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PAPER

Monolingual and bilingual children's social preferences for monolingual and bilingual speakers

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Abstract

Past research has shown that young monolingual children exhibit language-based social biases: they prefer native language to foreign language speakers. The current research investigated how children's language preferences are influenced by their own bilingualism and by a speaker's bilingualism. Monolingual and bilingual 4- to 6-year-olds heard pairs of adults (a monolingual and a bilingual, or two monolinguals) and chose the person with whom they wanted to be friends. Whether they were from a largely monolingual or a largely bilingual community, monolingual children preferred monolingual to bilingual speakers, and native language to foreign language speakers. In contrast, bilingual children showed similar affiliation with monolingual and bilingual speakers, as well as for monolingual speakers using their dominant versus non-dominant language. Exploratory analyses showed that individual bilinguals displayed idiosyncratic patterns of preference. These results reveal that language-based preferences emerge from a complex interaction of factors, including preference for in-group members, avoidance of out-group members, and characteristics of the child as they relate to the status of the languages within the community. Moreover, these results have implications for bilingual children's social acceptance by their peers.

Research highlights

- Monolingual children from a monolingual or bilingual community preferred to affiliate with a monolingual speaker over a bilingual speaker.
- As a group, bilingual children did not show a preference for monolingual versus bilingual speakers.
- Bilinguals had idiosyncratic friendship preferences, with some preferring bilingual speakers and others monolingual speakers.

Introduction

People tend to prefer speakers of their own native language, dialect, or accent, and often attach negative stereotypes to nonnative speakers (e.g. Anisfeld, Bogo & Lambert, 1962; Bresnahan, Ohashi, Nebashi, Liu & Shearman, 2002; Carlson & McHenry, 2002; Dixon, Mahoney & Cocks, 2002; see Gluszek & Dovidio, 2010, for a review). These language-based preferences can create barriers to socialization (Nesdale & Rooney, 1996) and employment (Carlson & McHenry, 2002; Gluszek & Dovidio, 2010).

Preferences for native speakers are already present in infancy, and likely emerge from early-developing perceptual abilities. At birth, infants prefer their native language(s) to other rhythmically distinct languages (Byers-Heinlein, Burns & Werker, 2010; Moon, Cooper & Fifer, 1993). By age 4 to 5 months, infants can distinguish two languages of the same rhythmic pattern (e.g. Spanish vs. Catalan) if one or both is their native language (Bosch & Sebastián-Gallés, 1997; 2001; Nazzi, Jusczyk & Johnson, 2000).

These precocious abilities give infants the necessary perceptual tools to develop language and dialect preferences. Indeed, 5-month-old monolingual infants look longer at a speaker of their native language than at a

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speaker of a foreign language, and also look longer at a speaker with a native-sounding accent than at a speaker with a foreign accent (Kinzler, Dupoux & Spelke, 2007). A few months later, at age 10 months, monolingual infants prefer to interact with a speaker of their native language than with a speaker of a foreign language (Kinzler *et al.*, 2007). Slightly older infants prefer to imitate the actions (Buttelman, Zmyj, Daum & Carpenter, 2013; Howard, Henderson, Carrazza & Woodward, 2015) and eat the foods endorsed by a native language speaker over a foreign language speaker (Shutts, Kinzler, McKee & Spelke, 2009).

Social preferences for native language speakers continue in the preschool years. Five-year-old monolinguals choose a native-accented over a foreign-accented speaker as a friend (Kinzler *et al.*, 2007). Further, linguistic information might be an even stronger driver of social preferences than other characteristics such as race. White American children prefer an African-American child with a standard American English accent over a White child speaking English with a foreign French accent, despite preferring the White child over the African-American child when viewing their faces only (Kinzler, Shutts, DeJesus & Spelke, 2009). Finally, other research has demonstrated that preschoolers prefer to learn the function of a novel object from a native-accented speaker than from a foreign-accented speaker (Kinzler, Corriveau & Harris, 2011). Thus, language seems not only to guide young monolingual children's social preferences, but also to provide a basis for their selective learning.

Together, this body of research suggests that children possess strong and early-developing language-based social preferences. Yet, research has yet to fully address why or how these preferences emerge. One possibility is that language is an especially salient cue to group membership. Researchers have theorized that children prefer native-language speakers to speakers of other language varieties because they prefer to interact with members of the in-group or other high-status groups (e.g. Kinzler *et al.*, 2007). A second complementary possibility is that children's preferences reflect an avoidance of out-group members. However, because studies have thus far mostly pitted in-group against out-group members, it is difficult to tease apart these two explanations.

Most research to date on language-based social preferences has studied monolingual children, who are exposed predominantly to a single language variety. However, studying children who live in bilingual or multilingual communities provides a unique opportunity to understand the ontogeny of language-based preferences. Children raised in bilingual or multilingual settings regularly encounter monolinguals who speak each of their languages, as well as bilinguals who speak both of their languages. Whereas monolingual children are only part of one language in-group, bilingual children can be members of multiple language in-groups. Further, there is interesting diversity amongst bilinguals with respect to the amount and timing of exposure to each language. Individual differences in language-based social preferences could reveal the drivers of children's social preferences.

