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Language mixing in the weak language: Evidence from two children[☆]

Harriet Jisa*

*Université Lumière-Lyon 2 and Laboratoire Dynamique du Langage,
CNRS UMR 5596, Institut des Sciences de l'Homme,
14, avenue Berthelot, 69393 Lyon Cedex 07, France*



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Université Lumière-Lyon 2 and Laboratoire Dynamique du Langage,
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Abstract

This study examines the frequency and the type of language-mixing in two young French English bilingual sisters (2;3 and 3;6). Their production is studied during a time period covering their first intensive contact with English, their weak language. The pattern of code-mixing for both children reflects their dominance in French. However, the two children show differences in mixing patterns over the time period. It is argued that the age at which a bilingual child begins to produce in her weak language has a profound impact on the type and the frequency of code-mixing. Language mixing in young bilinguals is very different from code-switching in adult bilinguals. The roots of code-switching can be seen in the early use of language choice as a function of addressee. Again, the two children show differences in development of the beginnings of code switching. © 2000 Elsevier Science B.V. All rights reserved.

1. Introduction

The complexity of codeswitching has been studied from a variety of perspectives. Considered from a social constructionist point of view, codeswitching is a powerful tool for speaker identity and speaker alignment (Myers-Scotton, 1993; Rampton, 1995, 1998; Jørgensen, 1998; Sebba and Wootton, 1998). Discourse perspectives on codeswitching ask questions concerning the functions or conversational activities a bilingual performs when s/he codeswitches (Auer, 1984, 1998b; Wei, 1998). For instance, bilinguals can use codeswitching to mark direct speech or side sequences in

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a narrative (Gumperz and Hernandez-Chavez, 1972; Romaine, 1989). Yet another perspective on codeswitching investigates structural constraints on codeswitching; what kinds of elements can be switched and where switching can occur in bilingual utterances (Pfaff, 1979; Poplack, 1981; Sankoff and Poplack, 1981; DiSciullo et al., 1986; Muysken, 1990).

Codeswitching is a widespread phenomenon in bilingual speech communities and in conversations between bilingual individuals. Just as monolinguals may switch registers, styles or voice during conversation, bilinguals may switch languages. In studies of adult bilingual speech, code alternation is considered an integral part of bilingualism. It has even been argued that certain types of code alternations in adult bilingual speakers are proof of complete control over the syntactic apparatus imposed by both languages (Poplack, 1980). No one would argue that code-mixing in young bilingual children is the same thing as codeswitching in adult bilinguals. In studies of bilingual first language acquisition, language mixing is considered something that the bilingual child will eventually overcome through further mastery and acquisition of both languages. Bilingual children will become bilingual adults. Codeswitching competence does not emerge full blown in a bilingual child from one day to the next. It is an additional competence which the bilingual child must acquire.

The work presented here will show how language mixing in young bilinguals is very different from codeswitching of adult bilinguals. Language mixing in the two bilingual sisters to be studied here abounds during their first intensive contact with English, their weak language. Before their first intensive contact with English, the two children were balanced bilinguals in comprehension, but were very dominant in French for production. The mixed elements in their English production, essentially one-word units, are very predictable and strongly related to language dominance. An abrupt change in the children's language environment forces them to produce more in their weak language. This forced production results in a large number of mixed utterances in which grammatical morphology from the strong language, French, is called upon to bolster up the weak language, English.

The two children differ in age by fifteen months. The youngest child's (2;3) productions in French at the beginning of the study reported on here are essentially two-word combinations. The oldest child (3;6) is well beyond this stage in her strong language. The developmental stage attained in the strong language at the time of the first intensive contact with the weak language is important in understanding mixing patterns.

One particular type of code alternation, situational codeswitching is just emerging in the two children's production. Codeswitching, as opposed to language mixing, is beginning to emerge in the children's production. The two children show differences, however, in their ability to switch language as a function of the language of their addressee. Intense contact with the weak language is an essential factor in their bilingual development. It will be argued, however, that there are important differences between the children due to differences in age and developmental stage of the

2. Situational codeswitching vs. non-situational codeswitching

Early approaches to codeswitching were particularly interested in its contextual role in speech events (Gumperz, 1982). An important distinction to be drawn that between situational or participant related (Auer, 1984) codeswitching and, situational or metaphorical (Gumperz, 1982) codeswitching. Situational codeswitching will be used here to refer to language choice based on participants, topics or things in conversational situations. Non-situational codeswitching will be used to refer to discourse functions of language alternation in bilingual interaction (Gumperz, 1972; Auer, 1984; Jørgensen, 1998).

Some young bilinguals, very early on, have been shown to use situational codeswitching. Research on young bilinguals has emphasized how families differ in the choices they make concerning language use in the home. In her review of the literature, Romaine (1989: 165–168) establishes an inventory of types of bilingual children, according to the parents' strategies for using the two languages with child. Some parents speak both languages to the child, inside as well as outside the home. Others maintain a strict 'one person-one language' principle within the home environment. Still other parents opt to use only one language in the home. Rather than differentiate the two languages according to speakers, these parents separate the two languages according to situation, inside the home versus outside the home. Much research has shown that bilingual children raised in one language – one person families are sensitive to the language of the addressee. In their second year of life, they reveal this sensitivity through the appropriate choice of language depending on their interlocutor (Genesee et al., 1995; Goodz, 1989, 1994; Meisel, 1994; Lanza, 1992, 1995).

