

**TALKING WITH STRANGERS:
A STUDY OF BILINGUAL CHILDREN'S COMMUNICATIVE COMPETENCE¹**

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Abstract

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An important component of the communicative competence of proficient bilinguals is the ability to use each of their languages differentially and appropriately according to relevant characteristics of interlocutors and communicative situations. The research reported here examined the communicative competence of 4 young children (average age of 2 years, 2 months; average MLU of 1.56) who were acquiring English and French simultaneously in the home. We observed the ways in which these children used their languages with monolingual strangers in comparison with their bilingual parents. Specifically, the children's use of English-only, French-only, and mixed (English and French) utterances with the strangers during naturalistic play situations was compared to patterns of use with their parents also during play sessions. We found that all of the children made some accommodations to the stranger that could be linked to the monolingualism of the stranger; some of the children were more accommodating than others. The results are discussed in terms of young bilingual children's communicative ability to modify their language on-line in response to the particular language characteristics of their interlocutors.

**TALKING WITH STRANGERS:
COMMUNICATIVE COMPETENCE IN BILINGUAL CHILDREN**

An important component of the communicative competence of proficient bilinguals is the ability to use each of their languages differentially and appropriately according to relevant characteristics of their interlocutors and of communicative situations. The research reported here is concerned with the communicative competence of young children who acquire two languages simultaneously. More specifically, it examined the ability of two-year old bilingual children to use their developing languages differentially and appropriately with interlocutors with different levels of language proficiency.

In a previous study, we found that two-year old English-French bilingual children used more of their mother's language with their mothers than with their fathers, and vice versa for their father's language; this was true even when both parents were present and using both languages with the children (Genesee, Nicoladis & Paradis, 1995). These findings are compatible with those of other recent researchers (deHouwer, 1990; Genesee, Nicoladis, & Paradis, 1995; Goodz, 1994; Lanza, 1992; Meisel, 1994; Nicoladis, 1994), but are incompatible with earlier claims by some researchers that two-year old bilinguals are unable to differentiate between their developing languages because their languages are represented in a unitary underlying system and become differentiated only later in development (see Genesee, 1989, for a review). As Genesee (1989) has pointed out, however, there are a number of methodological reasons to question the validity of these early claims, in particular, a lack of systematic investigation of children's language use in different language contexts. Although research indicates that bilingual children as young as two years of age can use their languages differentially and appropriately, the limits of this ability remain unclear. Most studies that report

context-sensitive language use by young bilinguals, including our own, have observed children in interaction with their mothers and fathers. It could be that bilingual children are able to use their languages differentially with familiar interlocutors because they have learned, implicitly, to associate certain languages with particular individuals as a result of repeated exposure to them. Using strangers would test the limits of bilingual children's communicative competence by examining their ability to modify their language use with interlocutors about whom they have no prior knowledge. Goodz (1994), Meisel (1994) and Swain & Wesche (1975) used adult interlocutors who were initially unfamiliar to the children they studied, but their results are inconclusive on this point for a number of reasons. First, the children in some of these studies had repeated recording sessions with the initially-unknown observers and, as a result, may have learned about their linguistic competencies or preferences (Goodz, 1994; Meisel, 1994). These authors do not report results for the first encounters between the children and observers since, in fact, they were not concerned with this issue. Second, Swain & Wesche's and Meisel's results pertain to children three-years of age, or older. There is little controversy about bilingual children's abilities to differentiate their languages at this age. Of additional concern in Swain & Wesche's study is the methodology -- the children were asked to act as translators for two monolingual adults who were conversing with one another but did not know one another's language. This task may have produced more linguistic mixing and thus the appearance of less differentiation than would be the case if a more typical form of conversation had been examined.