A handful of previous studies have examined language preferences amongst children raised in a multilingual context. Anisfeld and Lambert (1964) compared bilingual French-English children and monolingual French children in their ratings of English and French speakers on various characteristics such as intelligence, piety, and height. The study revealed that, although all the children were of Francophone origin, bilingual children perceived less difference between the English and French speakers, and identified more with the English speakers than did monolingual children (see also Genesee, Tucker & Lambert, 1978). More recently, Reizábal, Valencia and Barrett (2004) reported that Basque children raised in bilingual Spanish-Basque families identified with both Basque and Spanish speakers, whereas monolinguals raised in the same community mostly identified with their own linguistic group. Studies have also shown that Anglo-American children attending bilingual English-Spanish classes felt more positively and more similar to Hispanic children in comparison to monolingual Anglo-American children, regardless of whether or not the latter were attending an ethnically diverse school (Wright & Bougie, 2007; Wright & Tropp, 2005). Finally, a recent study reported that 19-month-old infants who lived in more linguistically diverse neighborhoods were more likely to imitate the actions of a foreign speaker than those who lived in less diverse neighborhoods (Howard *et al.*, 2015). These findings support the idea that regular exposure to multiple language varieties can result in children affiliating with multiple linguistic in-groups. Alternatively, these results could indicate that multilingual experience attenuates preferences for in-group members, and/or reduces the avoidance of out-group members.

Yet, several studies of children raised in multilingual environments have suggested that these children are not necessarily more tolerant of linguistic difference than children from monolingual environments. For example, Cohen and Haun (2013) found that Brazilian children exposed to multiple regional accents of Brazilian Portuguese favored a puppet speaking with their own native accent over a puppet speaking with an unfamiliar accent from Madeira (European Portuguese), whereas children

exposed to only one accent did not exhibit such a strong preference. The authors hypothesized that children raised in multidialect settings were more sensitive but not more tolerant to different accents and dialects. Souza, Byers-Heinlein, and Poulin-Dubois (2013) also found that both monolingual (French and English) and bilingual French-English children preferred a speaker who spoke their dominant language with a native accent over a speaker who spoke their dominant language with an unfamiliar Haitian Creole accent.

The current studies sought to clarify the origins of language-based social preferences by varying both the monolingual/bilingual status of the child participants, as well as that of the speakers they were asked to evaluate. That is, we tested monolingual and bilingual children's preferences for monolingual and bilingual speakers. Our studies included three distinct groups of children: monolinguals raised in a predominantly monolingual community (Study 1), and monolinguals and bilinguals raised in a predominantly bilingual community (Study 2). As we elaborate below, this approach allowed unique insight into how in-group status, out-group status, language exposure, and language proficiency inform children's language-based social preferences. Further, these are the first studies to date to investigate children's evaluation of bilingual interlocutors. As such, they can provide unique insight about how bilingual children might themselves be socially evaluated by their monolingual and bilingual peers.

Predictions: monolingual children

Monolinguals from two communities were tested: Fayetteville, Arkansas, a predominantly monolingual community (Study 1), and Montréal, Québec, a predominantly bilingual community (Study 2). Children were tested on their social evaluation of monolinguals (native-language speakers) relative to bilinguals (speakers of both the native language and a second language) in a friendship choice task. Bilingual speakers are unique because they are simultaneously members of monolinguals' language in-group and members of their language out-group. Thus, our research design provided a test of how children's preferences are driven by affiliation with in-group members versus avoidance of out-group members. If monolinguals' evaluations are guided solely by an affiliation with in-group members, they should show equal preference for the monolingual and bilingual speakers, as both use their native language. However, if their preferences are also informed by avoidance of out-group members, they should prefer monolingual to bilingual speakers.

In addition, in Study 2, we tested monolingual children's preference for monolingual speakers of their native language versus speakers of a non-native language that is also widely spoken in their community. This provided a test of whether ambient exposure to other languages can attenuate monolingual children's strong native-language biases. Children in Study 1 were not tested on this contrast, because previous studies have already demonstrated clear native-language preferences amongst monolinguals from predominantly monolingual communities (Kinzler *et al*., 2007).

Predictions: bilingual children

In addition to testing monolinguals, Study 2 also tested bilinguals growing up in a predominantly bilingual community (Montréal, Québec). First, we assessed bilingual children's preference for a monolingual vs. a bilingual speaker. For bilingual children, both monolingual and bilingual speakers are in-group members because they both use children's in-group languages. If children simply seek to affiliate with others who speak an in-group language, then bilinguals should show equal preference for the monolingual and the bilingual speaker. However, bilingual children might prefer the bilingual speakers to the monolingual speakers if they see other bilinguals as being characteristic of their in-group.

