

NOTE

Bilingual children's repairs of breakdowns in communication*

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ABSTRACT

This study examined two- ($n=10$) and three-year-old ($n=16$) French–English bilingual children's repairs of breakdowns in communication that occurred when they did not use the same language as their interlocutor (Language breakdowns) and for other reasons (e.g. inaudible utterance). The children played with an experimenter who used only one language (English or French) during the play session. Each time a child used the other language, the experimenter made up to five requests for clarification, from non-specific (What?) to specific (Can you say that in French/English?). The experimenter also made requests for clarification when breakdowns occurred for other reasons, e.g. the child spoke too softly, produced an ambiguous utterance, etc. Both the two- and three-year-olds were capable of repairing Language breakdowns by switching languages to match that of their experimenter and they avoided this repair strategy when attempting to repair Other breakdowns. Moreover, they switched languages in response to non-specific requests. The results indicate that even two-and-a-half-year-old bilingual children are capable of identifying their language choice as a cause of communication

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breakdowns and that they can differentiate Language from Other kinds of communication breakdowns.

Communicative competence entails sensitivity to feedback from one's interlocutors concerning the effectiveness or appropriateness of one's message. Clarification requests play an important role in effective conversations, and children must learn the conversational rules for interpreting and responding to such requests. Two classic studies have shown that children can integrate clarification requests and responses to requests in their conversations from a young age. Gallagher (1977) observed children in Brown's Stages I, II and III while they were playing with an experimenter who asked *What?* every three minutes. She found that even children in the earliest stages of acquisition usually responded appropriately to such requests and they seldom ignored the experimenter's requests for clarifications. Garvey (1977) found, further, that two- to five-year-old children responded appropriately to one another's clarification requests and were capable of embedding repair sequences in their conversations without disrupting turn-taking. It has also been found that children between 1;5 and 2;0 respond differentially to different kinds of requests for clarification (Wilcox & Webster, 1980; Marcos & Bernicot, 1994), indicating that they know that different forms of request require different responses.

For young bilingual children, language choice is an additional possible cause of breakdowns in communication as, for example, if a French-English bilingual child uses French with a monolingual English-speaking interlocutor. If bilingual children are to respond appropriately to requests for clarification from monolingual interlocutors or bilinguals who prefer one language over another, they must determine whether their interlocutor's requests for clarification are intended as requests for a change in language or for another type of repair. However, requests for clarification are not always explicit and leave it up to the child to figure out what kind of response would repair the breakdown as, for example, when an interlocutor queries a child by asking 'What?' following an incomprehensible utterance.

To date, research on bilingual children's communicative competence has focused on their ability to use their two languages appropriately with different interlocutors and on how language socialization shapes their use of their two languages (e.g. De Houwer, 1990; Döpke, 1992; Lanza, 1997; Deuchar & Quay, 2000). A number of studies have indicated that young bilingual children can use their languages differentially and appropriately with familiar (i.e. parents) and with unfamiliar interlocutors during dyadic conversations (Genesee, Nicoladis & Paradis, 1995; Genesee, Boivin & Nicoladis, 1996). For example, Genesee *et al.* (1995) compared two-year-old French-English bilinguals' language use with each of their parents, who

usually spoke only their native language to their child, and found that, although the children used both of their languages when speaking with their parents (i.e. code-mixed), they used a higher proportion of the mother's language with their mother than with their father, and vice-versa for the father's language (see also Padilla & Liebman, 1975; Saunders, 1988; Goodz, 1994; Meisel, 1994; De Houwer, 1995; Lanza, 1997). Döpke (1992) and Lanza (1997) have examined the relationship between parental discourse strategies and their bilingual children's language choices. Both report that certain kinds of parental discourse strategies are associated with children's use of one language over the other (Döpke, 1992) or the use of mixed versus non-mixed patterns (Lanza, 1997), indicating that parental language use can influence children's language choices. In contrast, in a study of naturalistic conversations between French-English bilingual children (1;9 to 2;7) and their parents, Nicoladis & Genesee (1998) were unable to find a statistically significant relationship between parents' discourse patterns and the children's tendencies to code-mix. Arguably, Nicoladis & Genesee's results differ from those of Lanza and Döpke because the former were based on turn-by-turn analyses of parents' and children's responses in contrast to those of Lanza and Döpke which examined extended patterns across entire conversations (see Lanza, 2001, for a detailed discussion of this issue). Moreover, there may be a number of mitigating factors in parent-child interactions, such as children's past history with parents' language preferences and language socialization with regards to the acceptability of code-mixing, that override turn-by-turn patterns.

