirouette, peanut,
There was a little man who had a funny little house, who had a funny little house.
His house was made of card, pirouette, peanut,
His house was made of card, and the stairs were made of paper, and the stairs were made of paper... It's better in French
C : Yes it is, because in French it's got rhyme and rhythm. It's difficult to translate songs because of not having the same rhyme and rhythm.

Later that day, Loïc tried to sing an English song in French for his father, but he gave up when it became to difficult, and he realised his father wasn't really paying attention.

In the following example, Loïc (4;7) translates a line from 'Here we go round the mulberry bush' as

part of a conversation about songs. His translation seems to be a form of code-switching because he is addressing his sister, Meriel (2;5):

98)
[N] *(at lunch)*
C : Did you sing any songs today, Meriel ?
M : Oui
L : I sang a new song *(L had already sang his new song twice)*
M : What did you sing, do you know ?
M : *(Rubs fingers of right hand on palm of left hand)*
C : What song could that be ? Do you know Loïc ?
L : A song about hands
M : Non
C : Is it like 'this is the way we wash our hands' ?
M : Oui
L : *(sings to tune of mulberry bush)* On se lave les mains comme ça
C : Or maybe a song about rubbing your hands together when it's cold. It was cold this morning wasn't it ?
M : Oui

The translation of stories.

Stories that have been heard at school are usually translated by the children and told in English at home. Stories are much less tied to sentence structure, rhythm, or rhyme than poems, and so are easier to translate. The example of the story "Toutes Les Couleurs" is an interesting one. Upon returning from school one day, Loïc wanted to tell me a story he had heard at school:

99)
[N] L (5;7): First the little rabbit rolls in the green grass and when he gets up his bottom is all green. He sees some strawberries and then his mouth is all red. Then he sees some mud. He splashes his feet in the mud. Then his feet are all brown. He picks some flowers and then he has his hands all yellow. He gives them to his mummy.
C: What does he give?
L: The flowers. Then his mummy says, "you need some blue. Go in the bath", and then the little rabbit doesn't have any colours any more.
C: Does he become a particular colour after that?
L: White. White is his normal colour.

Meriel had been listening and she wanted to have a go at this translation game, too. (Twice a week Loïc and Meriel are in the same class in the afternoon and can share experiences and hear the same stories).

100)
[N] M (3;5): The little rabbit's all white. And the rabbit's got every colour but not blue. He's go in the grass and get his botton [=bottom] wet. He's step in the mud for get his feet all brown. How about the flowers? I not say. He give the flowers to his mummy and he's got all yellow. He's need some blue. He's eat some strawberries and get his mouth all red. Something else. But not the same. I go to bed!

I found these translations so interesting that I borrowed the book from their teacher to compare the translations with the original. I was surprised to see that the original text was more simple than the children's translations since it contains only dialogue (see appendix). Their teacher explained that

the children told the story together, with the help of the illustrations, adding their comments to the dialogue which had been read aloud. When the children switched to English to tell the story, which had been created by the whole group, were they translating the speakers or the text? To what extent did they understand that they were dealing with a text, and what influence did this understanding have on their translation strategy? The following example provides us with some clues.

Meriel had another go at translating the same story. This time, I gave her the book that I had borrowed from her teacher and asked her to tell me the story, first in French and then in English. I recorded her on video. The following is the transcription of this memorable event:

101)
[V] Meriel (3;4) Translating 'Toutes les Couleurs'
1. M: Youpi! Youpi! Je glisse
2. Oh! J'ai les fesses tout marr.. er tout vert.
3. Yum yum, il y a des fraises! (....) J'ai la bouche toute rouge.
4. Oh! (...) J'ai la bouche toute rouge.
5. Oh! J'ai les pieds tout marrons.
6. Oh! J'ai les pieds tout marrons.
7. Oh! Je vais apporter ça à maman. C'est belle les fleurs. C'est tout, c'est tout um...what's this...I can't remember the colour.
8. C: They're yellow
9. M: Yellow. Je vais l'apporter à maman. Tiens maman! Mais, t'as la bouche toute, t'as les pattes toutes jaunes. Tiens. Mais t'as oublié le bleu. Tu vas dans cet bain pour enlever les couleurs. Oh, maman, tiens. I've finished.
10. C: Thank you, Meriel.
11. M: Yeah! Um, youpi!
12. Oh! J'ai, um je, I've got my bottom all green!
13. Oh! Yum yum! Je vais manger quoi?
14. C: Strawberries.
15. M: I gonna eat the strawberries, and then I'm gonna get my mouth all, all
16. C: Red
17. M: Red
18. C: That's right.
19. M: Oh! J'ai la bouche toute rouge.
20. Oh! J'ai les pieds tout marrons.
21. C: Hang on a minute. Aren't you supposed to be telling me this story in English?
22. M: Yeah, but I can't remember. I got my feet all, all
23. C: Brown.
24. M: Brown. Oh! Um Oh! I got my feet all brown!
25. Oh! C'est il...There's some flowers. Aren't they pretty! Oh, je vais les mettre pour donner à maman. Mummy. It's you, you're a mummy.
26. C: Yes, I'm your mummy.
27. M: Tiens, maman. Mais, j'ai les mains toutes jaunes!
28. C: Hang on a minute. Aren't you supposed to be telling me that story in English?
29. M: Um I can't remember.

30. C: Mmm. Here you are, mummy.
31. M: Here you are, mummy, it's for you. Yeah, but you got your mouth all red. Oui, mais voilà.
32. C: Your hands are all
33. M: Yellow
34. C: And you bottom is all
35. M: Green
36. C: And..what else? Your feet
37. M: are brown.
38. C: And your
39. M: mouth are red.
40. Oh, I oublie the bath. Oui, mais t'as oublié le bleu. Tiens, tu vas aller dans le baignoire et tu vas laver (.....) Oh bah c'est fini!

We can see from this example that Meriel is still acquiring colour terms; her translation enables us to measure this acquisition process. Line 11, Meriel seems to wonder whether she should translate 'Youpi', or perhaps she doesn't know how to say 'je glisse' in English. She code-switches frequently; lines 7 and 9 show a code-switch caused by her commenting to me, and choosing the appropriate language to do so. However, in line 13 she, code-switches from English to French to ask me a question. This is not her usual direction of switch when talking to me. It may have been triggered by the French word 'fraise' being the first to come to mind, since, in line 3, we see she has no trouble with this word, and a memory lapse concerning the English equivalent 'strawberries'. Since she thought of the word in French, she goes on speaking French to ask me for help with the English equivalent. We should not forget that Meriel knows the story from a French language context, school, and this effects her ability to produce a fluent English version (lines 12, 19, 25, 27, 31, 41). Lines 12, 15, 22, 24, and 31 are arguably the proof that Meriel is a really competent little translator, despite her limited linguistic development. Her use of "I've got my bottom all green" instead of "my bottom is all green" (As I, myself translate in line 34) is a more appropriate one, since it can include the meaning of having caused oneself to become green, an element of cause and effect which is a pertinent interpretation of the story. It is more likely due to luck than design, nevertheless it works. It is possible to argue that Meriel's frequent exposure at home to expressions like "you've got your sleeves all wet" or "you've got your face all mucky", has directly enabled her to produce this very natural translation by taking into account the reaction of the little rabbit's mother, of chiding the little rabbit for having got himself in a mess, reaction that Meriel can firmly identify with!