Bilingual children's language use with parents may not reflect the true limits of their ability to differentiate for yet another reason. Parents in bilingual families often understand and use both languages with one another and with their children, and their children might know this intuitively. As a result, they might also know that using both languages in the same utterance or stretch of conversation is generally acceptable and comprehensible in their families (Goodz,

1994). Children's use of both languages in the same utterance or stretch of conversation is referred to as code mixing. The mixed elements may be phonological, lexical, or morpho-syntactic (Genesee, 1989). When mixing occurs within a single utterance, it is referred to as **intra-utterance mixing**; when it occurs across utterances in the same conversation, it is referred to as **inter-utterance mixing**. Studying bilingual children's code mixing with their parents could lead to underestimates of the children's ability to use their languages differentially if and when the parents are themselves bilingual. Using monolingual strangers would test the limits of bilingual children's abilities to use their languages differentially since the most appropriate strategy in such situations would be to use only one language while suppressing use of the other.

Accordingly, we observed two-year old bilingual children in interaction with unfamiliar monolingual adults reasoning that if the children adjusted their language use with such interlocutors, this could not be explained in terms of previously learned habits or implicit knowledge of the strangers' language abilities. Rather, it would provide some evidence of the children's ability to make on-line adjustments to accommodate the language proficiency of unfamiliar interlocutors. In fact, for three of the four children we observed, the only language known by the stranger was the less proficient (non-dominant) language of the child. This situation provides a rigorous test of the children's communicative competence since, arguably, adjusting the use of a less proficient language is more difficult than adjusting the use of a more proficient language.

There are a number of ways in which bilingual children might be expected to adjust to a monolingual interlocutor. First, and most obviously, they would be expected to use more of the stranger's language with the stranger than with either of their parents, even the parent who speaks the same language as the stranger. Second, and conversely, they would be expected to

use fewer utterances that are entirely in the stranger's non-native language with the stranger than with either parent since although their parents might understand both languages, the stranger would not. There is a third possibility that is less transparent than the first two; namely, they might use more utterances in which both languages are used (i.e., mixed utterances) with the stranger than with their parents. The logic of this possibility is as follows.

We have found that although young bilingual children use their developing languages differentially and appropriately with familiar interlocutors, as noted previously, they nevertheless code mix (Genesee, et al., 1995; Nicoladis, 1994). We have also found that bilingual children code mix more when talking with the parent who speaks their non-dominant language than when talking with the parent who speaks their dominant language (Genesee, et al., 1995). Code mixing appears to be a way for bilingual children to stretch their limited proficiency in their non-dominant language -- they can fill in gaps in their non-dominant language by "borrowing" from their dominant language. Indeed, Nicoladis (1994) has found that, in comparison with words that are not code mixed, code-mixed words in bilingual children's talk are much more likely to lack translation equivalents in the other language (see also Lindholm & Padilla, 1978; and Wolf, 1995; see Nicoladis, 1995, for a discussion of alternative explanations of mixing). Arguably then, mixing words from both languages in the same utterances when talking with a monolingual stranger who speaks the child's non-dominant language would both extend the child's ability to communicate with the stranger and also show sensitivity to the stranger's linguistic dominance. Thus, we expected more intra-utterance mixing with the strangers than with the parents.

Studies of monolingual children around two-years of age (the late one-word and early two-word stage) have found that they understand contingent obligations of speech-act sequences in dyadic conversations and can respond differentially and appropriately to different kinds of

listener feedback, including requests for clarification and confirmation (Gallagher, 1981; Scherer & Coggin, 1982; Wellman & Lempers, 1977; Wilcox & Webster, 1980). The present study extends this line of inquiry by examining young bilingual children's sensitivity to implicit feedback about language proficiency from unfamiliar adults. This form of communicative competence is rarely required of monolingual children since most adults with whom they interact are probably more linguistically competent than they are.