In distinction to situational codeswitching, non-situational codeswitching is dependent on participants or settings, and can mark a number of discourse functions (Blom and Gumperz, 1972; Gumperz and Hernandez-Chavez, 1972). Codeswitching can be used to include or exclude a particular listener. Just as bilingual mothers fathers of monolingual children may use another language or monolingual parents can spell out words between themselves in the aim of excluding their young partner children, bilingual conversationalists can use codeswitching to mark addressee selection in bilingual conversations (Auer, 1984, 1998b). Bilingual speakers can use codeswitching to emphasize their identity as mixed (Poplack, 1980). A important expressive function of codeswitching is in establishing 'we' and 'I' social relations. Romaine (1989: 151) gives an example of this important symbolic distinction between in-group and out-group signaling. For Punjabi/English bilinguals, Punjabi is reported to signify in-group, informal, personalized activities, while English signifies more out-group or formal activities. The switches between Punjabi and English emphasize the boundaries established in discourse between 'we' and 'them'.

Non-situational codeswitching can also accomplish a number of discourse structuring functions. It can contextualise side sequences and open or close sequences in conversation. When introducing side sequences, speakers may use

eventual return. Bilingual speakers can indicate such departures and returns by using one language for the main discourse and framing the side sequences with the other language (Alfonzetti, 1998). When speakers, monolinguals or bilinguals, wish to produce a narrative in conversation, they must signal a desire to suspend normal turn-taking practices. Codeswitching can be a useful instrument as a story preface, in which the prospective story teller signals, through a change in language, an upcoming extended stretch of uninterrupted talk (Alfonzetti, 1998). Many functions of codeswitching, then, are not specific to bilinguals, but are discourse functions that all speakers mark using any language (Rampton, 1995). Codeswitching can be considered an additional means of marking discourse function, available only to bilinguals.

The early use of codeswitching as an instrument to struggle for power and rights in conversation has been studied in young Turkish-Danish bilinguals by Jørgensen (1998). This study suggests that up until approximately 8 years of age, language choice among bilingual children depends largely upon situational factors such as participants and setting. It is only after that age that language alternation serves discourse functions such as giving and taking rights in conversation or influencing events according to speaker desires. In Rampton's (1995) landmark study of ethnicity and language use (including non situational codeswitching) among bilingual adolescents in urban Britain, the youngest subjects are 11 years of age.

While situational codeswitching is well attested in very young bilingual children in one language-one person families, non-situational codeswitching would seem to be outside the possibilities of young bilingual children. Full-blown mastery of codeswitching is an additional pragmatic competence that bilingual children must develop. Such a development appears to extend well beyond early childhood. It is not surprising that non-situational or metaphorical codeswitching is not observed in young bilinguals. Discourse related codeswitching requires social, as well as pragmatic and textual competence, that are beyond the capacities of young children, be they bilingual or monolingual.

3. Structure in codeswitching vs. structure in language mixing

Research on formal aspects of codeswitching is abundant. In the brief discussion which follows only one aspect will be discussed: the relationship between inter- and intrasentential codeswitching and language proficiency. Intersentential codeswitching involves the use of sentential constituents from two languages in the same discourse. Each sentential constituent obeys the grammar of its respective language. Intrasentential switching occurs within the confines of a single sentence or clause constituent. Codeswitching within constituents requires access to the syntactic apparatus of both languages, since each of the monolingual fragments making up the code switched sentence should be internally grammatical (Sankoff et al., 1990).

Puerto Rican Spanish/English bilinguals to rely heavily on intersentential codeswitching, making only minimal use of intrasentential codeswitching. Other research, however, argues just the opposite. In a study of Arabic/French bilinguals in Morocco, Bentahita and Davies (1992) found that the most fluent and balanced subjects avoided intrasentential switching. Two groups of bilinguals participated in the study. The two groups differed in age: the older generation (28- to 40-years-old), the younger generation (16- to 24-years-old). The older generation attended school when Morocco was a French Protectorate and French was the language of instruction. The younger generation, born after this period, was schooled in Arabic with French instruction introduced later. The researchers report that the older subjects were balanced bilinguals, while the younger group was more dominant in Arabic. Intrasentential switching was more frequent in the older bilinguals, while intrasentential switching was more frequent in the younger group. Older, more balanced, bilingual also appear to use more metaphorical, non-situational codeswitching for discursive functions, for example to include side sequences or background information in narrative discourse.

Poplack (1980) also noted that for fluent adult bilinguals, higher-level constituents (e.g., sentences or clauses) tend to be switched more frequently than lower level constituents (e.g., one word switches including nouns, determiners, verbs adverbs, adjectives). A very regularly observed exception to this constraint is the category noun, which is particularly favoured for switching (Pfaff, 1979; Poplack 1980; Berk-Seligson, 1986). A bilingual may codeswitch a noun, for example, to refer to a notion which has no equivalent in one language. Myers-Scotton's (1979) work on codeswitching between Kikuyu and English bilinguals in Kenya shows how university students switch to English in Kikuyu sentences to refer to concepts specific to technical subjects.

Language mixing in bilingual children is quite different from codeswitching in older bilingual children and adults in the size of the mixed item. While single-word switches are rare in older bilinguals (except nouns), young bilinguals often show one word-switches in multiword utterances. In addition to the size of the switched element, the type of item mixed is quite different from adult bilinguals. Single-word switches in bilingual children are overwhelmingly grammatical morphemes (Redlinger and Park, 1980; Vilman, 1985; Lanza, 1992, 1995).