Second, we assessed bilingual children's relative preference for monolingual speakers of their dominant versus non-dominant languages. Again, speakers of each of the two languages could be considered members of children's linguistic in-group. However, bilingual children vary in their relative exposure to their two languages. We predicted that bilinguals with more balanced exposure to their two languages would show similar preference for monolingual speakers of the two languages, while children dominant in one of the languages would prefer monolinguals who speak that language.

Study 1

Study 1 examined the preferences of monolingual children raised in a predominantly monolingual community for monolingual versus bilingual speakers. Spanish was chosen as the second language for this sample because it is by far the most common language other than English that is spoken at home in the county in which testing took place (12.3% of households, see http://statisticalatlas.com/metro-area/Arkansas/Fayetteville/Languages).

Methods

Participants

Eighteen 4- to 5-year-old monolingual English-learning children (7 girls, 11 boys) participated. Children's average age was 5.4 years (*SD* = .31, range = 4.93–5.93). Children were recruited and tested at their schools in Fayetteville, Arkansas. Fayetteville is a predominantly English-speaking community, where English is the language of school instruction. Eighty-two percent of residents speak only English at home (US Census Bureau, 2010), and none of the children in the study had any systematic exposure to a language other than English.

Stimuli

Auditory stimuli were recorded from eight native English and eight balanced English-Spanish bilingual adults in Arkansas. Each stimulus consisted of a simple declarative sentence uttered twice in a natural tone of voice. Bilingual speakers produced each sentence once in Spanish and once in English (e.g. 'La hierba es verde … Mhmm … The grass is green.') separated by a filled pause to make the repetition sound more natural. Two versions of each bilingual stimulus were created: Spanish-first and English-first. Monolinguals also repeated the same sentence twice (e.g. 'The grass is green … Mhmm … The grass is green.'), so that the monolingual and the bilingual stimuli would be as similar as possible.

The English sentences produced by both the monolingual and bilingual speakers were rated by 20 native English-speaking adults for their accentedness, on a scale of 1 (not accented) to 7 (strongly accented). The English sentences produced by the monolingual speakers were rated an average of 2.4 (*SD* = 1.5), and the English sentences produced by the bilingual speakers were rated an average of 2.5 (*SD* = 1.5), and the ratings were not significantly different from each other, $t(19) = .57$, $p = .54$, $d = .13$. Thus, the English sentences produced by both the monolingual and bilingual speakers were generally perceived as having little to no accent. The accentedness of the Spanish sentences was not assessed, as Spanish was unfamiliar to the participants.

Visual stimuli consisted of 16 photographs of smiling young adult faces (including eight women). Images were selected from the NimStim set of facial expressions (Tottenham, Tanaka, Leon, McCarry, Nurse *et al.*, 2009) or were photos taken in a similar style.

Auditory and visual stimuli were combined into a PowerPoint presentation. On each slide, two different faces (presented on the left and right sides of the screen) and two different speakers were presented. Faces were paired on the basis of sex and overall similarity of appearance. Speakers' voices were paired to each other on the basis of sex and (as much as possible) pitch, and were randomly assigned to gender-matched pairs of faces. The two speakers on each trial uttered the same sentence (or its translation), and different sentences were used on different trials. There were eight trials in total.

Four different counterbalanced trial orders were created. Both within and across participants, orders counterbalanced whether the bilingual voice began with the English or the Spanish version of the utterance, and the side of presentation of each speaker. The particular pairing of a voice with a face within a trial was counterbalanced across participants.

Procedure

Parents of each child provided informed consent prior to the study. Children were tested individually in a quiet room in their schools by a native English-speaking experimenter. The procedure was similar to that developed by Kinzler *et al.* (2007). The experimenter and the child sat facing a laptop computer that displayed the PowerPoint presentation. The experimenter told the child that he or she would see and hear different people and asked the child to listen carefully.

On each trial, the experimenter played the first speaker by clicking on and pointing to the photograph on the left-hand side of the screen, and then played the second speaker by clicking on and pointing to the photograph on the right-hand side of the screen. Animations were included so that each photograph loomed while the corresponding sentences played. In this way, children could easily identify which voice went with which face. After listening to both speakers, the experimenter asked the child which speaker he or she would prefer to be friends with and recorded the child's choice. As a thank you for their participation, children received stickers.

Results

The proportion of trials on which children endorsed the monolingual speaker over the bilingual speaker was tabulated and compared to chance (.5). Scores thus ranged from 0 to 1, with 1 indicating that children always endorsed the monolingual speaker and 0 indicating that children always endorsed the bilingual speaker. Preliminary analyses did not find any effects of gender so this factor was excluded from subsequent analyses. Children were significantly more likely to endorse the monolingual

than the bilingual speaker, $M = .60$, $SD = .18$, $t(17) = 2.48$, $p = .024$, $d = .58$. See Figure 1 for a graphical display of these results.

Among the 18 children, 11 children endorsed the monolingual speaker most often, four children endorsed the two types of speaker equally often, and three children endorsed the bilingual speaker most often. Under the binomial theorem, there was a non-significant trend towards difference from chance, $X^2(2) = 5.134$, $p = .077$. However, pairwise comparisons confirmed that more children preferred the monolingual speakers than the bilingual speakers $X^2(1) = 4.57$, $p = .033$.