The present study was conducted to examine the extent to which bilingual children understand and correctly interpret requests for language change during dyadic interactions. In particular, our purpose was to investigate young bilingual children's ability to repair breakdowns in communication that occur when children do not use the same language as their interlocutor (hereafter referred to as the experimenter's language). Such breakdowns can only be repaired with a translation or reformulation, in part or in whole, of the child's utterance in the experimenter's language. In comparison, breakdowns in communication due to other causes, such as inaudible utterances or poor lexical choice, can be repaired by repetition or reformulation of an utterance with no change in language. Because of possible mitigating influences in parent-child interactions, noted earlier, we chose to examine this issue in interactions between bilingual children and unfamiliar interlocutors. We were also interested in examining what type of requests would elicit a change in language and, more specifically, whether young bilingual children could identify language as the source of breakdown if the interlocutor provided only implicit requests for a change in language; as for example, if an English-speaking interlocutor replied *What?* to a child

who had just said something in French. To do this, we provided each child with up to five requests for clarification varying from general (e.g. 'What') to specific (e.g. 'Can you say that in French/English?') (see also Brinton, Fujiki, Loeb & Winkler, 1986). Our analyses focused on the children's responses immediately following each request since, to be effective, repair strategies must be contingent on the interlocutor's request in a particular speech turn.

In a preliminary phase of this project (see Comeau & Genesee, 2001), we found that the majority of three-year-old English-French bilingual children (10 of 12) translated or reformulated their response using the experimenter's language in response to requests for clarification of utterances that were initially not in the experimenter's language. The majority of language switches were made in response to requests such as 'What?' that did not specify that language was the source of the breakdown. The children rarely switched languages in response to requests following breakdowns that occurred for other reasons; e.g. poor lexical choices or inaudible utterances. The present study is an extension of our earlier study and differs from it in that it includes a group of younger children (M age = 2;7; $n = 10$), a somewhat larger three-year-old sample ($n = 16$), and more detailed statistical analyses of all results (including alternative response strategies and not just language switches).

METHOD

Participants

Ten two-year-olds (9 girls and 1 boy; M age = 2;7, range 2;3 to 2;10) and 16 three-year-olds (8 girls and 8 boys; M age = 3;1, range 3;0 to 3;7) participated in the study; the gender distribution in the two-year-old sample was circumstantial. The children lived in the Montreal area of Quebec and were acquiring English and French in the home from their parents, except one child who was learning French from both parents at home and English in daycare which she had attended full time since birth. Most parents claimed that they used their native language most of the time when talking with their children. The parents reported that the children were not regularly exposed to other languages and that they had no known hearing or speech problems and no other developmental delays or disorders. Most families were middle-class. In 20 out of 26 families, at least 1 parent had a university or a postgraduate degree; and in 4 families, the parents had completed high school. Twenty-six parents worked as professionals, and 11 were employed in blue-collar occupations or as skilled tradespeople.