Many studies of one parent-one language situations have shown that from the beginning grammatical development in bilingual children (where there is relatively balanced production in the two languages) proceeds simultaneously and independently, with no interference between the two systems (De Houwer, 1990; Klinge 1990; Meisel, 1990; Müller, 1990, 1995). However, for many bilingual children growing up in one language – one parent situations, one language wins out over the other. Most typically, the majority language of the community in which the child lives becomes the strong or dominant language, while the minority language, often spoken only by one isolated parent, becomes the weaker language (De Houwer 1990; Klinge, 1990; Meisel, 1990; Müller, 1990, 1995). In a very careful examination of mixing in five French-English bilinguals (ages 1;10 to 2;2) Genesee et al.

the child's choice of language, young bilingual children do mix the two languages. In particular, young bilingual children mix when there is a dominance of one language over the other.

Petersen (1988) proposes the 'dominant language hypothesis' which predicts a directionality of mixing: grammatical morphemes should come from the child's dominant language. In word internal code mixing, grammatical morphemes of the dominant language are combined with lexical morphemes of the non-dominant language, but not vice versa (De Houwer, 1990). Lanza (1992), in her study of a Norwegian-English child dominant in Norwegian, shows indeed that both bound grammatical morphemes and grammatical words from Norwegian are 'borrowed' into English utterances. English bound morphemes and function words, however, do not co-occur with Norwegian lexical morphemes.

Schlyter (1993) was one of the first to ask about the development of the weak language. Based on her study of young French-Swedish bilinguals, Schlyter (1993) concludes that the strong language exhibits all characteristics of normal L1 development, as regards the development of central grammatical phenomena such as finiteness, word order, and placement of negation. While no studies have claimed that the development of the strong language differs from that of monolingual children of that language, there is growing evidence that the weak language develops in a very different way from the strong language (Jisa, 1989, 1995; Parodi, 1990; Schlyter, 1993, 1994, 1995; Schlyter and Håkansson, 1994).

Schlyter (1994: 69) has enumerated some of the indications in production that indicate a weak language. The child may show a marked preference for using one language in situations where both languages could be used. A second indication is a general reticence to use one of the languages in utterances consisting of more than *yes* or *no*. A smaller vocabulary and a shorter MLU in one language as compared to the other are also indications of a weak language. The weaker language, however, exhibits greater variation in the acquisition of central grammatical phenomena, from errors to complete non-existence of the grammatical construction in question. The weak language often shows an absence of modals, subordinate clauses and past reference. The child may avoid marking agreement in combinations of subject and verb altogether, resulting in a high frequency of isolated prepositional phrases and noun phrases. Or the child may replace the missing items by borrowing grammatical categories from the strong language into the weak language.

Language dominance develops when the child has greater exposure to one language and needs it in order to communicate with more interlocutors (Grosjean, 1982; Lanza, 1992). Changes in exposure patterns bring about profound changes in the weak language. The child is called upon to use the weak language in more and varied contexts with a larger range of interlocutors. The purpose of the work presented here is to show how language mixing evolves during a period of intense contact with the weak language. A second underlying purpose is to illustrate that the development of the weak language is influenced by the stage of grammatical devel-

4. Methodology

4.1. The two subjects

The corpus reported on here is part of a large longitudinal study of the acquisition of French and English by two young sisters. Systematic audio and video recording began when the oldest child, Odessa, was 2;8 and the youngest, Tiffany, was 1;5. Two-hour recordings were made every two weeks with the children interacting either with their father, or with their mother or with both parents at the same time. Both children were born and raised in France. Their father is French and their mother, American. Respecting a rather strict one language-one person principle, the father spoke French to the two girls, the mother, English. The language used between the parents is French. The children were recorded until the second child reached her sixth birthday.

In their early years, the children had much more exposure to French than to English. From the age of three months both children spent roughly 5 to 6 hours a day in a monolingual French-speaking day care center. Until the age of 2;9 Odessa was exposed to English exclusively in interactions with her mother. After that age Odessa began attending a bilingual nursery school in which English was used in the morning and French in the afternoon. While the French teachers in this bilingual school have very little command of English, the English teachers (all native speakers) speak French. Until the age of 2;3 Tiffany, the youngest girl, received English input exclusively from her mother. At the age of 2;5 Tiffany began attending the same bilingual nursery school as her sister.

The first intensive contact with English took place when Tiffany was 2;3 and Odessa 3;6. The children spent two months with their mother, without their father in California. For both children this was their first contact with completely monolingual English-speakers. During the two-month stay in California the children were audio-recorded almost everyday with a variety of interlocutors and their mother. A very rough first transcription was made by the mother within 48 hours of recording. These rough transcriptions were annotated with notes concerning the non-verbal situation and background information about the events, objects and people either present in the situation or being talked about. Subsequently, a first complete transcription was made by the mother and then verified by bilingual French-English assistants. Part of the data recorded over these two months make up the corpus that will be examined in this article.

While no difference was noted for either child in comprehension of French or English, a very big difference was noted for production of the two languages: French was very clearly the dominant language for production. The mother spoke English to the children, but made no effort to force them to speak English. Their stay in California represented an abrupt change in the community language and produced what Arnbeg (1987) might refer to as a 'linguistic shock' in which the children found themselves face to face with many and varied speakers of English.