Discussion

The monolingual children in Study 1, who were raised in a predominantly monolingual community, preferred to be friends with a monolingual speaker over a bilingual speaker. Even though both speakers demonstrated membership in the child's language group by speaking the child's native language (English), children tended to avoid speakers who demonstrated additional membership in another language group. At the same time, children's rate of endorsement of the monolingual native-language speaker (.60) was somewhat lower than previous studies that pitted this type of speaker against a monolingual foreign language speaker (~.70, Kinzler *et al*., 2007). Together, these findings indicate that both affiliation with in-group members and avoidance of out-group members contribute to children's language-based social preferences.

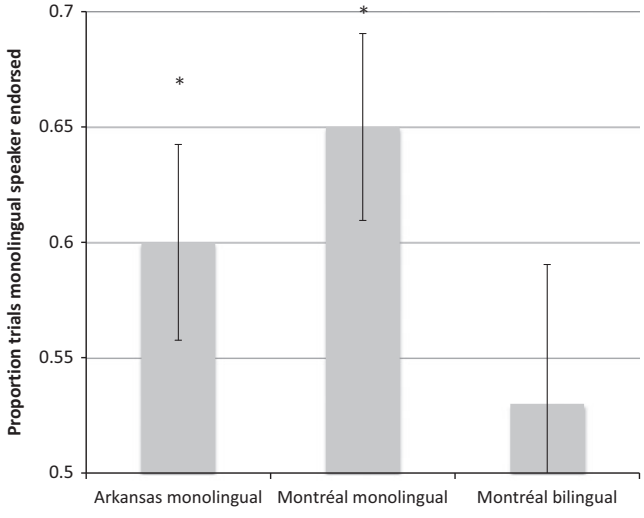

Figure 1 *Proportion of trials on which children in Study 1 (Arkansas monolingual) and Study 2 (Montréal monolingual & Montréal bilingual) endorsed the monolingual speaker as opposed to the bilingual speaker. The monolingual groups tended to endorse the monolingual speaker more often, while the bilingual group showed similar rates of endorsement of both types of speaker.* * $p < .05$

Study 2

Study 2 examined the preferences of monolingual and bilingual children raised in a predominantly bilingual community. Children were tested both on their preference for monolingual versus bilingual speakers, and on their preference for monolingual speakers using each of the two languages widely spoken in their community.

Methods

Participants

Forty-two 4- to 6-year-old children ($M_{age} = 5.6$ years, $SD = .5$, range = 4.8–6.9) from the Montréal area participated. Recent data have shown that 53.9% of Montréal residents identify as French-English bilingual (Statistics Canada, 2015), and both languages are regularly used in everyday life. Further, public schooling is available in both French and English.

Children were recruited through government birth lists and kindergarten classes at local private schools. Children's language background was assessed using a language background questionnaire completed by their parents, which was a modified version of the LEAP-Q (Language Experience and Proficiency Questionnaire; Marian, Blumenfeld & Kaushanskaya, 2007). All children had at least some exposure to English and French because both languages are spoken widely in the community and are required in the local school curriculum. Thus, following previous research with similar populations (Bosch, Figueras, Teixidó & Ramon-Casas, 2013; Souza *et al*., 2013), children were divided into monolingual and bilingual groups on the basis of their reported current and lifetime exposure to English and French. Children were considered monolingual if they had more than 75% exposure to a single language, either English or French, and bilingual if they had at least 25% exposure to both English and French.

Twenty-two children (9 girls, 13 boys) formed the monolingual group. They heard either English ($n = 7$) or French ($n = 15$) at least 75% of the time both currently and on average across their lives, according to parental report. Their average current exposure to their dominant language was 89% ($SD = 7.4$, range = 75–100), and their average current exposure to the other language was 9.6% ($SD = 5.3$, range = 0–20). According to parental report, the mean proficiency score for understanding of this

second language was 4.5 (SD = 3.30) on a 10-point scale. Five monolinguals had some current exposure to a third language (neither English nor French), which ranged from 5 to 10%.

Twenty children (10 girls, 10 boys) formed the bilingual group. They heard both English and French regularly, at least 25% of the time both currently and on average across their lives according to parental report. Fifteen bilinguals were dominant in English, and five were dominant in French. Bilinguals' current exposure to their dominant language averaged 54% (SD = 8.5, range = 34–70) and their current exposure to their non-dominant language averaged 41% (SD = 8.0, range = 29–50). Ten bilinguals had been exposed to both languages since birth, nine had been exposed to their second language after birth but before age 2 and one had been exposed at age 4. Their mean proficiency score in understanding their second language, as measured by the LEAP-Q, was 8.03 (SD = 1.87) on a 10-point scale (scores from two bilinguals were missing). Bilinguals' scores were significantly higher than those of the monolinguals, $t(38) = 13.59$, $p < .001$, $d = 1.51$. Eight bilingual children were currently exposed to a third language other than English or French, with exposure ranging from 3 to 37%.