For very young children, access to written stories is through being read to by a literate person, usually an adult. Most of the time, children look at a book while listening to the story and the illustrations are complementary, helping them to understand the text. Some children's books rely so heavily on the illustrations that simply reading the text, without referring to the pictures, would hinder full comprehension of the story. "Toutes Les Couleurs" is a good example of this kind of book. In order to translate it the children referred to the oral reading they had heard plus comments on the illustrations they had made together with their teacher and friends. The language is simple, direct, descriptive, and in the present tense. The translation of such a story could resemble the translation of an account of an experience, an ongoing event, or something heard in conversation, for example. More complex, traditional fairy tales, on the other hand, may be accompanied by illustrations, but do not depend on them for their meaning. The whole story is presented in the text,

the language is more literary with the use of formulas and, in the case of French, the past historic tense. In order to translate them, equivalents must be found which have a corresponding register in the target language. The translation requires knowledge of textual language, knowledge that the child can only acquire if a literate person reads aloud to them. In his preface to Dalgalian (2000:12), Weinreich calls this knowledge "oral textual competence".

It is likely that my habit of reading French books to the children by translating them as I go along contributed to their awareness of the literary translation act. Sometimes, the children will request that a particular book be read in its original version and we will discuss whether or not it is better in French or in English. Sometimes, the question of whether a book be read in its original version can cause a very emotional response, as in the following diary note from the corpus:

102)
[N] At bedtime I asked Meriel (2;8) which language she wanted me to read the story in and she said 'English', but when I started reading in English she said 'no! In English'. So I explained 'English is "T'choupi gardening" and French is "T'choupi jardine", so which one do you want, "T'choupi gardening?" She replied 'non' so I read it in French. When it was Loïc's (4;10) turn I asked him the same question about another French book that he had chosen, 'Je construis une maison' and he chose English. Meriel cried and complained throughout the story. Is it because she is used to having those stories in French?

As the level of language in books for older children becomes more complex, or if the story is in rhyming verse, I will explain that it is too difficult to translate as I read, or that we would lose the rhythmic and poetic qualities if we translated it. I will often comment on the translation as I do it, hesitating about the most suitable equivalent, or changing a word for a better one. Sometimes the children will help me, and we occasionally find ourselves stuck with "untranslatable" expressions. Thanks to this 'scaffolding' process, the children have become aware that it is possible to tell a story in two languages, and the task is not always an easy one. This does not prevent them from trying their hand at their own translations of stories that they are used to hearing in only one language. The following example demonstrates how important my reaction to a translation can be, and reminds us of the role Toury gives to feedback in the development of a native translator (Toury 1995:249):

103)
[N] *(Loïc has tried to translate a French book into English. When it is my turn to read the story in English he is pleased with himself for having produced the same translation.)*
L(4;11) : that's what I said!

In example 48, analysed in Part 1.3, Loïc (4;7), invents a story in English based on his own drawings and colourings. I am in no doubt that he was able to produce an equivalent story in French, although there is no recorded evidence of this from that period. And what is an equivalent story, if not a translation? Evidence of his narrative translation competence came nearly a year later, when he one day asked me to help him transform some of his drawings into a book; he wanted to tell the story of "Sleeping Beauty" (see appendix). I suggested we make a bilingual book. He agreed, and we began with the French version for which he provided the text to accompany his drawings. At first I instinctively corrected his French, but by the second page I had decided to simply write down what he said, word for word. Then we went back to the beginning and he translated into English each sentence as I read them out. Sometimes he automatically continued the sentence being translated instead of providing a translation:

104)
[N] C: (*reading out loud the sentence to be translated*) Et la sorcière dit...
L: "Ce n'est pas grave."

Here is the complete text of Loïc's bilingual narration. The text was originally presented, on each page, a block of French text followed by a block of English text. The column format is a device to facilitate the comparison of each sentence with its translation:

105)
Loïc (5;5): bilingual narration: La Belle au Bois Dormant / Sleeping Beauty

= New page and new illustration.

A	B
1. # Il était une fois, il y a très longtemps, un roi et une reine qui n'avaient pas d'enfants.	# Once upon a time, a long time ago, there lived a king and a queen who didn't have any children.
2. Ils decidèrent de faire un enfant.	They decided to have a baby.
3. # Le roi enferma sa fille dans une petite chambre	# The king locked his daughter in the cellar.
4. et par la fenêtre est venue une sorcière qui portait un chaudron.	Through the door came a flash of lightning and appeared a witch carrying a cauldron.
5. La sorcière installa le chaudron pour faire de la magie.	The witch put the cauldron down to do some magic.
6. Elle demanda à la petite fille -Pourquoi tu pleures comme ça?	She asked the little girl, "Why are you crying like that?"
7. La petite fille dit -Parce que mon père m'a enfermé dans une chambre.	The little girl said, "My daddy locked me up in this cellar."
8. La sorcière dit -C'est pas grave. Je vais te transformer. Tu ne pleuras plus quand tout le spectacle sera fini.	The witch said, "When all the show will be finished, you won't cry any more. It doesn't matter. I'm going to transform you."
9. La petite fille dit -D'accord.	The little girl says, "OK".
10. # Quand la petite fille va avec la sorcière dans une autre petite chambre, la sorcière mit un autre objet pour faire de la laine.	# When the little girl went with the witch in another little cellar, the witch put another object to do some cotton.
11. La petite fille voulait essayer.	The little girl wanted to try.
12. Elle s'asseoit sur le petit tambourin et puis elle essaya mais elle se piqua avec l'aiguille et quatre gouttes de sang tomba de son doigt.	She sat on the little stool and she tried, but she hurt herself with the needle and four drops of blood fell from Sleeping Beauty's finger.
13. Elle tomba sur le carrelage et la sorcière dit	She fell on the floor and the witch said,
14. -Ha, ha, ha, ha! Ca l'apprendra cette petite fille.	"Ha, ha, ha, ha! That will teach her a lesson."
15. Et puis un jour, plus tard, un prince viendra...	Some days later a Prince will come...
16. # -Oh, oh, il y a un danger, dit le prince.	# "Uh oh, there's a danger", says the prince.
17. Il coura jusqu'à l'autre côté de la forêt.	He ran all the way to the other side of the forest.
18. # Le prince vu dans le canal un dragon qui vola	# The prince saw a dragon which came up to the prince,

jusqu'au prince.	flying.
19. Quand il vu le dragon, le dragon le suit en volant jusqu'au château.	The dragon followed the prince, flying all the way to the castle.
20. Il batta le dragon au château.	He fought the dragon at the castle.
21. Il planta l'épée dans le cou du dragon.	He put his sword in the neck of the dragon
22. Le dragon fut tombé dans le canal.	and the dragon fell into the canal and sank.
23. # Il avait mari la princesse pendant que le roi les regarda, pendant qu'ils dansent pendant la fête.	# He married the princess happily ever after while the king watched the prince and the queen dance and then while the party was going on.
24.	And they lived happily ever after.
25.	They even had some children.
26.	But you never know if it starts all over again in Disneyland...