4.2. The data

The data collected over the two months were divided into five time periods, each period representing approximately 12 consecutive days. Thus, Period 1 covers the first 12 days, Period 2 the second 12 days and so forth. Each utterance was coded as either French, English or Mixed following De Houwer's (1990) guidelines. A child utterance was considered as being French if all the lexical items (lexical and grammatical) in it were French and an utterance was considered as being English if all the items in it were English. Single word utterances consisting of only *non/no/nah* or *oui/yes/ouai/yeah/OK* were not counted. When *non/no/nah* and *OK* were in a multiword utterance, the utterance was coded depending on the language of the other lexical items. Proper names and kinship terms for the children's significant adults (*maman/mommy, papa/daddy, dad, mamie/granny, papi/grandpa*) were considered as non-language specific when the child used them in single-word utterances to refer to their own mother, father, grandmother or grandfather and are not considered here. When kinship terms were used in multiword utterances, it was the language of the other items in the utterance which determined the classification of the utterance as French, English or Mixed.

Tables 1 and 2 give the number and percentage of total utterances of the French, English and Mixed utterances for Tiffany and Odessa respectively. Non-language specific utterances are excluded. Also given on Tables 1 and 2 are the MLUs for English, French and Mixed utterances. The MLU was calculated using all the utterances in the utterance type for a given period. When there were less than 50 utterances for an utterance type, the MLU was not calculated. Figures 1 and 2 trace the change in the children's production over the two months.

5. Rapid development of English

French utterances dominate in Tiffany's production during Period 1 and 2 and in Odessa's production during Period 1. Subsequently, English begins to dominate in production. The number of Mixed utterances steadily increases for Tiffany during Period 1 to Period 4, and falls slightly during Period 5. For Odessa, the number of Mixed utterances during Period 2 remains stable and falls during Period 5.

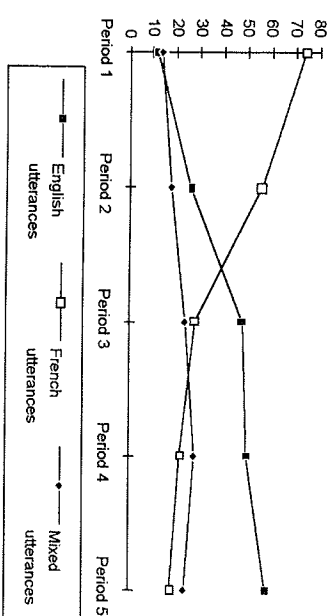
One of the advantages of using MLU is that it allows reliable comparison of production between children regardless of age (de Villiers and de Villiers, 1978; Ronald, 1983). During Period 1 Tiffany's English MLU is roughly equivalent to two of Brown's (1973) monolingual subjects, Adam and Sarah, at equivalent ages. Odessa's English MLU is greatly inferior to English monolingual subjects of her age. While Tiffany's French and English MLU are close, there is a large difference between Odessa's English and French MLU.¹

Table 1
Number of French, English and Mixed utterances and percentages of total utterances: Tiffany 2;3

	Period 1	Period 2	Period 3	Period 4	Period 5
Age	2;3	2;3	2;4	2;4	2;5
English	68 (12%)	78 (26%)	272 (48%)	243 (50%)	235 (58%)
LMU	1.79	1.7	2.18	2.04	2.16
French	430 (74.5%)	201 (56%)	158 (28%)	105 (22%)	74 (18%)
LMU	1.46	1.87	1.95	1.43	1.66
Mixed	78 (13.5%)	55 (18%)	133 (24%)	135 (28%)	96 (24%)
LMU	3.03	3.05	2.64	2.93	3.06
Total utterances	576	304	563	483	405

Table 2
Number of French, English and Mixed utterances and percentages of total utterances: Odessa 3;

	Period 1	Period 2	Period 3	Period 4	Period 5
Age	3;6	3;6	3;7	3;7	3;8
English	108 (12%)	155 (46%)	709 (73%)	44 (75%)	242 (87%)
LMU	1.33	2.35	2.65	3.25	3.01
French	688 (80%)	118 (35%)	79 (8%)	34 (6%)	5 (2%)
LMU	3.65	2.73	2.21	—	—
Mixed	74 (8%)	62 (19%)	188 (19%)	114 (19%)	32 (11%)
LMU	4.81	4.14	4.48	5.2	—
Total utterances	866	335	976	592	279



¹ It should be noted that in the months preceding the two months in California, Odessa's MLU in

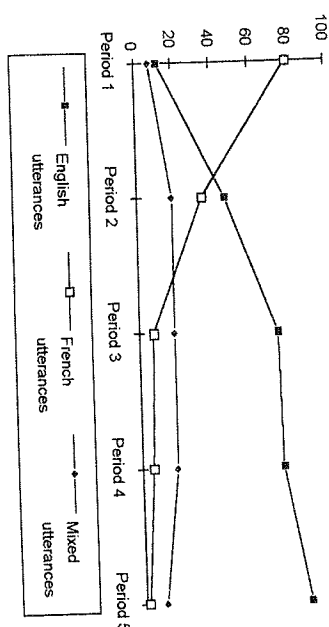


Fig. 2. English, French and Mixed utterances from period 1 to period 5 (in percentages).
Odessa 3;6 to 3;8

During the two months, Tiffany's English MLU increases slightly from 1.79 to 2.16. At the end of the two months her English MLU is close to monolingual English-speaking child of equivalent ages (Brown, 1973; Chapman, 1981; Chapman and Kohn, 1978). Tiffany's developmental curve is gradual and close to that of monolingual children. Odessa's English MLU increases much more during the two months, from 1.33 to 3.25 (Period 4) and 3.01 (Period 5). Her English MLU during Period 1 is closer to monolingual child of 16 to 23 months (de Villiers and de Villiers, 1973; Retherford et al., 1981; Seitz and Stewart, 1975). Odessa's English MLU during Periods 4 and 5 corresponds to monolingual children of 30 to 40 months of age (Cunningham et al., 1981; Chapman, 1981). Although she does not completely attain monolingual norms, Odessa's rapid development of English production during the two months shows that when a bilingual child is placed in a context where her weak language (in production) is the language which dominates in the community, the receptive competence accumulated before the period of intense contact translates rather quickly to productive competence.