An additional 30 children were tested but not included in the final analyses for the following reasons: they did not meet the inclusion criteria for either the monolingual or bilingual group because they most often heard a third language that was not English or French (11 children), there was a large difference between their reported current and lifetime language exposure, such that they switched from meeting monolingual criteria to meeting bilingual criteria or vice versa (10), they were mistakenly tested in their non-dominant language (5), or their parents provided inconsistent or incomplete information about their language background (4).

Stimuli

Auditory stimuli were declarative sentences recorded from eight native Canadian English speakers (four females), eight native Québec French speakers (four females), and eight bilingual French-English speakers (four females).

As in Study 1, voices and faces were combined into a PowerPoint presentation with 16 trials. The first eight trials used the same pairs of faces as Study 1, and the last eight trials used eight new pairs of faces. Different stimulus sets were created for children whose dominant language was English and children whose dominant language was French. The first eight trials paired a monolingual speaker of the child's dominant language with a bilingual speaker, and the next eight trials paired a monolingual speaker of the child's dominant language with a monolingual speaker of the child's non-dominant language.

Prior to testing, auditory stimuli were rated for accentedness by a group of 18 native English-speaking and 18 native French-speaking adults. Adults rated a subset of the stimuli that were in their native language, such that each stimulus sentence had at least eight ratings. Each sentence was rated on a scale of 1 (not accented) to 7 (strongly accented), and ratings were averaged for each sentence. Overall, the stimuli were rated as having little to no accent and ratings for sentences produced by the monolingual speakers (M = 1.6, SD = .58) and the bilingual speakers (M = 1.5, SD = .37) did not differ significantly from each other, $t(30) = .85$, $p = .40$, $d = .59$.

Procedure

Parents of each child provided informed consent prior to the study, and completed a language background questionnaire. Children were tested individually either in the laboratory or in a quiet room in their schools by a bilingual experimenter who was fluent in both French and English. Children were tested in either English or French, whichever language was dominant. The procedure was identical to Study 1, except that children responded to eight monolingual/bilingual speaker trials, followed by an additional eight dominant/non-dominant language trials.

As a thank you for their participation, children tested in the laboratory received a small gift and a certificate, and their parents received $20. Children tested in schools received stickers.

Results

Monolingual vs. bilingual speaker trials

As in Study 1, the proportion of trials on which children endorsed the monolingual speaker over the bilingual speaker was tabulated and compared to chance (.5). Once again, scores ranged from 0 to 1, with 1 indicating that children always endorsed the monolingual speaker and 0 indicating that children always endorsed the bilingual speaker. Preliminary analyses did not find any effects of gender or language of testing, so these factors were excluded from subsequent analyses. Single-sample t-tests were conducted to investigate whether either the monolingual children or the bilingual children were different from chance on their preference for the monolingual over the bilingual speaker. Monolingual children

were significantly more likely than chance to endorse the monolingual speaker, $M = .65$, $SD = .19$, $t(21) = 3.66$, $p = .001$, $d = .76$. However, bilingual children were not different from chance, $M = .53$, $SD = .28$, $t(19) = .54$, $p = .60$, $d = 12$. Next, an independent samples t-test was conducted to compare the groups' performance directly. Although comparisons to chance suggested different patterns of responding, the difference between monolingual and bilingual children's performance did not reach statistical significance, $t(40) = 1.64$, $p = .11$ $d = .51$. See Figure 1 for a graphical display of these results.

To further describe the results, children were categorized according to the speaker they endorsed more often. Among the 22 monolingual children, 14 endorsed the monolingual speaker more often than the bilingual speaker, six endorsed the two types of speakers equally, and two endorsed the bilingual speaker more often. Among the 20 bilingual children, 12 endorsed the monolingual speaker more often than the bilingual speaker, one endorsed the two types of speakers equally often, and seven endorsed the bilingual speakers more often. The monolinguals were significantly different from chance, $X^2(2) = 9.02$, $p = .011$, and follow-up analyses suggested that the locus of the effect was monolinguals' tendency to endorse the monolingual speaker more often than the bilingual speaker, $X^2(1) = 10.57$, $p = .001$. Interestingly, the bilingual children's pattern was also not consistent with chance responding, $X^2(2) = 6.75$, $p = .03$. However, follow-up analyses suggested that the locus of the effect was not different tendencies to endorse the monolingual as opposed to the bilingual speaker, $X^2(1) = 1.32$, $p = .25$, but was instead because bilinguals were less likely than chance to endorse the two speakers equally. Therefore, bilingual children did not respond randomly on each trial, but showed individual patterns of preference, some children for the monolingual speaker, and some children for the bilingual speaker.