Loïc's "Sleeping Beauty" example shows that the young bilingual is able to produce an oral translation in a literary register as young as five years old. The example enables us to analyse and compare Loïc's acquisition of narrative competence in his two languages. At first glance, we can see that his narrative competence has improved compared to example 48, which was recorded ten months earlier. It is possible that the difference between inventing a story oneself (example 48) and retelling a traditional fairy tale that has been heard in oral form and seen in audio-visual form (example 105) also have something to do with this. We will now look closely at example 105 in order to identify and analyse Loïc's language. The elements discussed in an example will be underlined. Italics signal and inappropriate usage or choice of word. * signals an incorrect form.

Loïc's use of the past historic tense is extremely interesting. It indicates that he has understood the importance of the narrative register, and the narrative function of this specific tense. His correct conjugations of the past historic (12) outnumber his incorrect conjugations (6). The correctly conjugated verbs are all from the first group, the most regular French verbs, except one, 'mit' (line 10) which is the past simple form of the irregular third group verb 'mettre'. The incorrectly conjugated verbs are from the second group of regular verbs:

106)
17. *coura (should be 'courut')
18. & 19. *vu (should be 'vit')
and the irregular third group:

107)
19. *suit (should be 'suivit')
20. *batta (should be 'battit')
and an interesting mistake with a regular first group verb:

108)
22. Le dragon *fut tombé dans le canal.

Tomber is one of the French verbs which is conjugated with the auxiliary 'être', giving, for example,

'il est tombé' in the perfect indicative tense. Here, despite having correctly conjugated 'tomber' as 'tomba' in the past simple in lines 12 and 13, Loïc makes the mistake of conjugating (correctly) the auxiliary 'être'. Considering his age, and the fact that he has not yet received formal instruction in the use of the past simple, these mistakes are easily excused.

In English, the task is easier, since the same past simple tense is employed in narratives as in other forms of speech. The only complication could be the past simple forms of irregular verbs, but this is not really a problem for Loïc, who correctly uses 11 irregular past simple forms. On two occasions, it appears that he doesn't know the irregular past simple form of the most appropriate verb, so he avoids the problem by rewording:

109)
21. He put his sword in the neck of the dragon.

Here, Loïc uses the verb 'put' instead of 'drove into' or 'plunged', or which would have been more accurate translations of 'planta', but which he possibly doesn't know.

110)
18. The prince saw a dragon which came up to the prince, flying.

Here, despite knowing the past historic form of the French equivalent, 'vola', Loïc apparently doesn't know, or can't access at the moment of speaking, the past simple form 'flew'.
There is a similar occurrence in the French version, where Loïc probably doesn't know the correct past simple form of the verb he wishes to use (se marier = se maria), so he tries a different approach, which results in an error:

111)
23. Il *avait mari la princesse....

In fact, the verb 'épouseré would have been more appropriate and, if he had thought of using it, possibly easier to conjugate in the past simple, as it is not a reflexive verb.

The use of the past simple form of the French verb 'dire' leads Loïc into tense confusion:

112)
9. La petite fille dit -D'accord.
10. Quand la petite fille va avec la sorcière...

Since the past simple form of 'dire' in the third person singular is identical to the present simple, Loïc's repetition of 'dit' in lines 7 to 9 appear to cause a switch to the present tense. He quickly reverts to the past simple (and an irregular one, at that) as he continues line 10:

113)
10 ....la sorcière mit un autre objet....

The confusing past simple 'dit' also causes Loïc to switch to the present tense in his English translation:

114)
8. The witch said....
9. The little girl says...

But, again, he quickly reverts to the past tense:

115)
10. When the little girl went...

This same occurrence is found in line 17:

116)
16. A: – Oh,oh, il y a un danger, dit le prince.
16. B: "Uh, oh, there's a danger", says the prince.

Again followed by a return to the past tense:

117)
17. A: Il *coura...
17. B: He ran...

Loïc's knowledge of fairytale vocabulary is pretty good. He correctly uses the terms 'roi, reine, princesse, prince' and 'king, queen, princess, prince', 'chaudron' and 'cauldron', 'sorcière' and 'witch', 'dragon', 'forest' and 'forêt', 'castle' and 'château'. He has trouble with the 'rouet' and 'spinning wheel', although I am certain he had heard the English 'spinning wheel' in stories before. To replace his lexical gap, Loïc gives a functional definition, which differs slightly across languages, demonstrating the question of translation equivalents:

118)
10 ...un objet pour faire de la laine.
...another object to do some *cotton*.

Does Loïc believe that 'laine' and 'cotton' are the same thing? Or does he choose an English option from the same lexical group, with similar properties, because the real translation equivalent of 'laine', and the more appropriate 'fil / thread', are unavailable to him? Another word that poses problems in the French version is 'tambourin' (line 12), which means 'little drum', where the English version gives the unproblematic 'stool'. Perhaps the close resemblance between 'tambourin' and 'tabouret' (the correct translation of 'stool') accounts for this. Or, it is possible that Loïc is indeed thinking of a little drum, since the children have one which they like to sit on.

Sometimes Loïc's vocabulary is more precise, and suitable for a fairy tale, in one language than the other, as in line 3:

119)
3 A: Le roi enferma sa fille dans une petite chambre.
3 B: The king locked his daughter in the cellar.

Line 13 provides us with a lovely example of cultural influence in the choice of vocabulary:

120)
13 A: Elle tomba sur le carrelage....
13 B: She fell on the floor...

Here, Loïc's French version conjures up images of French homes, where floors are commonly tiled, and the floor is often referred to as 'le carrelage' (= 'the tiles'). Although Welsh houses are more often carpeted than tiled, we mustn't forget that in the English version of the story, the princess has been locked in a cellar, which would most likely be tiled too! Line 22 provides us with an example of the influence of Loïc's individual home environment, since we live next to a canal:

121)
22 A: Le dragon fut tombé dans le canal.
23 B: The dragon fell into the canal and sank.

In line 8, Loïc produces an inappropriate translation:

122)
8 A: ...C'est pas grave...
8 B: ...*It doesn't matter*...

It would have been more appropriate to use a phrase such as 'don't worry' or 'it's alright' or 'everything will be alright'. 'It doesn't matter' is the correct translation of 'c'est pas grave' in some circumstances, but not really appropriate in this context, where the witch appears to be comforting the princess. Loïc's confusion no doubt stems from the French usage of 'c'est pas grave' in the same pragmatic context and with the same function as 'don't worry' or 'it's alright', that is, when comforting a child.

Another indication of Loïc's acquisition of the narrative register is the attampted use of narrative style in the construction of some sentences. For example:

123)
1 ...there lived a king and queen...
4 A: et par la fenêtre est venue une sorcière qui portait un chaudron
4 B: Through the door came a flash of lightning and appeared a witch.

The structure prepositional phrase + verb phrase + noun phrase, has a stylistic storytelling effect, whereas conversational French and English would be more likely to put the noun phrase in front position and the prepositional phrase in end position. The French version is acceptable, although "est rentrée" would be preferable. The use of "est venue" could be an example of lexical interference from English. The English version reads a little strangely. We would be more likely to say "Through the door came a witch, in a flash of lightning" or "Through the door came a flash of lightning and a witch appeared". Perhaps by adding a second VP + NP to the English version, Loïc was trying to generate a sentence that was too complex for his level of acquisition. Or maybe, the fact that he was translating from French to English caused the English version to be influenced by the word order of the French version, in which case "appeared a witch" is an example of syntactic

interference from the French "est venue une sorcière".