Method

Subjects

Four children participated in the study -- Joelle, Leila, Jessica, and Jennifer. All were first-born girls and only one had a younger sibling. They had been raised since birth in English and French by their parents; the mother was the primary caregiver in every case. They had an average age of 2 years, 2 months and an average MLU (based on calculations for both languages) of 1.56 (Table 1); the method of calculating MLUs is discussed later. The children and their families resided in the Montreal area. In the case of Joelle and Leila, the mothers' native language was English and the fathers' native language French; the situation was the reverse for Jessica and Jennifer. All parents, except Jennifer's, could understand the spouse's native language to some extent and reported that they sometimes used it with their child. Jennifer's mother could neither understand nor speak English.

Insert Table 1 about here

The parents differed somewhat with respect to educational and employment characteristics. Joelle's and Leila's parents both had university degrees; Jessica's father but not

her mother had a university degree; and Jennifer's father was a skilled tradesman and her mother had completed junior college. All of the mothers worked in the home at the time of the study. Socio-economically, all families appeared to be middle class.

The Language Samples

The children were observed in their homes -- once with their mothers alone, once with their fathers alone, and once with the stranger. There was no fixed order for the sessions with the mothers and fathers, although they always occurred before the sessions with the strangers to insure that the children would be comfortable with the procedure and observer. In all cases, the parents were present at the beginning of the sessions with the strangers to put the children at ease; the children were not given any information about the stranger. The second author, a bilingual 22 year-old female, observed and filmed all sessions. She addressed each adult interlocutor in both languages so as to indicate that this was acceptable. The observer restrained from talking with the children during the recording sessions. The parents and strangers were asked to play with the children as they normally would and to use whatever language they felt most comfortable in; as expected, the parents used their native languages predominantly (Table 2).

In the case of Joelle and Leila, the stranger was a 20 year-old monolingual French-speaking female and in the case of Jennifer and Jessica the stranger was a 22 year-old monolingual English-speaking female. We tried to choose strangers who spoke only the children's less proficient languages in order to test the limits of their ability to use their languages differentially. In fact, for all of the children except Jessica, the stranger's native language was the child's less proficient language. Jessica also differed from the other children in that her proficiency in her two languages was more balanced, although certainly not equal. All sessions

were audio- and video-recorded for later transcription and analysis and occurred within a three week period. Each session lasted approximately 45 minutes.

Transcription and Coding Procedures

Twenty-minute segments of all recorded sessions, except three, were transcribed and coded; thirty-minute segments of two sessions with Jennifer and one with Joelle were transcribed in order to capture sufficiently large samples of language from these children to base our subsequent analyses on. In fact, all subsequent analyses were based on within-child comparisons so that this variance in length of the recording sessions does not create problems of interpretation. The segments were first transcribed by the second author who had been present during the observation sessions. The transcriptions were made using standard English and French orthography whenever possible, using the CHAT transcription system (MacWhinney & Snow, 1990); phonetic transcriptions were made if the child's utterances deviated significantly from adult usage. The actions of the participants were recorded when they were judged to be useful for understanding the child's language.

The transcriptions were divided into utterances, defined as "a word or group of words with a single intonation contour" (Lanza, 1992, p. 638), and each utterance was coded for addressee and language of utterance. Utterances were coded as "French-only" or as "English-only" if they contained only elements that were clearly French or English, respectively. Utterances were coded as "mixed" if they contained at least one word from both languages. We did not examine phonological mixing since it is not germane to the study and it did not occur frequently. Mixed utterances, therefore, are necessarily at least two morphemes/words long; whereas, French-only and English-only utterances can be one or more morphemes long. Mixed utterances so-defined, in fact, are cases of **intra-utterance mixing**. The children also demonstrated inter-utterance mixing; that is, the use of utterances entirely in the interlocutor's

non-native language; these utterances could be one or more words long. The use of English-only utterances with the French-speaking stranger or parent is inter-utterance mixing; and, vice versa, for the English-speaking stranger or parents. We refer to these utterances in terms of the language of the utterance in order to maintain consistent terminology. In the excerpt below, Jennifer's response "*Regarde cookie*" is an example of intra-utterance mixing, while her response "*Un boule*" is an example of inter-utterance mixing.