Dominant vs. non-dominant speaker trials

The proportion of trials on which children endorsed the dominant language speaker over the non-dominant language speaker was calculated and compared to chance (.5). A score of 1 indicated that children always endorsed the dominant language speaker, and a score of 0 indicated that children always endorsed the non-dominant language speaker. Preliminary analyses did not find any effects of gender or language of testing, so these factors were excluded from subsequent analyses. Single-sample t-tests were conducted to investigate whether either the monolingual children or the bilingual children were different from chance in their endorsement of the dominant language speaker over the non-dominant language speaker. Monolingual children were significantly more likely than chance to endorse the dominant language speaker, $M = .68$, $SD = .25$, $t(21) = 3.33$, $p = .003$, $d = .71$. Bilingual children were not different from chance, $M = .51$, $SD = .26$, $t(19) = .12$, $p = .91$, $d = .03$. This difference in pattern between the two groups was confirmed by an independent samples t-test, $t(40) = 2.19$, $p = .035$, $d = .68$. See Figure 2 for a graphical display of these results.

Again, data were tabulated according to which speaker children endorsed more often. Among the 22 monolingual children, 15 endorsed the dominant speaker most often, two endorsed the two types of speakers equally often, and five endorsed the non-dominant speaker most often. Among the 20 bilingual children, seven endorsed the dominant-language speaker most often, six endorsed the two types of speakers equally often, and seven endorsed the non-dominant language speaker most often. Monolingual children's pattern of response was significantly different from chance, $X^2(2) = 9.95$, $p = .007$, due to the fact that they were more likely to endorse the dominant language speaker over the non-dominant language speaker, $X^2(1) = 5.00$, $p = .025$. Bilingual children's pattern of response was not significantly different from chance, $X^2(2) = .072$, $p = .96$.

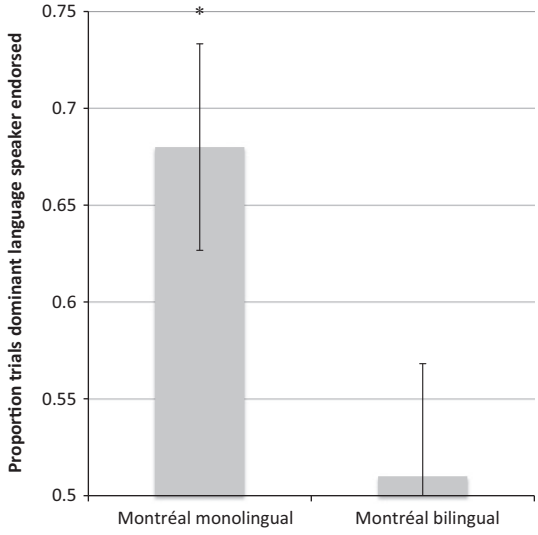

Figure 2 *Proportion of trials on which children in Study 2 (Montréal monolingual & Montréal bilingual) endorsed the dominant language speaker as opposed to the non-dominant language speaker. Monolingual children tended to endorse the dominant language speaker more often, while the bilingual group showed similar rates of endorsement of both types of speaker.* * $p < .05$

Individual factors affecting children's social preferences

A set of exploratory analyses was conducted to investigate individual factors that contribute to children's language-based social preferences. First, correlations were computed to investigate the relationships between children's choices on the two types of trials. Monolingual children who endorsed the monolingual speaker over the bilingual speaker were also more likely to endorse the dominant speaker over the non-dominant speaker, $r(18) = .47$, $p = .028$. A similar pattern was observed amongst bilingual children, $r(18) = .44$, $p = .051$. Thus, children's preferences on the two trial types were predictive of each other.

Next, we investigated whether individual bilingual children's relative exposure to each language could account for variance in their friendship choices. Bilingual children's preference for the monolingual over the bilingual speaker was not related to their exposure to each language.

In contrast, some individual difference variables were predictive of bilingual children's preference for the dominant over non-dominant speaker. We expected that bilingual children with the most exposure to their dominant language would show the greatest preference for the dominant language speaker. Surprisingly, our data showed the opposite pattern. There was a significant *negative* correlation between current exposure to the language of testing and preference for the dominant language speaker, $r(18) = -.61$, $p = .004$. To follow up on this finding, we calculated a dominance ratio of children's current exposure to the non-dominant relative to the dominant language, such that a ratio of 1 would indicate balanced exposure, and smaller ratios indicate less balanced exposure. Children's dominance ratio was positively correlated with their preference for the dominant speaker, $r(18) = -.61$, $p = .005$, again showing that children with the most balanced exposure had the strongest preference for the dominant speaker. A median split was performed on dominance ratio, dividing children into those whose ratio was .7 and below (unbalanced bilinguals, $n = 10$), to those whose ratio was .8 and above (balanced bilinguals, $n = 10$; no children had a ratio between .7 and .8). The balanced bilinguals showed a significant preference for the dominant-language speaker, $M = .65$, $SD = .19$, $t(9) = 2.50$, $p = .034$, $d = .78$. The unbalanced bilinguals showed a non-significant trend towards a preference for the non-dominant language speaker, $M = .36$, $SD = .23$, $t(9) = -1.92$, $p = .086$, $d = -.61$. These two groups were significantly different from each other, $t(18) = 3.02$, $p = .007$, $d = 1.37$.