In addition to the use of the past simple, fairy tale vocabulary, and storytelling style, both versions are recognisable as fairy tales thanks to Loïc's use of formulaic sequences. We will discuss this in section 2.3. We will continue our analysis here, with a discussion of the influence of MAPNI in Loïc's narration. First it is important to mention Loïc's exposure to the story. He had seen two different cartoon versions of 'Sleeping Beauty' before producing his own illustrated version. At his maternal grandparents' home in Cardiff, he had repeatedly watched an English language Abbey Home Media DVD of 'Sleeping Beauty' during our six-week-long visit in January-February 2008. At about the end of August, early September 2008, Loïc's father brought home the Disney animated version of 'Sleeping Beauty' in a format that only permitted its viewing in French. Loïc produced his version on 7th September 2008, and it appears to have been influenced by both versions. For example, the witch in Loïc's story appears through the door, as in the Abbey Home Media version, whereas in Disney's version, she appears in the middle of the room. Her appearance is accompanied by a flash of lightning, as in both animation versions. Loïc's prince fights a dragon, and kills it with a blow of his sword to the neck, as in Disney's version, whereas he fights a giant in the Abbey Home Media version, and kills him by making him fall into a deep crevasse. In both animations we see the dragon and the giant fall into what appear to be dry moats, or deep crevasses. Loïc's dragon falls into the canal, which is either a lexical-gap filler, or an indication that he possibly imagines himself in the role of the prince and locates the action in his own familiar environment. (Our home is not a castle, but we live very near a forest...)

It is also possible to detect the influence of Roald Dahl's 'Revolting Rhymes' version of 'Cinderella', which was given to Loïc in August 2008, and which is very different from the traditional tale, as indicated in the first lines:

I guess you think you know this story.
You don't. The real one's much more gory.
The phoney one, the one you know,
Was cooked up years and years ago,
And made to sound all soft and sappy
Just to keep the children happy.
Mind you, they got the first bit right

And so does Loïc; lines 1 -2 are the traditional start to the 'Sleeping Beauty' story. However, from line 3 we can detect the influence of other stories: 'Cinderella', who is locked in the cellar while her step-sisters go to the ball, in Roald Dahl's Revolting Rhymes version, and 'Rumpelstiltskin', in which the king locks the miller's daughter in a little room with a spinning wheel and orders her to spin straw into gold. The witch who appears carrying her cauldron, seems at first to be sympathetic with the princess. She asks her why she is crying, in the same way as the fairy godmother asks Cinderella, and Rumplestiltskin asks the miller's daughter, and she then promises to 'transform' the princess as if she were indeed Cinderella's fairy godmother. This scene does not figure in the traditional version of 'Sleeping Beauty' and Loïc seems to have produced an amalgam of several different stories at this point in his narration. Loïc's version actually adds to the drama of the story by introducing the notion of the cruel father (inspired by the wicked stepmother and the cruel king), and the ambiguous witch, who appears to be kind, telling the princess "C'est pas grave / It doesn't

matter", and promising to transform her in a way the reader imagines will be helpful to the princess. Whereas, is in fact, the witch turns out to be wicked after all and reverts to her true 'Sleeping Beauty' role of causing the princess to prick her finger on the spinning wheel and fall down as if dead.

2.3 The Role of Formulaic Language in Narrative Translation

Hypothesis 2b). Formulaic language helps the children to translate stories.

Wray's explanation of the balance of analytic and holistic language processing from birth to adulthood (Wray 2002:133), could lead us to hypothesise a parallel development of the manner in which bilingual children approach translation acts. During the first, holistic, processing phase, (from birth to age 2) the bilingual child might tend to translate formulas, or entire sequences, which are stored whole in the bilingual memory. During the second phase, (age 2 to 8), of analytic processing, the child may break up sequences in order to process and translate them. As a result, the child may have to produce a greater effort to generate new sentences from their components and the language's grammar, with a translation of components, rather than sequences, taking place. In this case the child will be confronted with the difficulties of analytically translating fixed formulas and idioms, for example. In the third phase of language processing (age 8 to 18), the child might then gradually return towards a more holistic translation strategy which, in phase 4 (adulthood) would involve a balance between the translation of equivalent sequences and equivalent components.

In this section we will examine some of the corpus examples from Part 2.2 with the same methodological framework that we used in Part 1.4. (We will continue the alphabetical classification used in 1.4.)
We will look first at evidence of formulaic sequences in Meriel's narration of 'Toutes les couleurs', and we will begin by returning to the phrase discussed in the previous section :

H)
2. J'ai les fesses tout verts.
3. J'ai la bouche toute rouge.
5. J'ai les pieds tout marrons.
12. I've got my bottom all green!
24. I got my feet all brown!

These productions have a very formulaic feeling to them. We can test this intuition by checking it against Wray and Namba's criteria already mentioned in 1.4. In both languages, they receive a "strongly agree" judgement with E) since this is the formulation used most commonly by Meriel to convey this idea; "strongly agree" also applies to H) as it is highly probable that Meriel encountered these precise formulas before in communication with other people, both at school and at home. The sequences both have scope for morphological variation, as demonstrated in line 15:

15: and then I'm gonna get my mouth all, all

And lexical variation, as demonstrated by the different body parts and colours that are inserted into the 'gaps', as well as the different pronoun and verb agreement in line 9:

9. t'as les pattes toutes jaunes

Evidence that this frame is formulaic for Meriel at the time of her narration, also comes from her repetition of the frame and the way in which it triggers interference from French during Meriel's English narration (lines 19, 20, and 27). Example I comes from the same story-telling transcription, but the examples are not directly related to the narrative aspect of Meriel's language. The example, nevertheless illustrates formulaic sequences in discourse:

I)
21. C: Hang on a minute. Aren't you supposed to be telling me this story in English?
22. M: Yeah, but I can't remember. I got my feet all, all
23. C: Hang on a minute. Aren't you supposed to be telling me that story in English?
24. M: Um I can't remember.

On two separate occasions, I use the same sequence ("Hang on a minute...") to interrupt Meriel's code-switching and to bring her back to English. Both times, she replies with the same rejoinder ("I can't remember"). This pattern and the repetition is highly indicative of formulaicity. Both sequences are frequently used by us in similar situations (E). My "Hang on a minute" sequence also lacks semantic transparency (B). My second sequence, ("...aren't you supposed to be...") contains a 'gap' that can be meaningfully completed with any word, phrase or clause that fits the formulaic frame. It is actually a sort of request for a change of behaviour, so in this sense it performs a function (D). Meriel's "I can't remember", was, at the time, her preferred way of saying "I don't know", and here it also seems to mean, "I can't do it", so it receives an agree judgement on criterion J: By my judgement, this wordstring is formulaic, but it has been unintentionally applied inappropriately.

We will now return to our analysis of example 105, Loïc's bilingual narrative, 'La Belle au Bois Dormant / Sleeping Beauty'. The most obvious indicators of the fairy tale nature of Loïc's stories is the use of traditional formulas (criterion A: grammatically unusual; criterion D: performing the functions of introducing and ending narratives; criterion H: Loïc has encountered these formulas in fairy tales.)