Jennifer and the stranger are playing with plasticine; the stranger points to a ball of plasticine Jennifer has made:

Stranger: *What's that?*
 Jennifer: *Un boule.* (A ball)
 Stranger: *It's a square.*
 Jennifer: *Boule* (ball)
 Stranger: *A what?*
 Stranger: *It's a ball?*
 Stranger: *Or a square?*
 Jennifer: *Regarde cookie* (look cookie)

Certain words were considered to be of either French or English origin; these were primarily onomatopoeic words and interjections. When such words occurred along with a word or words of clearly English or French origin in the same utterance, they were considered to belong to that language and the utterance was coded accordingly. When an utterance consisted only of such words, it was classified as "both". The latter type of utterances was excluded from our analyses because of their largely non-linguistic nature and their ambiguous language provenance. Utterances were coded as "unknown" if they were incomprehensible; 11% of Jessica's utterances were unintelligible, 20% of Jennifer's, 29% of Joelle's, and 29% of Leila's. These utterances were excluded from further analysis. Finally, utterances by the children that were repetitions of a preceding adult's utterance or that were made in response to explicit prompts by an adult interlocutor were excluded from the analyses because they were not

spontaneous and could misrepresent the child's communicative competence.

The transcriptions and codings were checked for reliability by a second bilingual assistant. Inter-rater agreement was high: utterance tier - 96.24%; combined addressee and language tiers - 97.83%.

RESULTS

First, we describe the children's general levels of language development and their relative proficiencies in each language. Second, we examine the children's language use with their parents; this is essentially a replication of Genesee et al. (1995) and, more importantly, a comparison point for interpreting the children's language use with the strangers. In this section, we also briefly describe the parents' use of each language with their children in order to substantiate our earlier assumption that these children are exposed to bilingual input. Third, we describe the children's language use with the strangers in comparison with each parent.

The Children's General Language Development

While fully recognizing the potential shortcomings of MLU, especially in cross-linguistic comparisons, we calculated French and English MLUs for each child in order to give a general impression of their overall levels of language development. The MLUs are based on counts of all productive morphemes aggregated across both sessions with the parents; since we expected the children to use their languages differently with the strangers, we excluded these sessions from these calculations (Table 1). All the MLU scores, except for Jennifer's English score, fell within Brown's Stage I (Brown, 1973).

The children's relative proficiency in each language was estimated using indices proposed by Genesee, Nicoladis, and Paradis's (1995). They found that bilingual children's proficiency in each language can be discriminated reliably on the basis of the percentage of word types and multi-morphemic utterances used in each language (see Table 1). Multi-morphemic

utterances (MMU) are utterances that contain two or more words or morphemes; mixed utterances were excluded from the calculation of MMU since there is no way of assigning such utterances to either English or French. We also include counts of word tokens for each child as an additional index of proficiency. The word token, word type, and MMU scores reported in Table 1 are based on the transcriptions of the sessions with the parents only. Based on these indices, Joelle and Leila were clearly more proficient in English, their mothers' language; Jessica was also more proficient in English, her father's language; and Jennifer was clearly more proficient in French, her mother's language. These results accord with our impressionistic judgments of the children's relative proficiencies in each language. **Children's Language Use with Parents**

These results were analyzed using two (language of utterance: French-only, English-only) by two (mother, father) chi-square procedures. Mixed utterances were not included in these analyses since there were very low rates of intra-utterance mixing. To control for the talkativeness of individual children, the *actual* number of French-only and English-only utterances used by the children with their mothers and fathers has been calculated as a percentage of the total number of utterances addressed to each parent; repetitions, incomprehensible utterances, and utterances classified as "both" were excluded (Figure 1). The *expected* values were based on the children's dominance in each language. We reasoned that the children would be expected to use French and English with each parent in proportion to their relative proficiency (or dominance) in each language. In effect, we examined whether the children's use of each language with their parents differed from expectations based on their overall proficiency in each language. Alternatively, we could have calculated the expected values assuming equal use of both languages (i.e., 50%:50%). However, this calculation is based on an assumption of equal proficiency in both languages, an assumption that is clearly not