Each child's mean length of utterance (MLU) and the percentage of utterances which comprised two or more words (MWU) were calculated for

English and French. These calculations were based on the children's language use during the first 20 minutes of the play session with the experimenter. Only the children's fully intelligible utterances in the language used by the experimenter during these sessions were used to compute these indices (e.g. English when the experimenter used English and French if the experimenter used French); mixed utterances and utterances in the other language were not counted: two-year-olds – MLU = 2.5 ($SD = 1.11$); MWU = 46.1% ($SD = 19.36$); three-year-olds – MLU = 3.1 ($SD = 1.02$); MWU = 57.8% ($SD = 12.26$). The children's standardized scores on English and French receptive vocabulary tests, the Peabody Picture Vocabulary Test (PPVT-R; Dunn & Dunn, 1981) and its French adaptation, the Echelle de vocabulaire en images Peabody (EVIP, Dunn, Thériault-Whalen & Dunn, 1993), were also obtained: two-year-olds – English $M = 92.70$ ($SD = 16.03$); French $M = 84.00$ ($SD = 11.60$); three-year-olds – English $M = 102.44$ ($SD = 16.03$); French $M = 101.69$ ($SD = 21.69$). Twenty-three of the 26 children obtained scores that fell within the normal range for monolingual age-mates in at least one of their two languages, with 15 of these children performing within or above the norm in both languages; 3 children scored below the normal range in both of their languages.

In order to ensure that the two-year-olds had sufficient expressive ability in both languages to participate in the study, we also recorded them for approximately 30 minutes while playing with each parent on two separate occasions prior to the experimental sessions. Twenty minutes from each parent-child session were transcribed according to the CHAT system (MacWhinney, 2000), and the children's utterances were coded for: language (English-only, French-only, mixed [French and English]), MLU and MWU. MLU and MWU were based on the number of fully intelligible utterances in the parent's preferred language during a given session so that MLU and MWU in English were calculated when the children were with the English-speaking parent, and in French when they were with the French-speaking parent (see Comeau & Genesee, 2001, for more details): English MLU $M = 2.80$ ($SD = 0.79$); English MWU $M = 52\%$ ($SD = 18\%$); French MLU $M = 2.59$ ($SD = 0.74$); French MWU $M = 52\%$ ($SD = 15\%$). We did not deem it necessary to assess the three-year-olds' expressive abilities with their parents since it was possible to ascertain their general proficiency in both languages during our experimental sessions with them. Finally, the parents of all children were asked to identify their child's 'dominant' language, defined for purposes of the study as the language used most often by the child on a daily basis and the one which the parents felt their child was more advanced in and/or more comfortable using.

Procedure

Aside from the visits for recording the two-year-olds with their parents, all the children were visited at home twice. The vocabulary tests were administered during one visit by a bilingual research assistant or by the first author, who was also bilingual. During the second visit, the children were taped for up to one hour while playing with an experimenter (either the first author or a trained research assistant). We ensured that the adult with whom the children played was not the same person who had administered the vocabulary tests in the previous visit so that the conversational partner of the child was unfamiliar to the child. The children played with their own toys or toys brought by the experimenter. Most parents left the room once the children felt comfortable with the experimenter. Those who stayed were instructed to limit their interactions with their child and to not help their child answer the experimenter's clarification requests. The observer who filmed the session seldom spoke and, on those few occasions when she did, she used the language in which she was addressed. The experimenter used only the child's less proficient language, as indicated by the child's parents, on the assumption that this would result in more breakdowns than if the child used their more proficient language. There was a match between the parental reports and the language development indices obtained from the sessions with the two-year-olds and their parents in 9 out of 10 cases; the language dominance of the three-year-olds, however, could not be verified in advance of our recording sessions. While it was preferable to observe the children while they spoke their less proficient language, our interpretation of the results does not depend upon it.

The experimenter spoke the less proficient language of the children with native or native-like proficiency and behaved as though she did not understand the children when they used their other language. She did not use the child's other language with others while in the children's presence. Bilingual experimenters were used because pilot testing indicated that it was often difficult, and sometimes impossible, for monolingual experimenters to determine the language of a child's utterance and/or plausible breakdowns in communication due to other causes besides language. Judging whether the children provided satisfactory repairs of Language breakdowns was also difficult for monolinguals. The fact that the experimenters were bilingual raises the possibility that the children inferred that the interlocutor understood both languages. Thus, the situation examined here should be regarded as one where the child's interlocutor displays a strong preference for one language and the results may not be representative of how young bilinguals would respond to a true monolingual.