6. Patterns of language mixing

For both children the MLU for Mixed utterances is always superior to the MLU for either language. The percentage of Mixed utterances is considerably higher than that reported for bilingual children showing a relatively clear balance between the two languages (De Houwer, 1990; Meisel, 1989; Redlinger and Park, 1980; Swain and Wesche, 1975; Taeschner, 1983; Vihman, 1985). The mixing pattern in both children reveals a very clear dominance for French: utterances with French lexical items contain French bound and free grammatical morphemes and; utterances with English lexical items contain French free grammatical morphemes and; utterances with

Table 3 and Table 4 show the type of mixing during Period 5 for Tiffany and Odessa respectively. During this Period 24% of Tiffany's utterances are Mixed, 11% of Odessa's utterances are Mixed. Mixed utterances were divided into two categories: functors and others. Functors include unbound grammatical morphemes. Others refer to lexical items. While the rate of mixing is higher than for other bilingual children reported on in the literature, the type of mixing is very similar (Lanzetta, 1992; Redlinger and Park, 1980; Swain and Wesche, 1975; Vihman, 1985). Both children mix French grammatical morphemes (pronouns, prepositions, articles and connectors) in their English production. In addition, Tiffany uses the negative marker 'pas', deixis markers 'ça' [that], 'là' [there] and the existential marker 'c'est' [it's]. Tiffany also shows a larger proportion of mixed utterances which include French verbs, nouns, adjectives and auxiliaries compared to her older sister.

Table 3
Mixed utterances (types) during Period 5 (24% of total utterances): Tiffany 2;5

Types	Tokens
<i>Functors</i>	
Pronouns	10
<i>ma</i> sweater	
Prepositions	16
<i>à</i> (for dative, locative and possessive constructions)*	
coffee <i>à</i> mommy (=mommy's coffee)	
the high chair <i>pour</i> Odessa	
Articles	15
is this <i>le</i> sweater mommy?	
see <i>le</i> kitty?	
Connectors	6
<i>et</i> me	
<i>mais</i> come on	
Negation	32
I wan <i>pas</i> chair	
<i>pas</i> dry	
<i>pas</i> mommy that shoe [that's not mommy's shoe]	
Deixis, Existentials	11
<i>ça</i> mommy coffee [that's mommy's coffee]	
<i>met</i> Odessa high chair <i>là</i> [put Odessa's high chair there]	
<i>c'est</i> cold	
Total functors switches	90 (80%)
<i>Others: Nouns, verbs, auxiliaries, adjectives</i>	
I wan <i>poire</i>	23
<i>met</i> Odessa high chair <i>là</i>	
a <i>petit</i> bus	
Total others	23 (20%)
Total mixes	113

* The use of the French preposition *à* to encode dative, locative and possessive constructions is typical

Table 4
Mixed utterances (types) during Period 5 (11% of total utterances): Odessa 3;8.

Types	Tokens
<i>Fonctiors</i>	
Pronouns	8
<i>tu</i> see?	
what this <i>tu</i> got?	
<i>moi</i> I get down	
Prepositions	12
the sun is coming <i>dans</i> my eyes	
a daddy <i>avec</i> a child on his shoulders	
Articles	6
take <i>la</i> spoon	
<i>tu</i> do what <i>avec</i> <i>le</i> table?	
Connectors	10
go like this <i>et</i> <i>après</i> foot's clean	
<i>mais</i> I want Aunt Hannah not coming	
Total functor switches	36 (92%)
<i>Others: Nouns, verbs, auxiliaries</i>	3
a <i>put</i> like me (corrected to 'sweater' in next turn)	
<i>on met</i> little pot	
<i>on va</i> push ok?	
Total others	3 (8%)
Total mixes	39

In addition to strong dominance in French there is another possible cause for this high rate of mixing: parental mixing. Examination of the transcripts from recordings made during the two months preceding the trip to California, however, eliminates this hypothesis. The father's rate of mixing during the two months preceding Period 1 ranges from 0% to 6% depending on the recording. The same figures for the mother range from 0% to 3%. In addition to a lower rate of mixing, the parents' type of mixing is quite different from the children's. The father's main type of mixing concerns the use of English nouns in French utterances. The mother's major type of mixing consists of discourse markers, especially 'bon' [good, so] and 'alors' [so] tagged to the beginning of English utterances. For example, to mark the end of an activity the mother says 'bon, let's go' or 'bon, should we clean up this mess?' It is arguable that this kind of switching is intersentential as the discourse marker tagged to the beginning of the utterance carries its own sentential prosody. Use of such discourse markers has been described as very typical of bilingual adults (Auer, 1984; Oesch-Serra, 1998). The dominance of French would seem to account for the high proportion, as well as the type of Mixed utterances in the children's production.