justified. The dominance scores were calculated, following Nicoladis (1995), as the average percentage of word types and MMUs in each language; for Jessica, for example, using the values in Table 1, her French dominance score is 41 (i.e., $44.8+37.4/2$) and her English dominance score 59 (i.e., $55.2+62.6/2$). The children's dominance scores are summarized in Table 1.

Insert Figure 1 about here

The chi-squares were significant at the .01 level in all cases -- Joelle: $\chi^2(2)=12.45$; Jessica: $\chi^2(2)=69.44$; Jennifer: $\chi^2(2)=62.81$; Leila: $\chi^2(2)=23.09$. Inspection of Figure 1 indicates that the results were in the expected direction in every case -- each child used more of the mother's language with the mother than with the father and more of the father's language with the father than with the mother. There were large individual differences, with Joelle showing the least differentiation and Jessica the most. We suspect that Joelle's very low level of proficiency in French, her father's language, imposed a severe restraint on her ability to respond differentially to her parents using French. Jessica, in contrast, showed the most differentiation and, of all the children, she showed the most balance in proficiency in her two languages. Jessica was the only child to show a complete crossover in language usage with her parents -- she used more French than English with her French-speaking mother and more English than French with her English-speaking father.

Jennifer, Leila, and Joelle used more of their dominant than their non-dominant language with both parents. We have found this pattern for most other bilingual children in our previous work (Genesee, et al., 1995; Nicoladis, 1994). These three children, nevertheless, demonstrated

differentiation even when they were using their less proficient language; for example, although Leila was more proficient in English and, in fact, used more English than French with both parents, she used more French with her French-speaking father than with her English-speaking mother. Jennifer, who was more proficient in French, exhibited the reverse pattern.

In order to describe how much each parent used both languages with their children, we have calculated the percentage of parental utterances that were presented in their native and non-native language; see Table 2. For this analysis, we have combined mixed utterances with utterances entirely in each parents' non-native language; this aggregated score is indicated as "non-native utterances" in Table 2. All of the parents, except Jennifer's mother, used their non-native language with their children to some extent. Use of the non-native language ranged from a high of 19% (Jessica's mother) to a low of 0% (Jennifer's mother).

Insert Table 2 about here

Thus, the children were clearly using English and French in context-sensitive ways; this was evident even when they were using their less proficient language. As we had assumed in the Introduction, these children's parents, except Jennifer's mother, used both languages with the children; although they clearly used their native language most of the time.

Children's Language Use with the Stranger

We analyzed and discuss the children's use of their languages with the stranger and each parent separately since each comparison reveals somewhat different information about communicative competence. More specifically, because the strangers and mothers spoke different native languages, comparisons between the mother and the stranger indicate whether

the children can use their languages differentially as a function of differences in the native languages of their interlocutors. These comparisons are analogous to the mother/father comparisons from the previous analyses except that they involve an unfamiliar interlocutor. The children's ability to use their languages differentially in these cases could be interpreted to represent a minimum degree of communicative competence in this situation.

Comparisons between the stranger and the father indicate whether the children can use their languages differentially as a function of differences in the degree of language proficiency of their interlocutors; the native languages of the strangers and fathers were always the same. It was their relative proficiency in the other language that differed. For three of the children, these comparisons could be interpreted to reflect the upper limits of their communicative competence because accommodating the stranger called for them to use more of their less proficient language and less of their more proficient language.