Each time a child used the experimenter's language, she made up to five requests for clarification; the following are the English versions of these requests:

1. What?
2. I don't understand.
3. Can you tell me that so I can understand?
4. I don't speak French.
5. Can you tell me that in English?

The first three requests were non-specific while the last two specified the source of the breakdown and, thus, the nature of the required repair. The less specific requests were asked first in order to test the children's understanding of implicit requests for language change. The explicit requests allowed for the possibility that the children had the linguistic proficiency to translate their initial utterance or to reformulate it in the other language, but failed to do this because the request did not specify explicitly what the source of the breakdown was. The same sequence was used following Other breakdowns except that request types 4 and 5 were modified to be appropriate for the specific source of breakdown (e.g. if a child spoke very softly, the experimenter asked 'I can't hear you.' as request 4 and 'Can you speak more loudly?' as request 5).

Transcription and coding

Twenty consecutive minutes of each experimental session after the first 5 minutes were fully transcribed. Since the number of breakdowns for some children was quite small when we limited our analysis to 20 minutes, we also scanned the entire recording for each child to identify all possible breakdowns, either Language or Other, and each of these breakdown-repair sequences was transcribed for further analysis. The children's utterances were coded for language: French-only, English-only or mixed (utterances containing elements from both languages). This was done to determine the extent to which the children used the same language as the experimenter. Incomprehensible utterances were omitted from the analyses. A breakdown sequence began with a turn by the child in which the child did not use the experimenter's language (Language breakdown) or produced an incomprehensible utterance (Other breakdown) followed by one or more requests for clarification from the experimenter and the child's responses to those requests; see examples (1) and (2). The sequence was terminated when the child either: (a) repaired the breakdown, (b) changed the subject, or (c) said or did something that made it impossible for the experimenter to continue to make requests for clarification (e.g. left the room or became noticeably frustrated with the experimenter's requests). In the following

examples, glosses of utterances including French are provided in square brackets.

- (1) Example of a Language breakdown: child (CH) with French-speaking experimenter (EX):
 CH: There's water right here.
 EX: Quoi? ['What?']
 CH: Water!
 EX: Je comprends pas. ['I don't understand.']
 CH: De l'eau. ['Water.']
- (2) Example of an Other breakdown: child with an English-speaking experimenter:
 CH: It's a tree xxx xxx. [xxx = incomprehensible]
 EX: What?
 CH: Tree?
 EX: I don't understand.
 CH: Tree, climb up!

The following features of each breakdown were coded.

Type of breakdown (Language or Other): Language breakdowns consisted of sequences during which the child used a mixed utterance or an utterance entirely in the language not spoken by the experimenter. Other breakdowns consisted of sequences when a child used the experimenter's language but the utterance was inaudible, unclear or incomprehensible for other reasons. Some of the Other breakdowns occurred naturally, and some were initiated by the experimenter when there was a plausible reason; e.g. the child produced an ambiguous utterance, mispronounced a word or spoke too softly to be heard.

Responses to clarification requests: The child's responses to the experimenter's requests were classified as: Appropriate Language Change (ALC; see example 1); Inappropriate Language Change (ILC; see example 3); Repetition (REP; see example 4); Reformulation (REF; see example 5); Subject Change (SC; see example 6); No Response (NR); and Other (O). Responses were classified as Reformulations and Repetitions only if there was no change in language; if there was a change in language, then the response was classified as ALC. Responses classified as Other were seldom used and included replying to a request for clarification by responding 'yes' or 'no,' asking someone else for help, changing the pronunciation of a word to make it sound like the other language, or using gestures, such as pointing to an object; there were few responses of these types. The categories of Subject Change, No Response and Other were combined into one category (SC/NR/O) because all three are instances when the child did not provide a repair. The child was credited with use