J)
1 A: Il était une fois, il y a très longtemps...
1 B: Once upon a time, a long time ago...
24 B: And they lived happily ever after.
25 B: They even had some children.

While we can note that 25B may have been better expressed 'and had children of their own' or 'and had lots of children', Loïc does not include the French version of 24–25 B at all, ('Ils vécurent heureux et eurent beaucoup d'enfants'). Either he didn't know this formula, or he forgot to use it to end his first version, and remembered only when doing the translated second version. Loïc also uses 'happily ever after' in line 23, but here it is not used appropriately and sounds a little awkward (criterion J)

K)

23 He married the princess happily ever after...

The following formula sounds a little strange, too:

L)
8 A: ...Tu ne pleuras plus quand le spectacle sera fini.
8 B: ....When the show *will be finished, you won't cry anymore.

The English version demonstrates syntactic interference from French in the construction of the first conditional, and this is a common mistake in Loïc's speech. (E.g. "How old will Meriel be when I'll be seven?"). But, it is not only this that makes the utterance sound odd. It is because Loïc has borrowed a formulaic sequence from another source of MAPNI and has applied it inappropriately here. (criteria H and J) (My attempts to identify precisely the source of this formula have been unsuccessful, although Loïc's father is convinced he heard it in a 'Superman' cartoon.)

Line 17 A seems to be a translation of 17 B, even though it was produced first:

M)
17 A: Il *coura jusqu'à l'autre côté de la forêt.
17 B: He ran all the way to the other side of the forest.

A more natural French expression of the notion would be, 'Il traversa la forêt en courant'. Loïc's transfer of the English structure into his French version is an indication that this sequence is formulaic for him. A similar occurrence in line 18, which has already been discussed in section 2.2, example 110, also demonstrates the formulaicity of this sequence:

N)
18 A: Le prince *vu dans le canal un dragon qui vola jusqu'au prince.
18 B: The prince saw a dragon which came up to the prince, flying.

The fact that he uses the sequence 'came up to the prince', suggests he is trying to translate a 'chunk' of language: 'vola jusqu'au prince', which might be better translated by 'he flew up to the prince'. Perhaps Loïc is not familiar with the phrasal verb 'fly up to' and only knows 'come up to', and since it is the notion of moving towards someone which is important, more so than the means of movement, then he prefers to, or can only, translate in this way.

In line 14 we come across a formula learned from MAPNI that was discussed in section 1.3, example 73:

O)
14 A: ...Ca l'apprendra cette petite fille.
14 B: "...That will teach her a lesson."

This example serves to reinforce the judgement of this sequence as formulaic. Not only does Loïc use it repeatedly, on many different occasions (criterion E), but he also attempts to transfer it to French as it is, rather than using a more appropriate, equivalent expression, such as, 'Ca lui servira de leçon à cette petite fille'. Here we can support the idea that during the second phase of

acquisition, Loïc is moving towards a more analytical processing, breaking down strings and trying to translate component by component, rather than seeking a holistic translation equivalent. Furthermore, we can question the semantic appropriateness of the formula here, since it is unclear in Loïc's story why the princess needs to be taught a lesson (criterion J).

The last example in this section, although not bearing any relation to MAPNI, is interesting because it indicates how difficult it can be for children to translate, and correctly understand, idioms:

P)
[N] L (4;6) (*Eating lunch. To Dad)* Papa, tu peux me couper la parole? *(Turns to Mum)* Mummy, can you *coupe* me *la parole*? *(laughs)* Do you know what that means? It means 'shut up'!

It is so difficult for Loïc to translate this idiom that he code-mixes, something he only does extremely rarely. Also, he has misunderstood the meaning of the idiom, which conveys the notion of interrupting or cutting in on somebody while they are speaking. Loïc thinks it is funny to ask his parents to 'cut' his 'speech' since we are sitting at the table, in a context where we often cut up the children's food for them to eat, in response to requests such as, 'Tu peux me couper ma viande?' or 'Can you cut up my meat?' His misunderstanding probably results from a pragmatic association of somebody who interrupts being told to 'Shut up!' by the person they are interrupting.

Conclusion to Part Two

In Part Two, we looked at the question of translation by young bilinguals. We explored the mechanisms involved in translation and the notions of natural and native translators. We then analysed some corpus examples of the children's translation in conversation and the translation of songs, rhymes and stories. The study of natural translation and natural translation acquisition, seems to interest researchers in the field of translation studies because of the insights it may bring to the translation process that may be of help to professional translators and those who train them. However, we can question whether professional translators should aim to reproduce a "natural" translation, by trying to understand natural translation processes in order to proceed in the same way, as seems to be the underlying justification in both Harris' and Toury's arguments, much in the same way as we can question applications to second language teaching of insights drawn from the study of first language acquisition.

The children in this study provide us with some interesting examples of natural translation, including some evidence of formulaicity which we did not discuss here. I preferred to focus on evidence of formulaicity in their narrative translation, since the subject of this paper is the role of MAPNI in children's output. The study of formulaicity in their daily translation could constitute an area of further study. The study of their narrative translation will become more interesting as the children grow older and their bilingual processing becomes more complex. It will be particularly interesting to observe the effects of literacy on this process, and the analysis of language that will take place at school.

CONCLUSION

Summary of the paper and discussion of the hypotheses

In this paper we have looked at the relationship between musical, audio-visual, poetic, and narrative input (MAPNI) and the simultaneous acquisition of two languages by three natural bilingual children. Our study was divided into two parts. In the first part of the paper, we looked at the context of the children's bilingualism, their contact with each language, and the nature of the corpus. We outlined some important elements in bilingualism, bilingual acquisition, and the role of input in the acquisition of two languages. We then looked at the nature of MAPNI, before examining corpus extracts demonstrating the influence of this input in bilingual acquisition. This examination provided some evidence in support of hypothesis 1a) which proposed that a lot of the L2 input the children re-use in their own output comes from musical, audio-visual, poetic, and narrative sources. We also demonstrated the important role played by MAPNI in providing a context for establishing joint attention, and helping very young children to enter into communication. From this we can conclude that MAPNI indeed contributes to the children's acquisition of two languages, and more particularly their acquisition of English while living in a monolingual French community. The reasons for this are related to the link between the exposure to, and the nature, of the input, and the way it is used as a context for communication. MAPNI seems to provide children with both here-and-now type input, such as descriptions of ongoing activity, and notions that are distanced from the child's own experience. It enables them to explore concepts, and the means of expressing those concepts, from the comfort of their own environment, accompanied by their caregivers. MAPNI is a way of learning about the world which allows for children's need for repetition, predictability, and relevance to their own lives.