Each child's use of French- and English-only utterances and of mixed utterances was analyzed separately because we used different assumptions to calculate expected values. In the analyses of French- and English-only utterances, expected values were based on the children's language dominance and the actual values were proportions based on each child's total number of utterances to each interlocutor. Two (utterance type: French-only, English-only) by two (interlocutor) chi-square analyses were carried out. Using these expected values means that the **actual** use of French- and English-only utterances in equal proportions to the stranger and the father, for example, could yield significant chi-square results since they differ from expectations based on dominance. In the analyses of mixed utterances, the actual number of utterances addressed to each interlocutor was compared to expected frequencies assuming an equal distribution of mixed utterances to all three interlocutors.

The results are summarized in Table 3. For ease of interpretation, we have indicated the

native language of each person in parentheses. The results for each child are discussed separately in order to better capture individual response patterns -- bilingual children, like monolingual children, exhibit highly individualized language behaviors.

Insert Table 3 about here

Jessica

Jessica responded in ways that indicate that she was sensitive to the language characteristics of the stranger. She used more English-only utterances but fewer French-only utterances with the English-speaking stranger than with her French-speaking mother than would be expected from her dominance in each language; $\chi^2(2)=23.06$, $p < .01$. With respect to her father, Jessica used the same number of English-only but significantly fewer French-only utterances with the English-speaking stranger than with her English-speaking father than would be expected from her dominance in each language; $\chi^2(2)=32.38$, $p < .01$. There was no difference in her use of mixed utterances with her mother, her father, and the stranger; $\chi^2=4.29$, $p > .05$.

Jennifer

Jennifer also accommodated the stranger although less so than Jessica. Jennifer used significantly more English-only but fewer French-only utterances with the English-speaking stranger than with her French-speaking mother; $\chi^2(2)=12.61$, $p < .01$. Jennifer also used fewer French-only but the same percentage of English-only utterances with the stranger in comparison with her father; $\chi^2=6.76$, $p < .01$. She used significantly more mixed utterances with the stranger than with either parent; $\chi^2=13.99$, $p < .01$. It is worth pointing out here that although there is a

lack of a numeric difference in Jennifer's use of English-only utterances with the stranger in comparison with her father, there is a statistically significant difference between her actual results and what would be expected from Jennifer's dominance in English. **Joelle**

Joelle's results give some evidence that she was sensitive to differences in the languages and levels of language proficiency of her interlocutors. More specifically, she used significantly more French-only but fewer English-only utterances with the French-speaking stranger than with her English-speaking mother; $\chi^2=8.06$, $p < .01$. Joelle also used more French-only but fewer English-only utterances with the stranger than with her French-speaking father; $\chi^2=6.05$, $p < .05$. Joelle used significantly more mixed utterances with the stranger than with her mother or father; $\chi^2=2.03$, $p > .05$. Joelle said very little to the stranger, probably because of her limited proficiency in the stranger's native language, French, and this must be kept in mind when interpreting these results. Arguably, however, talking less is a reasonable adaptation for this child who has acquired little proficiency in the stranger's language.

Leila

Leila's results indicate that while she could differentiate between interlocutors who spoke different languages, she was relatively unsuccessful differentiating between interlocutors who differed with respect to proficiency in the other language. Thus, on the one hand, Leila used significantly more French-only but fewer English-only utterances with the French-speaking stranger than with her English-speaking mother; $\chi^2(2)=18.14$, $p < .01$. On the other hand, she used fewer French-only utterances and more English-only utterances with the stranger than with her French-speaking father; $\chi^2=5.69$, $p < .05$. Leila used significantly more mixed utterances with the stranger than with her mother or father; $\chi^2=12.15$, $p < .01$. The comparisons involving her father give the impression that Leila was not sensitive to the monolingualism of the stranger at all. We have no ready explanation for these results.