Discussion

Study 2 replicated and extended the findings of Study 1. Participants included both monolingual and bilingual children raised in a bilingual community. We examined two types of friendship preferences: monolingual versus bilingual speakers, and monolingual speakers using each of the two community languages. The results for monolingual children were nearly identical to those in Study 1: monolingual children preferred to be friends with monolingual over bilingual speakers, and the two monolingual groups did not differ statistically, $t(38) = .82$, $p = .42$, $d = .26$. Further, replicating previous findings (Kinzler *et al.*, 2007), monolingual children preferred to be friends with monolinguals who spoke their native language rather than monolinguals who spoke a non-native language. Our study provided a particularly stringent test, as monolinguals were growing up in a bilingual city and had some exposure to both languages. Across both conditions, we found no evidence that growing up in a bilingual community eliminated monolingual children's preference for monolingual native-language speakers over other speakers. These results further confirm the main finding of Study 1, that children's friendship preferences are driven both by affiliation towards in-group members, and avoidance of out-group members.

Bilingual children's friendship preferences were more nuanced. As a group, bilingual children did not show a preference for the monolingual versus bilingual speakers. This suggests that bilinguals did not simply use a 'like-me' strategy of picking the interlocutor who was also bilingual, nor did they systematically reject bilingual interlocutors. Yet, rather than responding randomly on each trial, some children preferred the monolingual speakers while others preferred the bilingual speakers. Surprisingly, bilinguals also did not show a preference for a monolingual speaker of their dominant language over a monolingual speaker of their non-dominant language. One interpretation of these results is that bilingual children are highly flexible in their friendship choices. It may be that bilinguals show similar affiliation for both monolingual and bilingual speakers, as long as those speakers use one or both of the languages that the child speaks.

However, in contrast to this interpretation, we observed some unexpected patterns of individual differences amongst bilingual children. We predicted that bilingual children with less balanced exposure to their two languages would show the strongest preference for the speakers of their dominant language. Instead, we found the opposite pattern: balanced bilinguals tended to endorse the non-dominant-language speakers, while unbalanced bilinguals tended

to endorse the dominant-language speakers. We explore possible explanations for this finding in the next section.

Finally, for both monolinguals and bilinguals, links were found across their patterns of social preferences in the two conditions we tested. Children who showed stronger preference for the monolingual over the bilingual speaker also showed stronger preference for the dominant-language over the non-dominant language speaker. This suggests that, beyond effects of a monolingual versus bilingual language background, children have stable individual differences in the strength of their preference for in-group members. Some children appear more accepting than others of interlocutors who use a less familiar language.

General discussion

Numerous previous studies have shown that children prefer unaccented speakers of their own language compared to those who speak a different language or with an accent. The current studies extended this research by examining language-based preferences in three diverse groups of children: monolingual children growing up in a predominantly monolingual community (Fayetteville, Arkansas), and monolingual and bilingual children growing up in a predominantly bilingual community (Montréal, Québec). Using a task similar to Kinzler *et al*. (2007, 2011) and Souza *et al*. (2013), we examined children's friendship preferences for monolingual versus bilingual speakers. To our knowledge, this is the first study to investigate children's social evaluation of bilingual interlocutors. In addition, for children raised in bilingual communities, we assessed their preferences for monolingual speakers of the two community languages, and whether bilinguals' relative exposure to each of these languages mediated these preferences.

Monolingual children from both communities preferred to be friends with monolingual speakers than with bilingual speakers. Because both monolingual and bilingual speakers used the child's native language, this finding rules out the explanation that children are equally tolerant of any speaker who demonstrates native proficiency in children's native language. Instead, monolinguals avoided speakers of an out-group language, even though those speakers also used the in-group language. Similar patterns of preference for monolingual speakers were found for monolinguals raised in both monolingual and bilingual communities. In addition, Study 2 demonstrated that even monolinguals raised in a predominantly bilingual community that have some proficiency in the non-native language prefer their native language over a non-native language that is widely spoken in their communities. These data provide a stringent replication of previous results (Kinzler *et al*., 2007). Together, these findings suggest that monolingual children have a robust preference for others who speak their language and only their own language. Both in-group preferences and out-group avoidance contribute to monolingual children's language-based social preferences.

The results from bilingual children provide a more complex view of factors that mediate children's social preferences. As a group, bilingual children showed no preference for either bilingual or monolingual speakers. Instead, some bilinguals preferred the monolingual speakers and others preferred the bilingual speakers. It may be that bilingual children from bilingual communities assume that most interlocutors can speak both languages. In a predominantly bilingual community, the language spoken by an individual in a given situation may not provide an informative cue to group membership. However, in a monolingual community, interlocutors might be presumed to be monolingual unless they demonstrate otherwise. This explanation yields interesting predictions for future studies that could test bilinguals raised in a predominantly monolingual community. As opposed to the bilingual children in our current study, these children might be more likely to show a preference for bilingual speakers over monolingual speakers. Another interesting direction for future research would be to compare bilingual children's preferences for bilingual speakers who speak one of the children's languages as well as a foreign language. This approach could assess whether, like monolinguals, bilingual children also avoid individuals who show membership in an out-group.