We ended Part One with the identification of formulaic sequences in some corpus examples, thereby confirming hypothesis 1b) which proposed that much of the input from MAPNI is formulaic. We suggested that MAPNI, being rich in formulaic language, provides a useful and meaningful context within which children can encounter formulaic sequences which they can then re-use themselves in their own output, whether that output be in the form of everyday dialogue, or whether it be forms of musical, poetic, or narrative output, or in their role-play and acting games. It is highly probable that the formulaic richness of MAPNI is one of the things that makes it so appealing to children, and relevant to their acquisition of language. If we consider small children to have a dominantly holistic approach to language processing, then it is not surprising that they pick up on the highly formulaic aspects of MAPNI and use them towards the building up of their own linguistic repertoire, thereby helping children to achieve the satisfaction of their own needs and desires, to exhibit both their individuality and their membership of the social group they are a part of. Imagine, by way of illustration, a game of 'Pokemon' taking place between a group of 5 to 6 year-olds in the school playground. Being able to 'play Pokemon' is certainly enhanced by having had personal experience of the 'Pokemon' cartoons and maybe collection cards, or toys, although probably not dependent on it, since children's imaginations can fill in any gaps in knowledge. It is, most importantly, an opportunity to integrate the social group of peers, and can be the context within which a child can demonstrate his individuality by inventing his own character and acting out that role. During this whole process the children participating in the game will be drawing on, and experimenting

creatively with, language they have encountered through all kinds of MAPNI, and not just 'Pokemon' cartoons.

In the second part of the paper, we looked at the children's acquisition of translation competence. After looking at some of the theoretical issues related to the subject, we analysed some examples of the children's translation taken from the corpus. Our examination seems to confirm hypothesis 2a) that the mental exercise of translating MAPNI contributes to the acquisition of translation competence, in so far as it exposes the children to the possibilities and limitations of the process, as well as providing a context within which to try their hand at a form of translation which can differ greatly from the daily reformulation they seem to perform so naturally. The presence of so much formulaic language in MAPNI means that the translation task needs to include a holistic processing element, taking into account the best way to deal with complex linguistic sequences, or concepts which require multi-word signifiers, that may not have exact equivalents, or may have a conceptual translation equivalent whose component parts do not resemble those of the original. The ability to translate a formulaic sequence also depends on having a clear and correct understanding of its meaning, and this is not always easy for children. Hypothesis 2b) which states that formulaic language helps children to translate stories, cannot be wholly confirmed, then, since the presence of formulaic sequences may actually complicate the translation process and lead the young translator into error. However, it is possible to propose that it is the presence of formulaic sequences in a narrative translation that make it so convincing, so natural, and so much fun to listen to.

Possibilities for future research

The acquisition of narrative competence and translation competence

It would be interesting to pursue the study of the children's acquisition of narrative competence and translation competence by setting up situations in which the children were asked to tell a story from an illustrated book without text, first in one language and then in the other. Their use of different translation tactics could be analysed as well as the role of formulaic language in the creation of a narrative and its translation.

The fine line between code-switching and natural translation

Another translation-related topic which has scope for further investigation, is the close examination of reformulative code-switching. There seems to be a fine line between translation and code-switching in bilingual ordinary discourse. It might be interesting to study this distinction with the help of contextualised corpus examples. Since repetition and imitation can participate in language acquisition, and in a bilingual situation, they can take the form of a code-switch, it might be useful to establish exactly how this process contributes to bilingual language development.

The acquisition of culture through MAPNI

MAPNI is an expression of children's culture, forming a basis from which children can go on to discover other manifestations of their own and others' cultures. The investigation of the encounter with, and the acquisition of, culture through MAPNI is a possible area of future research. The study

of bilingual children, MAPNI, and formulaic language, the three main elements in this paper, can contribute to a discussion of the intertwined relationships between language, culture, and identity. Aspects that could be examined include, the universal / culture-specific nature of MAPNI; the bilingual child as a 'meeting place of two cultures' (Lüdi and Py); the forging of bilingual/bicultural identity and the role of MAPNI in that process; the contribution of formulaic sequences to a child's sense of belonging to a group and the origin and uses of these sequences. The list is far from exhaustive, and a lot still remains to be explored.

Observation of my own children and the way they talk and play, combined with an intuitive sense of pattern, convinces me that the role of MAPNI is wide-reaching. The little examples they provide me with daily to the link between what they have heard and seen in MAPNI, are like so many clues on a great and elaborate detective hunt, or pieces of a puzzle to be put together. So many clues remain to be discovered and examined, so many pieces to be added, but the big picture is gradually emerging, and I can already guess what it's going to look like.

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APPENDICES

Appendix 1: Lists of the children's contact with their two languages

The children regularly see other English-speaking friends, sometimes with their children, :

Valerie, Lally and Tara 2003 -2006 (Fr to girls, Eng to Val)

Nicola and Amy : 2004-2006 (Eng)

Cindy, Jade and Annabel : since 2004 (Eng)

Shane and Caroline , and Armel since 2006, (Eng to Shane, Fr to Caroline, both to Armel)

Anouk and Yumi since 2007 (English and French)

Chronology of each child's care/school context.

Loïc

Age 0 – 0 ;5 Principle care-giver : mother – English

0 ; 5 – 2 ; 0 Child minder part-time , 2.5 to 4 days a week - French

2 ;0 – 3 ;4 Home with Mum and Meriel (from age 2 ; 2) -English, regular attendance at playschool one or two mornings a week, occasionally whole days- French. One or two mornings a week at Mums and toddlers group –French with others, English with Mum.

2 ;5 and 3 ;3 holidays in Wales without Dad -English

3 ;5 – 4 ;1 School four mornings a week – French, Wednesdays at home with Mum.

4 ;1 – 4 ; 3 School four mornings and four afternoons a week -French , coming home for lunch-English. Wednesdays at home with Mum.

4;3 – 4;5 Holidays: four weeks in Cardiff, three without Dad, then two with Grandpa in France

4; 5 – 4;9 School two whole days with canteen and two days coming home for lunch. Wednesdays at home with Mum.

4;9 - 4;10 5 weeks in Wales and England without Dad

4;11 – 5;2 School four days a week with canteen. Wednesdays at home with Mum.

5;2 – 5;4 Holidays at home with Mum and visits from English-speaking family and friends

5;4 – 6;2 School four days a week with canteen (sometimes home for lunch once a week). Wednesdays at home with Mum.

Meriel

0 –0 ;9 at home with Mum and Loïc ; one or two mornings a week at mums and toddlers group from age 0 ;5

0 ;9 – 2 ;2 One or two mornings then one day a week at playschool- French

2 ;2 - 2;7 Two whole days a week at playschool, two mornings at school – French; Wednesdays at home with Mum.

2; 7 – 2; 8 5 weeks in Wales and England without Dad

2;8 – 3;0 School three mornings and one whole day with canteen; Wednesdays at home with Mum.

3;0 – 3;2 Holidays at home with Mum with some visits from English speaking family and friends.

3;2 – 4;0 School two full days with canteen and two mornings. Wednesdays at home with Mum.

Owen

0 ;0 –0 ;8 at home with Mum and Meriel, plus one or two mornings a week at mums and toddlers group

0 ;8 – 1; 0,5 Two whole days and two mornings a week at childminder -French

1;0,5- 1;2 5 weeks in Wales and England without Dad

1;2 - 1;9 At home with Mum

1;9 – 2;6 Two full days at playschool – French; Wednesdays at home with Mum.