Replacing French lexical items with English lexical items was much less prob-

the communicative situation. Prepositions, for example, establish relations between objects. In act-out comprehension tasks very young monolingual children will often ignore the preposition altogether, using the canonical relationship between objects to dictate their responses (Clark, 1973, 1977; Cook, 1978; Hoogenraad et al., 1978). For instance, a bucket will be treated as a container if the object to be located in relation to the bucket is smaller. In Odessa's Mixed utterance addressed to monolingual aunt, 'the sun is coming *dans* my eyes', she is counting on the fact adults will make the same kind of inference between the objects to be related. If she is right, her aunt promptly lowered the kitchen curtains to block the sun.

The meaning of a connector is often determined as much by the proposition connects as by the connector itself (Auchlin, 1981a,b; Moeschler, 1981; Rotstein, 1981; Schiffrin, 1982; Van Dijk, 1977a,b). Young monolingual children often use an all purpose connector such as 'et' [and] or 'et puis' [and then] to conjoin propositions related by a number of semantic relations (eg., sequentially, cause, consequence) (Jisa, 1984/1985, 1987). The semantic meaning comes from the propositional content of the conjoined utterances as much as it comes from the connector. While Odessa and Tiffany mix more than other bilingual children reported on the literature, the type of mixing is very much the same. They borrow grammatical morphology from their strong language, French, into their weak language, English.

7. Differing patterns of mixing in the two children

The two children differ, however, in the evolution of Mixed utterances. Odessa's much further along in the grammatical development of her dominant language than is Tiffany. She has acquired agreement, makes reference to past events using the *passé composé* and the *imparfait*. She encodes future events using periphrastic future and she uses a number of subordinate constructions.

The majority of Tiffany's utterances in French are two-word constructions. In Tiffany, as for all young children, content words, especially nouns, make up the basis of her word combinations (Brown, 1973; Braine, 1976; Slobin, 1985; Bassett et al., 1998). Bound and free grammatical morphemes are just beginning to appear the two months preceding the trip to California. Two-word constructions require considerable interpretation on the part of the adult. *Maman cuillere* [mommy spoon] can mean 'mommy's spoon' (identification), 'mommy my spoon fell' (information) or 'mommy give me your spoon' (request), depending on prosody and context. To clarify utterances as clear requests, Tiffany begins to use the verb 'wan' [want] during Period 1. In fact 'wan' is one of the most frequent verbs in Tiffany's production. Out of 2331 total utterances in her corpus for the two months, 311 (13%) use 'wan' to ask for something necessitating the intervention of another person. In instance, 'wan cuillere' [want spoon] and 'wan juice'. Table 5 lists all the tokens Tiffany's affirmative constructions using the verb 'wan'.

The rate of mixing often increases with proficiency in both languages (Redling

Table 5
Affirmative utterances formed with the verb WANT (types): Tiffany 2;3–2;5.

	Period 1	Period 2	Period 3	Period 4	Period 5
<i>French</i>					
Nouns	<i>ça</i> <i>bonbon</i> <i>dodo</i> <i>de l'eau</i> <i>ma soupe</i> <i>oiseau</i> <i>cuisine</i> <i>couteau</i> <i>culière</i> <i>deux</i> <i>chaise</i> <i>les chaussures</i> <i>'core*</i> <i>'core soupe</i> <i>'core ça</i>	<i>ça</i> <i>bonbon</i> <i>dodo</i> <i>de l'eau</i> <i>'core de l'eau</i> <i>beaucoup</i> <i>papa</i> <i>dodo</i>	<i>ça</i> <i>bonbon</i> <i>dodo</i> <i>bain</i> <i>là</i> <i>sucré</i>	<i>ça</i> <i>bonbon</i> <i>dodo</i> <i>champiignon</i> <i>bain</i> <i>poire</i>	
Verbs	<i>boire</i>	<i>boire</i> <i>'ti*</i> <i>si****</i>	<i>boire</i> <i>maniller****</i>	<i>boire ça</i> <i>'tir</i> <i>partir</i>	
<i>English</i>					
Nouns	milk juice ice cream	ice cream juice spoon	coffee juice spoon eggs crayon tomatoes water bottle bread cucumbers the glass some tomatoes some more bottle this one my bottle	high chair bottle spoon candy grape peach kitty this mommy dolly	milk my bottle candy yogurt cookie sweater my lap
Verbs	wash see it	go go pipi go caca get out take off talk Hannah open this write	see go pipi go see (it) get out get down swimming have it	see 'em go pipi get down have it	

lish lexicon, mixed forms with 'wan' decrease. As can be seen in Table 5, *mixes* are constructed using 'wan' with a French noun or verb during Periods 1 and 2. During Period 3 Tiffany replaces many of her French words with English equivalents (spoon, water, more) and acquires many new English words (tomatoes, cucumbers, crayon). Nevertheless, as can be seen in Table 1, the frequency of mixing continues to increase during Periods 3 and 4 in Tiffany's production.

This increase in mixing can be understood by examining another construction Tiffany's production, negation. Before her trip to California, Tiffany was using 'no *pas*' and 'plus' as markers of negation in French. During Periods 1 and 2 'non' is used in one-word negation to answer questions (1), to refuse suggestions (2) and issue interdictions (3).

- (1) M:² Tiffany-Tiffany you're tired
→ T: *non*
M: should you take a night-night?
→ T: *non*
(2) M: let Odessa do it honey
→ T: *non. non.*
(3) (T, O et M are looking in the refrigerator)

O: *manan*
M: what honey?
O: *c'est quoi ça?*
[what is that?]
(Odessa points to a bottle of coke)
→ T: *non non. pique.*
[no no. stings]

Anaphoric negation such as in (4) is very productive in French.