of more than one response if they did not repair the breakdown after the first request for clarification. For example, if the experimenter made three requests for clarification of a specific Language breakdown, the child was credited with use of three responses; each response (including repairs) the child made was coded according to the above categories. If the same response was used more than once in a single breakdown sequence, the child was credited with use of that response type as often as it was used. The number of responses to each request for clarification was greater than the number of breakdown sequences for each child because they usually did not repair breakdowns following the first request for clarification.

- (3) Inappropriate Language Change: child with an English-speaking experimenter:

CH: But c'est pas c'est pas noir. ['But it's not it's not black.']

EX: Can you say that so I can understand?

CH: C'est pas blanc. ['It's not white.']

- (4) Repetition: repeating the initial utterance verbatim:

CH: Arroser les fleurs. ['Water the flowers.']

EX: Quoi? ['What?']

CH: Arroser les fleurs. ['Water the flowers.']

- (5) Reformulation: rephrasing the initial utterance in some way, by adding, deleting or substituting elements:

CH: Ah ah un mouton. ['Ah ah a sheep.']

EX: What?

CH: Ah chèvre chèvre. ['Ah goat goat.']

- (6) Subject Change: introducing a new topic of conversation or activity:

CH: No I just I don't just don't like um the video but I like the thing.

EX: What?

CH: Hey you wanna read these two books they're funny.

All transcripts were coded by the first author, and a trained research assistant independently coded the responses of randomly chosen children within each age group (2 two-year-olds and 3 three-year-olds). Inter-rater reliability was 90.5% and disagreements were resolved by discussion.

Serial position of children's repairs: The child's responses were coded with respect to the serial position of the immediately preceding experimenter's request to which the child's response was being made; e.g. responses to the request 'What?' were coded as '1;,' responses to the request 'I don't understand' were coded as '2,' etc. This allowed us to determine what type of requests elicited a change in language from the children.

RESULTS

Children's language use with the experimenter

Despite the fact that most of the children were using their less proficient language, both the two-year-olds and three-year-olds used the experimenter's language most of the time: two-year-olds 90.5% and three-year-olds 85.8%; these percentages are the number of utterances produced by the children in the experimenter's language divided by the total number of utterances the child produced (English-only, French-only, mixed) during the 20-minute sections of the recordings that were transcribed. The 4 children, 2 two-year-olds and 2 three-year-olds, who used the experimenter's language 100% of the time, had relatively low MLUs ($M=1.95$), well below the average for both groups combined ($M=2.80$), suggesting that appropriate use of the experimenter's language was not highly correlated with linguistic ability (see also Genesee *et al.*, 1996).

Repairs of language breakdowns

The number of breakdown sequences (Language and Other) per child varied widely, from 1 to 36, as did the number of responses by each child to their interlocutor's requests for clarification, ranging from 1 to 97. Tests of proportions were carried out to examine the children's relative use of Appropriate Language Change in comparison to the other types of responses following Language and Other breakdowns (see Figure 1). Separate analyses were done for each age group and the alpha level was adjusted to 0.005 to compensate for the number of pair-wise comparisons. These analyses were carried out on the frequency of the children's use of each type of response expressed as a percentage of the total number of responses of all types made by the children during the entire session (Totals: two-year olds: 109; three-year olds: 344).

