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The development of accent-based friendship preferences: Age and language exposure matter

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Abstract

Previous research has shown that children exhibit strong, language-based social biases, preferring speakers of their locally dominant accent over foreign language or foreign-accented speakers. Even when regularly exposed to multiple languages or to speakers with non-local accents, elementary school-aged children nevertheless display strong language biases, preferring to be friends with native speakers over non-native speakers. The present study revisited this issue, examining whether routine exposure to additional languages and/or non-local accents influences language-based friend preferences. Three- to 5-year-old children (N = 183) growing up in a large, multicultural, North American City with at least 70% English exposure were presented with pairs of children—one speaking native-accented English and the other speaking foreign-accented English—and were asked to choose whom they wanted to be friends with. While accent exposure was not found to predict children's preference, there *was* a significant effect of language exposure, such that greater experience with multiple languages reduced biases for native-accented speakers.

Keywords: language attitudes, friend preference, developmental sociolinguistics

Introduction

Starting from infancy, children exhibit early preferences for speakers of their native language (i.e., the locally dominant language/accent). Five- to 7-month-olds, for example, prefer to look more at native speakers compared to foreign language speakers, or speakers with foreign accents (Kinzler, Dupoux, & Spelke, 2007), and will listen longer to songs introduced to them by native compared to non-native speakers (Soley & Sebastián-Gallés, 2015). By 11-months, children will imitate native speakers more than non-native speakers (Buttelmann, Zmyj, Daum, & Carpenter, 2013; de Klerk, Bulgarelli, Hamilton, & Southgate, 2018; Howard, Henderson, Carrazza, & Woodward, 2015) and preferentially reach for toys offered to them by native speakers (Kinzler et al., 2007); by 12-months, they prefer to try new foods endorsed by native speakers over non-native speakers (Shutts, Kinzler, McKee, & Spelke 2009).

This preference for native speakers persists in older children, who prefer to be friends with native over non-native or foreign-accented speakers (Kinzler et al., 2007; Kinzler, Shutts, DeJesus, & Spelke, 2009). In addition, children exhibit greater trust for native over non-native speakers, relying more on native speakers to learn the labels for novel objects (Corriveau, Kinzler, & Harris, 2013), and how to use them (Kinzler, Corriveau, & Harris, 2011). Later in childhood, this tendency to positively evaluate native speakers is often accompanied by a converse tendency to *negatively* evaluate speakers of non-dominant language varieties (Kinzler & DeJesus, 2013b). For example, 7- to 11-year-old children—while equally likely to attribute positive behavior to native and non-native speakers (e.g., sharing toys)—attribute negative moral behavior (e.g., stealing somebody's cookie) more to foreign language speakers compared to native speakers (Liberman, Howard, Vasquez, & Woodward, 2018).

Recent work has explored whether this strong bias to prefer speakers of the locally dominant language variety is attenuated through regular exposure to speakers of other languages or non-local accents, the idea being that increased contact with out-group members leads to greater tolerance and acceptance, and therefore, less bias. To explore this possibility, studies have often employed the friendship preference task, presenting children with two speakers—a native speaker and foreign language or foreign-accented speaker—and asking them whom they prefer to be friends with. In studies with bilingual children, who are routinely exposed to multiple languages, children are nevertheless more likely to show preferences for speakers of familiar over unfamiliar languages, as well as for native-accented over foreign-accented speakers, just like their monolingual counterparts (DeJesus, Hwang, Dautel, & Kinzler, 2017; Souza, Byers-Heinlein, & Poulin-Dubois, 2013). Similarly, monolingual English-speaking children with regular exposure to non-local English accents also do not exhibit less bias for locally-accented speakers than monolingual children with limited exposure to other accents (Paquette-Smith, Buckler, White, Choi, & Johnson, 2019). In fact, one study

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has found the opposite effect, namely, greater preferences for locally-accented individuals in children raised in communities with multiple co-existing accent varieties compared to children from communities with a single dominant accent (Cohen & Haun, 2013).

The present study revisited the question of whether exposure to multiple languages and/or accents influences friend preferences, testing a group of 183, English-dominant children raised in a large, multicultural North American city (Toronto). Unlike Paquette-Smith et al. (2019), which looked only at accent and not language exposure (recruiting children who were exposed to English at least 90% of the time), in the current study, we instituted a lower threshold of 70% exposure to English in order to be able to examine effects of both accent *and* language exposure on friend preferences.