Holidays

June 2003 3 weeks in Wales with Dad L. 0 ;3

Feb 2004 1 week in Wales without Dad L 0 ;10

July 2004 ? weeks in Wales without Dad L 1 ;3

Nov 2004 10 days in Florida with Dad L 1 ;7

December 2004 1 week England and Wales with Dad L 1 ;8

Sept 2005 3 weeks Cardiff without Dad L 2 ;5 M 0 ;3

Nov 2005 1 week Ireland with Dad L 2 ;7 M 0 ;5

Dec 2005 1 week Wales with Dad L 2 ;8 M 0 ;6

May 2006 4 days in Carnac with Cindy and girls L 3 ; 1 M 0 ;11

June-July 2006 4 weeks in Wales, 1 with Dad, L 3 ;3 –4 M 1 ;0-1

April 2007 1 week in Penlan with Cindy and girls L 4 ;0 M 1 ; 10 O 0 ;3

July –Aug 2007 3 weeks in Wales without Dad L 4 ;3 M 2 ; 1 O 0 ;6

Jan –Feb 2008 5 weeks in Wales without Dad L 4;10 M 2;7 O 1;1

March – April 2009 4 weeks in Wales, three without Dad L 5;11 M 3;9 O 2;3

Visits from English-speaking family and friends

April 2003 Grandparents 1 week L0 ;0

Aug 2004 Grandparents, Rosina and Joshua, Jo, Steph and Virgil L 1 ;4

June 2005 Grandparents 1 month L 2 ; 2

Sept 2005 Justina 4 days L 2 ;5 M 0 ;3

Feb 2006 Ben, Debbie and boys 4 days L 2 ;11 M 0 ;8

Dec 2006 Grandparents 4 weeks L 3 ;8 M 1 ;6

March 2007 Granny 2 weeks L 3 ;11 M 1;9 O 0 ;2

July 2007 Granny 5 days L 4 ;3 M 2 ;1 O 0 ;6

Aug 2007 Grandpa 2 weeks L 4 ;4 M 2 ;2 O 0 ;7

Aug 2007 Seb and Roisin and children 2 days

Sept 2007 Grandpa 2 weeks L 4 ;5 M 2 ; 3 O 0 ;8

Dec 2007 Granny 2 weeks L 4;8 M 2;6 O 0;11

August 2008 Granny and Grandpa 3 weeks L 5;4 M 3;2 O 1;7

Appendix 2
Transcript of video recording: Reading magnetic letters 'First Words' book with Owen (2;5)

1. O: It's working?
2. C: Yes, hello, right, where're you gonna put that one?
3. O: there mmm It's not there, not there, not there, not the animal, not this [one] hmm this (turns page)uh uh it's the frog, not the [horse?] oh there he is (turns page) oh it's the cow, no, it's the dog, oh it's the dog, yeah it's the dog, got it, the dog got it, the dog got it
4. C: hmm
5. O: and and the cow (....) the cow; It's this? It's not this?
6. C: no, it's not that one
7. O: what's what's the blue one
8. C: this one goes here
9. O: this one goes here
10. O: What's this?
11. C: that's a W
12. O: oh a W
13. C: we need a C and an O to make cow
14. O: (??)a cow. That's a (it ???)

15. C: no, you have to look look at all the letters
16. O: letters
17. C: find the C and the O
18. O: and the O
19. C: Q S Y, oh there's the C
20. O: there's the C
21. C: oh there's the O
22. O: there's the O
23. C: put it in the middle
24. O: there
25. C; what's that cow doing?
26. O: uh uh uh eating this
27. C: What's he eating? She, what's she eating?
28. O: this this ça (points) this grass
29. C: this grass and, where is
30. O: and the dog is
31. C: and the dog is what, darling?
32. O: ee's eating this
33. C: and what's the dog eating?
34. O: this (points)
35. C: a bone
36. O: a bone (???)
37. C: and where's the cow? Where is she?
38. O: it's there! (points to picture in book) um (I watch???) the animals (turns the page) there ee is!!
39. C: what's that?
40. O: i's a bear
41. C: yeah and what are these?
42. O: a bees
43. C: and what's the bear eating?
44. O: (???) a with the feet
45. C: what's this? What do bears like eating?
46. O: ah ah mouth, oh the the *crocodile (Fr.)* a mouth the mummy an' me! Oum (gobbling sound)
47. C: the crocodile has got big teeth
48. O: Uum!
49. C: where are his big teeth?
50. O: thas the theres
51. C: where are your big teeth
52. O: the *crocodile (Eng Pron)*
53. C: show me your big teeth
54. O: (opens mouth wide)
55. C: are you a crocodile?
56. O: yeah! A crocodile
57. C: are you?
58. O: (????) (blows)
59. C: the crocodile has a long tail
60. O: a long tail
61. C: and a big mouth
62. O: a big mouth
63. C: with lots of teeth
64. O: lots of teeth
65. C: and the bear likes eating honey

66. O: likes eating 'oney
67. C: Honey hhoney
68. O: 'oney
69. C: Hhhhoney
70. O: Honey
71. C: good boy! Honey, honey
72. O: honey
73. C: do you like honey, Owen?
74. O: yeah (I) like honey
75. C: do you? What else do you like?
76. O: um sandwich
77. C: do you like honey sandwiches?
78. O: umunney sandwiches
79. C: What do you like in your sandwiches?
80. O: saucisson
81. C: saucisson!
82. O: yeah
83. C: What else do you like in your sandwiches?
84. O: um ... pain
85. C: what? (really didn't understand because wasn't expecting it)
86. O: pai... I eating the pain
87. C: bread?
88. O: yeah bread
89. C: bread. bread and saucisson sandwiches
90. O: bread an sauci..sson..san(???)
91. C: and what do you like for dessert?
92. O: petit filous!
93. C: petit filous!
94. O: (laughs)
95. c: shall we have sandwiches for our lunch? Shall we have sandwiches for our lunch, hmmm?
96. O: there he is (pointing to book again)
97. C: would you like a sandwich for your lunch, Owen?
98. O: there he is
99. C: there he is, yeah

O: Where, where où is is (sounds like id id or it it but he has a cold so it's hard to tell) the cow? it's there the cow and the dog

100. C: hmmm
101. O:the cow, the dog and the animals (turns page) the gre, the frog
102. C: and what's this?
103. O: this...
104. C: what's that?
105. O: tha a coignk
106. C: a coignk, it's a duck
107. O: a duck
108. C: yeah
109. O: a fox
110. C: fox, good boy, what about all these animals over here? What's that? There's an
111. O: a elephant, and a giraffe, a bird
112. C: and what's this here?
113. O: a snake and a bird
114. C: and what does the snake say?

115. O: shhshsh
116. C: yeah and what does the elephant say?
117. O: phsshhphsshh (high pitched hiii)
118. C: does he? (laughs)
119. O: what's the elephant doing, mummy?
120. C: he goes (trumpets)
121. O: (trumpets)
122. C: (clears throat)
123. O: (clears throat)
124. C: (coughs)
125. O: (coughs)
126. C: that's just me coughing, you don't have to copy! An elephant
127. O: an elephant *cough cough (said like a high pitched animal call)*
128. C: what other animals are there in this book; oh! what's this?
129. O: what's this?
130. C: look
131. O:a cat!
132. C: and what's the cat playing with?
133. O: the ball
134. C: that's right, and what's this?
135. O: a bird
136. C: where is the bird?
137. O: (points to picture)
138. C: the bird is sitting in..in the
139. O: the grass
140. C: the grass?
141. O: in the grass
142. C: oh. And what's this?
143. O: uh a soleil
144. C: a what?
145. O: a soleil
146. C: a soleil?
147. O: yeah
148. C: a sun
149. O: (sings) Mr Sun, sun Mr golgen sun, iydeeiy [hiding behind] a tree; it's this one? this one?
150. C: yeah, very good Owen it is this one, yeah that's exactly the right one, (Owen has put the right letter in the right place) well done, ooh what's that?
151. O: a pig
152. C: what's he doing?
153. O: ploosh, ituh splush
154. C: sploosh
155. O: sploosh
156. C: he's rolling in the
157. O: water
158. C: the water? That's very dirty water. I don't think it's water, what is it?, it's all brown
159. O: brow
160. C: It's the mud.
161. O: it's the mud
162. C: He's rolling in the mud
163. O: He's rolling in the mud
164. C: Is he happy?