Analyses of the two-year-olds' results showed that they used Appropriate Language Change more often than most of the other response types, namely Inappropriate Language Change ($z=3.47$, $p<0.005$), Reformulation ($z=4.55$, $p<0.005$), and Subject Change/No Response/Other ($z=2.91$, $p<0.005$). However, they used Repetition and Appropriate Language Change equally often ($z=1.52$, $p>0.005$). The three-year-olds also used Appropriate Language Change more often than Inappropriate Language Change ($z=7.07$, $p<0.005$) and Repetition ($z=4.47$, $p<0.005$). However, unlike the two-year-olds, they used Appropriate Language Change and Reformulation equally often ($z=1.03$, $p>0.005$). Further analyses involving Repetition and Reformulation revealed that the younger children favored Repetition, a basic repair strategy, over Reformulation, which entails more complex responses ($z=3.00$, $p<0.005$). In contrast, the three-year-olds preferred to reformulate their utterances rather than repeat

BILINGUAL CHILDREN'S REPAIRS

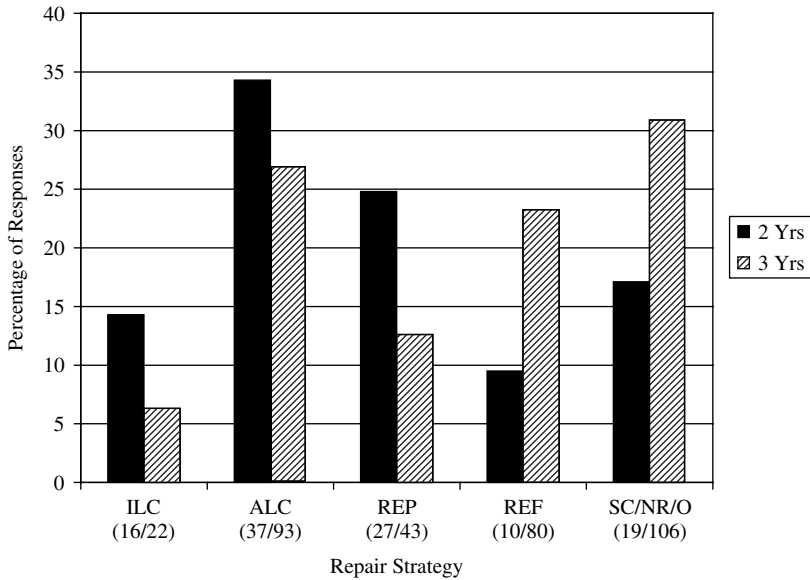


Fig. 1. Percentage of each repair strategy used by two- and three-year-olds in response to requests for clarification following language breakdowns (numbers in parentheses are the frequencies of occurrence of each type of repair for the two- [first entry] and three-year-olds [second entry]).

ILC=Inappropriate language change; ALC=Appropriate language change; REP=Repetition; REF=Reformulation; SC/NR/O=Subject change/No response/Other.

them ($z=3.43$, $p<0.005$). Finally, unlike the younger children, the three-year-olds used Subject Change/No Response/Other and Appropriate Language Change equally often ($z=1.08$, $p<0.005$).

While all 13 three-year-olds repaired Language breakdowns using an Appropriate Language Change at least once, only 5 of the 8 two-year-olds did so ($X^2=5.69$, $df=1$, $p<0.05$). The children who made appropriate language changes used this strategy in two ways: (a) they gave a total or partial translation of their initial utterance, as shown in example (7); or (b) they gave responses in the appropriate language that included subject changes, yes or no answers, and short utterance such as 'Like this' with accompanying gestures, as in example (8).

(7) NIC (3;4) and French-speaking experimenter:

NIC: N'est pas une une boat. ['Is not a a boat.']

EX: Quoi? ['What?']

NIC: Euh c'est bateau bateau. ['Uh it's boat boat.']

- (8) JUL (3;2) and English-speaking experimenter:

JUL: And a scie. ['And a saw.']

EX: A what?

JUL: Scie. ['Saw.']

EX: I don't understand.

JUL: A scie. ['A saw.']

EX: Can you say that so I can understand?