DISCUSSION

The present results confirm our earlier findings and those of others that bilingual children as young as two years of age are able to use their languages differentially and appropriately with familiar interlocutors (see, for example, DeHouwer, 1990; Goodz, 1994; Lanza, 1991). At the same time, they extend our understanding of communicative competence in young bilinguals by suggesting that bilingual children in the one-word stage of development can also respond differentially and appropriately to unfamiliar interlocutors whose language proficiency was previously unknown to them. Our findings imply that our young subjects were able to make fairly rapid and accurate judgments about the stranger, undoubtedly implicitly and not consciously, and to modify their language use in accordance with their judgments. Not only were they able to ascertain the native language of the stranger accurately despite having had no prior experience with her (stranger-mother comparisons), but they were also able to judge her level of proficiency in the other language (stranger-father comparisons).

It might have been expected that the children would simply assume that the strangers, like their parents, knew both languages and, therefore, that they could use both languages to the same extent with them. Our findings do not support this expectation, but rather suggest that the children were sensitive to the relative language proficiency of their unfamiliar interlocutors and could adjust their languages accordingly. The comparisons involving the stranger and father are especially relevant here since both interlocutors spoke the same native language but differed in their proficiency in the other language. Our hypotheses about the children's use of English-only and French-only utterances were the most obvious and straightforward predictions we could have made about how the children would modify their language use with the stranger, and it is reassuring that the results are in line with these hypotheses. Our hypothesis concerning intra-utterance code mixing as a form of accommodation to the monolingual stranger was more

speculative. There was some support for this hypothesis, although it was not consistent for all of the children. More investigation of this issue with larger sample sizes is clearly called for.

If these findings are corroborated in subsequent work, then they would argue for viewing intra-utterance code mixing as a general pragmatic strategy used by bilingual children to extend their limited communicative abilities in their less proficient language. This interpretation is consistent with our previous findings (Nicoladis, 1994) but runs counter to earlier claims that code mixing reflects communicative **incompetence** and a lack of differentiation in the underlying representation of the bilingual child's languages -- a matter of competence in the Chomskian sense (see also Meisel, 1994). Because the present results concern language performance, they can only provide indirect evidence about the children's underlying linguistic competence. Heeding this caveat, they suggest that the languages of bilingual children in the one-word stage are represented in some differentiated way underlyingly. Whether or not even younger and less linguistically advanced children than those included in this study can differentiate their languages is still a possibility (Nicoladis & Genesee, 1995; Quay, 1992).

There were evident individual differences in the children's sensitivity to the stranger. It might have been expected that an explanation of these differences could be found in the children's relative levels of proficiency in each language, but this does not appear to be the case. Even though Leila was clearly the least sensitive of the children to the stranger, she was not the least proficient in the stranger's native language. Joelle clearly had the least proficiency in the stranger's language and, yet, her language use, albeit limited, suggests sensitivity to the language characteristics of the stranger. It might also have been expected that children whose parents used both languages relatively little would keep their languages separate more than children whose parents used both languages frequently. We could detect no apparent relationship between the children's relative sensitivity to the stranger and how much each child's parents used

both languages during our observation sessions (Table 2). There may be other factors, such as experience with other monolingual interlocutors, that play a role. Explication of the role of these factors in the emergence and development of communicative competence in bilingual children clearly requires additional research with larger sample sizes than is the case in the present study.

It is also important to point out here that the children we observed were raised in families where each parent reported using primarily their native language with the child. At the same time, there was undoubtedly some code mixing by the parents with one another and with the children (Goodz, 1994). Our analyses of the parent's language use during the recording sessions with the children confirm both of these patterns. Code mixing in the community in which these children were raised (Montreal) is generally episodic and marked (see Poplack, 1987). Whether bilingual children raised in families and communities where code mixing takes different forms, serves different functions, and is more prevalent would adjust to a monolingual stranger in the same ways as our young subjects is an open question (see, for example, research on Spanish-English code mixing in the Puerto Rican community of New York City; Poplack, 1980).