- (4) (M asks Tiffany to sit in her chair)
M: Tiffany sit down
→ T: *non. côté manan*
[non. next to mommy]
(I want to sit next to mommy)

'Pas' is used after what functions as auxiliaries (Blanche-Benveniste, 1990): '*être* [to be], '*avoir*' [to have/to be], '*vouloir*' [to want], '*aimer*' [to love], '*aller*' [to go] but before main verbs, '*pas pleurer moi*' [won't cry me], '*pas sortir l'oiseau*' [th bird won't come out], '*pas manger la soupe*' [won't eat the soup], before nouns an other adverbial constructions '*pas là*' [not there], '*pas ça*' [not that], '*pas 'core*' [no again] to encode the absence of something or someone ((5) and (6)), to give negative orders (7) and to comment on quality (8).

- (5) *pas là le kitty*
[the kitty isn't there]
- (6) *pas place*
[(there's) no room]
- (7) *pas là*
[don't (put it) there]
- (8) *pas bon*
[(it's) not good]

During Period 3, when her English lexicon increases rapidly, many two-word combinations with mixed elements are observed with adjectives, 'pas DIRTY' [my hands are not dirty], 'pas BIG' [that's not big], 'pas CLEAN' [that's not clean] and with nouns (9).

- (9) (O and T are sitting at the kitchen table. M is cooking with her back turned to O and T. T has a child's spoon on which there is the picture of a bird dressed in pants and a jacket.)

T: bear

M: that's a teddy bear? a bear?

O: no. a bird

→ T: *pas* bird. a te:bear

During her stay in California 'pas' is beginning to be replaced by 'no', first in anaphoric negation (*no. finish.* (= no (I'm not) finished). 'Not' is used in an unanalysed form 'don't' to issue interdictions. During Periods 4 and 5, as might be expected 'wan' and 'pas' begin to be used together (10).

- (10) (M and T are sitting at the kitchen table. M gives T a biscuit.)

T: no.: wan 'gurt.

M: you wanna yogurt?

T: *oui*

M: oh honey. I don't think you'll eat it will ya?

T: *oui*

M: o:ka:y

(M gives T a yogurt)

M: there ya go

T: 'gurt!

M: here lemme get ya a spoon

(M gives T a spoon. T tastes the yogurt)

→ T: wan *pas*. wan *pas* 'gurt

M: that's what I thought Tiffany. you didn't want any yogurt.

Many other mixes constructed with 'wan *pas*' are observed during Periods 4 and 5

A comparison of the evolution of English negation between the two children helps to explain why Tiffany's Mixed utterances continue to increase and Odessa's Mixed utterances decrease. The evolution of negation in Odessa's English production is quite different from that of Tiffany. During Periods 2 and 3 a wide variety of negative forms are observed (11).

- (11) a. I can't see
- b. I don't want it
- c. Tiffy no clean up the mess
- d. I no want taste it
- e. I wan *pas* now

During Period 3 mixed negative forms such as (9e) disappear. Preverbal negative forms such as (11c) and (11d) persist until Period 5. Such preverbal negative forms are observed in monolingual English children in the early acquisition of negation (Bloom, 1970; Bellugi, 1967). During Period 5, the preverbal forms are beginning to give way consistently to forms such as (11a) and (11b) where the negative element is attached to an auxiliary. Out of 18 negative predications produced during Period 5, 6 are of the preverbal form and 12 show the negative element attached to an auxiliary (12a–c).

- (12) a. I don't want it.
- b. I won't eat it.
- c. I'm not finished.

Wode (1977, 1984) examined the acquisition of negation in a variety of learner languages (L1 and L2). The first stage consists of one-word negation, such as in (1) and (2). The second stage, two-word negation, includes anaphoric negation (4) and non-anaphoric negation (9). The third stage, preverbal negation (11c,d) is followed by stage four, with appropriate placement of the negative element inside the verb phrase (12a–c).

Before her trip to California, Odessa was well beyond stage four in French. Occasional errors were observed with the placement of the negative in complex verb phrases, '*ça fait tomber pas*' (= *ça fait pas tomber*, [that doesn't make (it) fall]), '*j'aime bien pas ça*' (= *j'aime pas bien ça*, [I don't like that very much]). These are normal late errors for French acquiring children (Guillaume, 1927: 214; Wode, 1977, 1984). Tiffany, on the other hand, was moving into stage three. 'Pas' is found after auxiliaries, but before main verbs.

During Period 5, both children attain roughly the same level in their weak language as in their strong language. Odessa is moving into a consistent stage four (12a–c). Tiffany is moving into stage three: preverbal English forms 'no wan juice', 'no cry me' coexist with Mixed utterances 'wan *pas* gurt' [(I don't want yogurt) and French post-auxiliary forms '*aime pas*' [I don't like (it)] and preverbal forms, '*pas manger la soupe*' ['not eat the soup', = I won't eat the soup] The differences

to a profound change in exposure to English. It is equally important to consider the child's developmental stage in her strong language at the point of intense contact with the weak language. While Odessa has acquired considerable knowledge about grammatical categories, Tiffany is at the beginning of her acquisition of grammatical morphology.