JUL: For ... [child shows how to cut with a saw]

Some children also used Inappropriate Language Change when attempting to repair Language breakdowns (3 two-year-olds, and 7 three-year-olds), although rarely. A X^2 analysis comparing the frequency of use of this response by each age group shows that the two-year-olds and three-year-olds were equally likely to use this strategy ($X^2=0.53$, $df=1$, $p>0.05$). In every case, the children initially produced a mixed utterance, and then, rather than translating the components that were in the inappropriate language, they used only the inappropriate language in their reply; see example (9).

- (9) JUL (3;2) with English-speaking experimenter:

JUL: And look vert. ['And look green.']

EX: What?

JUL: Vert. ['Green.']

EX: I don't understand.

JUL: Vert. ['Green.']

To examine whether the children were able to make an Appropriate Language Change in response to an implicit request, we calculated the frequency of occurrence of a language change by each child after each clarification request by the experimenter as a percentage of the total number of language changes made by the child in response to all requests for clarification during the entire session (Totals: two-year-olds – 36; three-year olds – 81). As shown in Figure 2, nearly half (47%) of all Appropriate Language Changes made by the two-year-olds occurred after the first request, with an additional 25% occurring after the second request, and 11% after the third request. Thus, 83% of language changes were made in response to implicit requests to change language. The three-year-olds also made the majority of their Appropriate Language Changes in response to the first three requests: 23% after the first request, 32% after the second request and 26% after the third request (Total=81%).

Comparisons of repairs of Language and Other breakdowns

Tests of proportions were carried out to compare the children's use of language change to repair Language and Other breakdowns for evidence

BILINGUAL CHILDREN'S REPAIRS

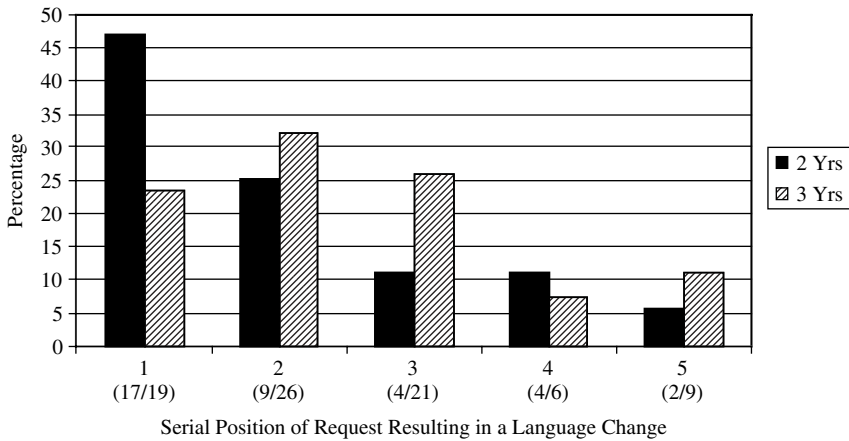


Fig. 2. Percentage of appropriate language changes made by two- and three-year-olds in response to each clarification request numbered from 1 to 5 (from 'What?' to 'Can you say that in English/French?') (numbers in parentheses are the frequencies on which the percentages were based for the two- [first entry] and three-year-old [second entry]).

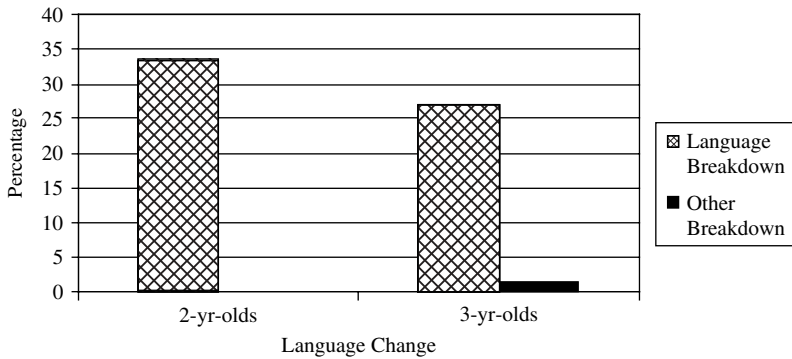


Fig. 3. Percentage of two-year-olds' and three-year-olds' repair strategies following language versus other breakdowns 3 (the percentages in this table are based on the total number of breakdowns experienced by the children [Language and Other]).