In conclusion, the present results suggest that bilingual children in the one-word stage of development are able to adjust their patterns of language use to accommodate unfamiliar interlocutors with particular language characteristics. These findings are consistent with the results of studies of communicative competence in monolingual children of approximately the same age as the present children (Gallagher, 1981; Scherer & Coggins, 1982; Wellman & Lempers, 1977; Wilcox & Webster, 1980). At the same time, the present findings extend the findings from monolingual children by suggesting that children who learn two languages simultaneously are sensitive, relatively early in their development, to implicit feedback about language proficiency from unfamiliar adults. As noted earlier, this form of communicative

competence is rarely required of monolingual children who generally interact with linguistically competent adults. In this study, we examined one way in which bilingual children can accommodate their interlocutors' linguistic needs; namely, by using the interlocutor's dominant/native language. Our understanding of communicative competence in bilingual development could profit from future research that examines in more detail precisely how monolingual interlocutors convey lack of understanding to bilingual children and, in turn, how bilingual children respond to such feedback. Research that combines naturalistic observation, as in the current study, and quasi-experimental designs, in which adult interlocutors are instructed to use specific kinds of requests for clarification, would be particularly useful to enrich the data set. We are currently planning follow-up studies of this sort.

REFERENCES

- Brown, R. (1973). A first language: The early stages. Cambridge, MA: Harvard University Press.
- deHouwer, A. (1990). The acquisition of two languages from birth. Cambridge, Eng.: Cambridge University Press.
- Gallagher, T. (1981). Contingent query sequences within adult-child discourse. Journal of Child Language, 8, 51-62.
- Genesee, F., Nicoladis, E., & Paradis, J. (1995). Language differentiation in early bilingual development. Journal of Child Language, 22(3).
- Goodz, N. (1994). Interactions between parents and children in bilingual families. In F. Genesee (Ed.), Educating second language children. New York, NY: Cambridge University Press, 61-81.
- Lanza, E. (1992). Can bilingual two-year-olds code-switch? Journal of Child Language, 19, 633-658.
- Leopold, W.F. (1949). Speech development in a bilingual child: Vol. 3. New York, NY: AMS Press.
- Lindholm, K.J., & Padilla, A.M. (1978). Language mixing in bilingual children. Journal of Child Language, 5, 327-335.
- MacWhinney, B., & Snow, C.E. (1990). The child language data exchange system: An Update. Journal of Child Language, 17, 457-472.
- Meisel, J. (1994). Code-switching in young bilingual children: The acquisition of grammatical constraints. Studies in Second Language Acquisition, 16, 413-440.
- Nicoladis, E. (1994). Code-mixing in young bilingual children. Ph.D. Dissertation, Psychology

- Department, McGill University.
- Nicoladis, E., & Genesee, F. (1995). A longitudinal study of pragmatic differentiation in bilingual children. Unpublished manuscript, Psychology Department, McGill University.
- Poplack, S. (1980). "Sometimes I'll start a sentence in Spanish y termino en espanol": Toward a typology of code-switching. Linguistics, 18, 581-618.
- Poplack, S. (1987). Language status and language accommodation along a linguistic border. In Georgetown University Round Table on Languages and Linguistics 1987. Georgetown University Press, Washington, 90-117.
- Quay, S. (1992). Explaining language choice in early infant bilingualism. Paper presented at the Ninth Sociolinguistics Symposium, University of Reading, England.
- Scherer, N.J., & Coggins, T.E. (1982). Responses to requests in the dialogues of mothers and their Stage I children. Journal of Speech and Hearing Research, 25, 58-64.
- Swain, M., & Wesche, M. (1975). A case study of a bilingual child. Language Sciences, 37, 17-22.
- Wellman, H.M., & Lempers, J.D. (1977). The naturalistic communicative abilities of two-year-olds. Child Development, 48, 1052-1057.
- Wilcox, M.J., & Webster, E.J. (1980). Early discourse behavior: An analysis of children's responses to listener feedback. Child Development, 51, 1120-1125.
- Wolf, L.(1995). Early lexical development in bilingual children. Unpublished ms., Psychology Department, McGill University, Montreal, Quebec.