8. Situational codeswitching

The ability to codeswitch in addressee appropriate ways also differs for the two children. One of the first indications of codeswitching is found in language choice as determined by language of the interlocutor. In this final section, it will be shown how the two children differ in language choice in the beginning of the stay in California. Odessa appears to attend to meaning and language earlier and more consistently than Tiffany.

One of the children's favourite monolingual playmates, Andy (A), is a monolingual adult family friend. The total number of English and French utterances addressed to A by the two girls during Periods 1 and 2 is shown on Table 6.

Table 6
Utterances addressed to A during Periods 1 and 2

	Total	English	% English	French	% French
Tiffany	72	30	42	42	58
Odessa	114	105	92	9	08

As shown in Table 6, Odessa makes the 'wrong' language choice much less frequently than does Tiffany. In addition, the type of utterances in the wrong language differs between the two children. The nine cases of wrong language choice in Odessa's production are essentially one-word utterances which Dore (1977, 1979) calls "accompaniments". The words are redundant with the actions that they accompany. For instance, in giving an object to A, Odessa says '*voilà*' [here] or '*tiens*' [take]. In answer to A's where-question, Odessa answers '*c'est là*' accompanied with a pointing gesture that also answers the question. Twelve of the 42 'wrong' language utterances in Tiffany's production are also accompaniments. The other others, however, are more referential, for example, she asks A about the whereabouts of her teddy bear, '*où il est?*' [where is he?]. In answer to A's question 'where's the cat?', she answers '*i mange*' [he's eating], barely lifting her head from the puzzle which occupies her attention.

False starts, in which the child begins an utterance in the wrong language and then switches to English are observed only in Odessa's production (13) and (14).

(13) (O and A are looking at a book.)

→ O: *oui comme ç-* like this?

(O points to the tail of the racoon)

(14) (O and A are reading a book. O wants to read the book that they had just finished. O takes the book that is in A's hands.)

O: *voilà*

A: I can't read the book

→ O: *mais en-* again

(O gives A the book that they had already finished.)

A: no not again. no I have to finish this book first

Odessa also translates utterances directed to different speakers (15).

(15) (O and A are in the living room. M crosses the room on her way to the kitchen.)

O: *maman je veux de l'eau* (⇒ M) [mom I want some water]

M: OK just a second

→ O: I'm thirsty (⇒ A)

Self corrected repairs and translations are absent from Tiffany's production, even during Period 5.

A final difference between the children concerns conversational repetitions. When repeating a previous speaker's utterance or part of an utterance, Odessa respects semantics and language. Tiffany respects semantics, but not necessarily language (16).

(16) (T, O, an adult friend, E, and M are looking at a book.)

E: that's a little doggy. I'll hide my ball here. who's this?

O: I dunno

E: you don't know?

M: (whispers 'a worm' to Odessa)

E: it's a:

→ O: a worm

E: it's a worm. and the worm says hey watch out

→ O: watch out

T: ah

(T tries to take the book from E)

E: wait a minute. wait a minute. he likes to: bark at the cat. that's a little

cat. t. (⇒ T)

→ T: *petit chat*

[little cat]

From Period 1, Odessa's repetitions of English are always in English. During Period 1, 7 of Tiffany's 21 repetitions of English are in French. From Period 2 on, Tiffany's repetitions increasingly respect the language of the speaker.

8. Conclusion

Both children experienced an abrupt change in their language environment at during the two months in California. The impact of the change, however, was not identical for the two children. Odessa was further along in grammatical development of her strong language. Although she showed considerable mixing at the beginning of the two-month stay, she replaced French grammatical functors with equivalent English functors very rapidly. Tiffany, on the other hand, was just beginning her acquisition of grammatical morphology in French. She was somewhat more conservative in establishing English equivalents for grammatical forms and functions. It would be an error, then, to attribute either the amount or the pattern of mixing solely to an abrupt change in language environment. The level attained in language production in the strong language is an important variable. Both children were receiving the same English input. Their treatment of that input, however, varies because of differences in their linguistic knowledge, as estimated by their production, previous to receiving the input. The findings in this study highlight the importance of studying input and its use from the *learner's* perspective.

Odessa also shows a more precocious capacity for code choice depending on the language of her addressee. She is no where close to the full-blown non-situational codeswitching of bilingual adolescents and adults, but she is well into the development of situational codeswitching. Tiffany shows much less sensitivity to language of her addressee. An interesting anecdote: during the week following her return to France, Tiffany often used English when addressing her monolingual French-speaking grandmother. When her grandmother displayed incomprehension, Tiffany's reaction was to speak louder.

The data from these two children underscore the importance of production in developing grammar. While neither child showed difficulty in understanding English addressed to them, producing in English was a different matter. Had the two children not spent two months in an English speaking environment, their competence in English would most probably have remained passive. The impact of the change in linguistic environment is obvious, but equally important is the child's linguistic development at the time that s/he is forced to produce in intense contact.

An important methodological point should be addressed in this conclusion. It has been presupposed throughout this study that Odessa and Tiffany had the same level of comprehension in English as monolinguals. This is perhaps an erroneous presupposition. More precisely, it should be said that in the in-context conversational situations in which these children were observed and recorded, there are never any obvious cases of incomprehension of the English addressed to them. Future studies of the development of the weak language in bilingual children should pay careful attention to exactly what this type of bilingual child understands in less contextualised, more controlled studies of comprehension in the weak language.

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Harriet Jisa is Professor of Linguistics at the Université Lyon 2. Her research interests include language development in monolingual and bilingual children and, more recently, the impact of literacy on French-speaking children.

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