that their responses to requests for clarification following Language-based breakdowns were distinctive. Separate analyses were conducted for each age group and the alpha level was adjusted to compensate for the number of comparisons made. For purposes of these analyses, all responses involving a language change – inappropriate or appropriate – were combined to form one response category, Language Change. As shown in Figure 3, the two-year-olds used Language Change only when attempting to repair Language breakdowns ($n=37$); they did not use this strategy when attempting to repair Other breakdowns. The three-year-olds sometimes used Language

Change when repairing Other breakdowns, but seldom; they changed language far more often when repairing Language breakdowns: Language = 93; Other = 2 ($z = 11.1$, $p < 0.005$).

Self-repairs involving a language change

It is worth noting that some of the children made spontaneous auto-corrections involving a language change—they changed to the experimenter's language for part or all of their initial utterance in the absence of feedback from the experimenter, as illustrated in examples (10) and (11).

(10) TAL (2;9):

TAL: La la soeur. The the sister. [pause] The sister.

(11) JIA (3;2):

JIA: Un a. [pause] A bird.

In example (10), TAL translates her short utterance into English, the experimenter's language, after having produced an equivalent utterance in French. In the other example, JIA interrupts her utterance and starts again, translating the first portion of the utterance before completing her thought in the experimenter's language. In total, there were 14 instances of self-repairs involving a language change: 3 were made by the two-year-olds (by 2 different children), and 11 were made by the three-year-olds (by 6 of the children). Similar self-repairs have been reported by De Houwer (1990) in her study of a young child acquiring English and Dutch.

DISCUSSION

The present study contributes to the growing body of evidence that young bilingual children are sensitive to their interlocutor's language preferences. More specifically, the present results indicate that young bilingual children can recognize that their use of a particular language can lead to breakdowns in communication. Indeed, both the two- and three-year-olds were capable of interpreting requests for clarification as cues for language change even in the absence of specific feedback about the cause of the breakdown. The findings suggest further that bilingual children can treat Language breakdowns differently from Other breakdowns. Although the first three requests for clarification were the same for both types of breakdowns, the children rarely switched languages when attempting to repair Other breakdowns but did so frequently for Language breakdowns. While both the two- and three-year-olds demonstrated this pattern, more of the three-year-olds did so. In particular, all of the three-year-olds who experienced Language breakdowns used Appropriate Language Change as a strategy, whereas some of the two-year-olds did not. Both groups appeared to know

when NOT to use this strategy (that is, to repair an Other breakdown) even if they sometimes failed to use it when it was needed. They also used appropriate strategies such as Repetition and Reformulation when repairing Other breakdowns. In contrast to the three-year-olds, however, the two-year-olds showed a preference for Repetition, arguably a minimal, less sophisticated repair than Reformulation, which entails the ability to convey one's meaning in more than one way. This finding is consistent with earlier studies showing that monolingual children use increasingly complex repair strategies as they get older and as their linguistic abilities increase (Gallagher, 1977; Konefal & Fokes, 1984; Marcos & Kornhaber-le Chanu, 1992).

That the children did not switch languages even after two, three or four requests in some cases may be due to a number of factors. It may simply be difficult for young bilingual children to determine with total accuracy whether a language change is required. Lack of proficiency in the experimenter's language may also come into play, sometimes preventing the children from providing adequate translations. This would not be surprising, given that most of the children were using their less proficient language. It is also possible that the children did not truly believe their interlocutor to be monolingual and that through interactions with parents and others in their home environment who are bilingual they have been socialized to view code-mixing as an acceptable and effective strategy. Additional analyses and research are called for to examine reasons for the individual variation that is evident in these data.

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