165. O: Is he happy, yes he's happy
166. C: he's got a big smile on his face, hasn't he?
167. O: yeah!
168. C: he likes rolling in the mud
169. O: what's the uh what's the other
170. C: what's that one? what's this one here?
171. O: a bird
172. C: a bird, what kind of bird
173. O: blue
174. c: a blue bird?
175. O: No
176. C: no, it's a hen
177. O: it's a paint
178. c: a what?
179. O: a paint
180. C: a paint?
181. O: yeah its on the on the on the bird
182. C: paint on the bird?
183. O: yeah (the hen has dark tips on her feathers)
184. C: those are her feathers
185. O: theher feathers
186. C: she's sitting on her nest. What can you see in the nest?
187. O: blue (or plume?)
188. C: what are these? what's this here?
189. O: egg
190. C: yes! The hen is laying eggs and she's sitting on her nest. Do you like eggs Owen?
191. O: yeah I like eggs
192. C: do you? Do you like boiled eggs with soldiers?
193. O: soldiers
194. C: yeah, do you like egg sandwiches? Oh! What's this one? (magnetic letters) We don't need that one, do we?
195. O: nah not that one
196. C: oh, here we are again. We can put this one here
197. O: yeah put this one here
198. C: shall we go and have some sandwiches?
199. O: uh no the cows and the dog and and the animals, the animals, no the animals
200. C: you want me to film the animals
201. O: the animals the frog, and duck and the animals
202. C: finished!

Appendix 3
Transcript of video: watching 'Sleeping Beauty 2' with Meriel (3; 11) and Owen (2;5)

1. O: A naughty cat again
2. M: a naughty cat
3. .....
4. O: c'est a naughty cat again
5. M: There's that naughty cat again....oh, who's that? I think it's Jacques.
6. C: Jacques? The mouse? What's happened to him?
7. M: He turned in a man

8. C: The fairy godmother's turned him into a man!
9. M: there's that naughty cat again
10. C: there's that naughty cat again
11. O: there! A dancing
12. C: they're dancing?
13. O: yeah
14. C: they're building something, aren't they?
15. O: there, look
16. M: What are they building?
17. C: I don't know
18. O: it's a swing
19. M: a house, maybe
20. C: A swing? A house, maybe, yeah...oh
21. M: ow
22. O: ow
23. C: What did he do then?
24. M: Just like me...because me got a very big bump
25. C: Oh yeah, you bumped your head as well didn't you? You've got a bump.
26. Hervé: Est-ce que tu aurais du Paracetamol
27. C: Oui. Tu as mal quelque part?
28. O: There's that cat again
29. C: Attends
30. H: J'ai mal à la tête
31. O: that cat again
32. C: Je vais te chercher ça. Sit down Owen (leaves the room, children continue watching saying nothing.....)
33. .....
34. O: c'est a naughty cat again (repeats until I say yeah)
35. M: and there's a black one as well
36. C: Is there? There are two cats...Look at him (laughs) he still thinks he's a mouse
37. O: c'est un mouse
38. C: oh
39. M: oh
40. O: oh
41. .....
42. C: oooh, (laughs)
43. O: ooo (laughs) (repeating what character said) Eh Caca, you caca!
44. C: Are you sure that's what he said?
45. O: yeah. A naughty cat again (repeats until I say yeah) c'est un naughty cat mummy
46. M: No, it's the godmother
47. C: the godmother, that's right
48. O: What's make that noise? What's making noise? A cat noise, mummy.
49. C: A cat noise?
50. O: yeah, hein, not a cat noise.... a naughty cat again, a naughty cat
51. C: yeah?
52. O: yeah, a naughty cat! (laughs) a naughty cat again
53. C: Oh, where're they all going? Oh the fair. Juggler. Oh look, puppets!
54. O: a puppets...oh! A elephant!
55. C: an elephant
56. O: it's a mouns thing, a mouns thing pour a colo, (can't understand) ascolo a schopping
57. C: Shopping?
58. O: (can't understand) go to shopping

59. C: what?
60. O: (can't understand) go to shopping
61. C: going shopping?
62. O: yeah
63. C: who's going shopping?
64. O: the meow
65. C: the cat? Going shopping?
66. O: yeah oh it's a elephant oh it's dancing, it's dancing
67. C: yeah they're dancing
68. O: oh a naughty cat again
69. C: oh, oh dear
70. M: (can't hear) his head, he's gonna eat his head
71. C: he's gonna eat his head?
72. O: plouf! On the water
73. C: splash
74. O: splaf
75. C: splash
76. O: splaf on the water
77. C: splash in the water
78. O: yeah oh ah (scream)
79. C: oh he's going on the big wheel. Uh oh the cat is there as well..oh he can't get away from that cat, can he?
80. M: yes, he can, look
81. C: uh oh uh oh
82. O: uh oh uh oh aaah aaah ahhh he's falling down waah aaaahhh
83. C: oh dear, a stampeding elephant
84. O: haaahhuh, c'est comme ça...mummy
85. C: how's he going to help?
86. O: he's stopped, stops, stops
87. C: how is Jacques going to help Cinderella?
88. O: huh! Uh! It's a daddy it's a daddy
89. M: it's gonna turn him in Jacques
90. C: oh no the king!
91. O: ah it's gone now
92. C: hooray
93. O: hooray
94. C: well done Jacques
95. O: well done Jacques
96. M: haha ha
97. O: hahaha....a naughty cat again, a naughty cat again
98. C: he's being taken away now, isn't he, that cat;
99. M: Why?
100. C: because that lady really likes him, she wants to keep him..
101. O: who's the cat? What's the cat?
102. C: Jacques saved the day...oh!...oooh.
103. O: (can't hear) it's run away
104. C: hooray, fireworks
105. O: fireworks
106. C: that's pretty
107. M: We('ve) already seen fireworks
108. C: have we?

109. M: yeah
110. C: do you remember?
111. M: with Shane
112. O: with Shane
113. C: that was a long time ago, wasn't it?
114. M: Yeah
115. C: you remember it, do you?
116. M: and when we were a very tiny baby
117. C: well, you were two
118. O: a tiny baby
119. C: no, you were three
120. M: yeah
121. C: only just though, it was nearly a year ago. Did you like it?
122. M: mm, I were a bit scared and a bit cold so we put a blanket on me
123. C: a bit scared and a bit cold, because it was late at night, wasn't it, we had to wait until it was night time so was really late, do you remember?
124. M: Yeah
125. O: a naughty cat again a naughty cat again
126. C: not that naughty cat again...oh what's going on?
127. O: what's going on?