Another important but unanticipated result was that bilinguals did not show an overall preference for monolingual speakers of their dominant versus non-dominant language. Bilingual children's choices for dominant versus non-dominant speakers were mediated to some degree by their degree of bilingualism, but in an unexpected way. While we predicted that children would prefer a speaker of their dominant language, our results were in the opposite direction. Children with the most balanced exposure to their two languages had the strongest preferences for speakers of their dominant language, as compared to children who had greater dominance in one language over the other.

There are several possible interpretations of these findings. For instance, bilinguals' friendship choices might not solely reflect their social evaluations, but could also be influenced by children's own language learning goals. Because unbalanced bilinguals are likely in the process of building their proficiency in their

weaker language, they might be oriented towards speakers of their non-dominant language in a way that the more balanced bilinguals are not. That is, in the context of selection of a play partner, children might seek out those who challenge their current abilities within the zone of proximal development (Vygotsky, 1967). Another possibility is that the relationship that we observed between language dominance and preference for the non-dominant speaker was mediated by additional variables that we did not measure. For example, while we assessed children's overall exposure to each of their languages, our language background measure did not assess the types of speakers who provided this exposure (e.g. how much each bilingual child was exposed to monolingual versus bilingual speakers, the status of different language speakers in the child's life). Future studies should explore additional environmental variables that might better account for bilingual children's individual patterns of social preference.

A complementary interpretation of our results is that children prefer those speakers who are more intelligible. While we did not directly measure children's understanding of the sentences used in our study, it is likely that the bilinguals understood both languages and thus showed no overall preference, but that the monolinguals had limited or no understanding of sentences uttered in their non-dominant language and thus preferred monolinguals and native language speakers. Yet, previous research has shown that even when listening to nonsense speech, monolingual children selectively trust native over foreign accented speakers (Kinzler *et al.*, 2011). This suggests that intelligibility alone cannot account for language-based preferences. Nevertheless, more research will be needed to understand how group membership and intelligibility interact, particularly in bilingual contexts.

A final important consideration is that, although both French and English are widely spoken in Montréal, children's families likely vary considerably as to how these two languages are regarded. Research with adults in Montréal has shown that attitudes towards French and English speakers are affected by ongoing political and cultural trends. Montréal adults' evaluations of English and French speakers depend on the language background of the speaker and the listener, as well as what characteristics of the speaker are being evaluated (Genesee & Holobow, 1989; Kircher, 2014; Lambert, Hodgson, Gardner & Fillenbaum, 1960). A number of studies have demonstrated that children are sensitive to the perceived or actual social status of spoken languages and accents when making social judgments (Day, 1980; Kinzler, Shutts & Spelke, 2012; Rosenthal, 1974; Stevens & Behrend, 2014). It could be that bilingual children are more sophisticated than monolinguals in their understanding of Montréal's complicated landscape of language attitudes. Further, bilingual children's exposure to such attitudes might also vary more widely than monolingual children's. This could account for their less clear-cut patterns of responding in the current study. While friendship choice tasks are highly revealing of monolingual children's language attitudes, it could be that more nuanced tasks are needed to fully understand bilingual children's language preferences.

Beyond their theoretical importance for understanding the nature of early social preferences, the current results also have practical implications for bilingual children's social motivations to speak each of their languages. Our previous results showed that both monolingual and bilingual children prefer unaccented speakers (Souza *et al.*, 2013), suggesting that children who speak with an accent might be less strongly accepted by their peers than children who speak without an accent. The current findings suggest that even when they achieve a high level of proficiency in the majority language, bilingual children risk social exclusion if monolingual peers hear them speaking a second language. Conversely, bilingual children are likely to accept others whether they speak one or both of the community languages. Peers' early social preferences could, in part, explain why bilingual children are more likely to maintain both of their languages when raised in bilingual communities rather than in monolingual communities (Pearson, 2008).

In sum, the current studies are among the first to assess language-based preferences among both monolingual and bilingual children, and are the first to investigate children's evaluations of bilingual speakers. Monolingual children's preferences are fairly straightforward: they prefer monolingual speakers of their own language. In contrast, bilingual children's preferences are more nuanced, and appear to be heavily influenced by individual factors. When combined with other recent research on children's language and accent-based preferences in multilingual and/or multicultural contexts (Kinzler *et al.*, 2011; Souza *et al.*, 2013), this research shows that children's language-based social preferences do not solely reflect an in-group bias, but rather that these preferences result from a complex interaction of variables that also include avoidance of out-group members, the child's exposure to the two languages, and the status of the specific languages being assessed. A native language or native accent bias may only emerge if it is supported by the sociocultural context in which such languages are learned and encountered. Understanding the operation of these early social preferences has important implications for peer acceptance of children from diverse language backgrounds.

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