In addition to using a lower threshold, we additionally tested a broader and slightly younger age range (3;9 to 5;2) than most friendship preference studies, which have typically tested children above five years of age (Cohen & Haun, 2013; DeJesus et al., 2017; Kinzler et al., 2007; Kinzler et al., 2009; Kinzler, Shutts, & Spelke, 2012; Paquette-Smith et al., 2019, Souza et al., 2013; but see Arrendondo & Gelman, 2019 and Byers-Heinlein, Behrend, Said, Girgis, & Poulin-Dubois, 2016 for samples including 4-year-olds). This was done in order to better probe the developmental trajectory of language-based social preferences in children. In previous research, children 5 to 6 years of age and older tend to show robust preferences for ingroup members, both with respect to culturally salient categories such as language (Kinzler et al., 2007) and gender (Martin, Fabes, Evans, & Wyman, 1999), as well as more arbitrary categories (e.g., blue/yellow team; Bigler, Jones, & Lobliner, 1997); however, studies with slightly younger children (3- to 4-years-old) have produced more mixed results (e.g., Dunham & Emory, 2014). For example, while older children (7- to 11-years-old) are more likely to attribute positive behavior with ingroup members and negative behavior with out-group members, younger (3- to 5-year-old) children attribute positive and negative behavior equally to in- and out-group members, exhibiting less in-group biases than their older counterparts (Liberman et al., 2018; see also Dunham, Baron, & Carey, 2011).In this vein, we predicted that younger children in our study might exhibit less in-group biases.

As in previous friend preference studies, children saw pairs of child images on a computer screen, one speaking with a native accent and the other speaking English with a Korean accent, and were asked to choose which one they wanted to be friends with. Of interest was whether children's age, as well as their routine exposure to multiple accents and/or languages influenced their preferences for the native speaker. We also tested children on the Structured Photographic Expressive Language Test (SPELT-3), a standardized test designed to measure children's morphosyntactic knowledge (Dawson, Stout, & Eyer, 2003), in order to see whether children with different degrees of exposure to English displayed different levels of linguistic abilities, which could potentially impact children's behavior in the friend preference task.

Experiment

Method

Participants A total of 210 children, who were exposed to English at least 70% of the time, were recruited from a large, multicultural North American city using a university database of families who previously signed up to be contacted for potential studies. Twenty-three participants were excluded because they did not want to complete the task (7), were undergoing speech therapy (1), or exhibited a side bias, selecting only speakers on the left or right side of the screen (15). Three additional participants were excluded because of technical difficulties, leaving 183 participants (M = 52.48 months; range: 45 – 62; 95 females) for the analysis.

Materials The stimuli used in the experiment, adopted from Experiment 2 of Paquette-Smith et al. (2019), consisted of 16 still images of Caucasian children (to hold race constant) presented in pairs on 8 displays (4 female, 4 male). Each pair of images in the displays, placed side-by-side on a white background, was accompanied by a pair of voices, one speaking Canadian-accented English and the other speaking Korean-accented English. Two versions of each display were created, with the native- and Korean-accented voices associated with either the left or the right image, resulting in 16 videos total. To indicate which voice was associated with which image, each image in turn (starting with the left) became highlighted with a green box and proceeded to zoom in and out for the duration of a particular voice recording (either Canadian- or Korean-accented).

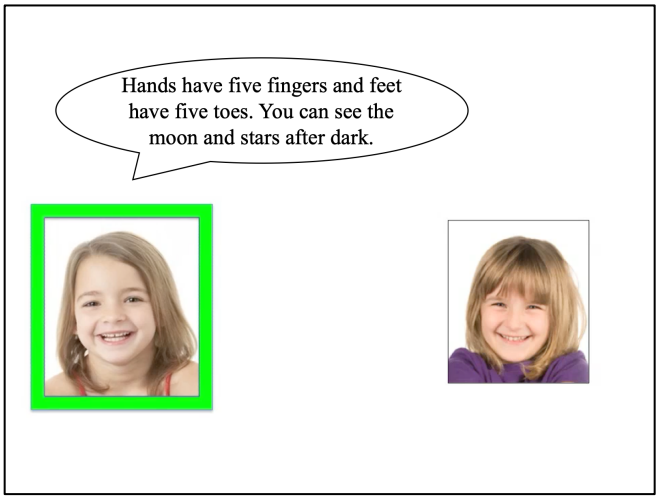

Figure 1: An example test trial, with a green box over the left image, indicating that she is speaking. Speech bubbles were not present in the actual presentation of trials.

The audio stimuli, consisting of eight neutral sentences 10 syllables in length (e.g., *There are 3 meals: Breakfast, lunch*

and dinner) were recorded by 8 children between the ages of 5 and 9—four native English speakers who grew up in the neighboring area and spoke with the local accent, and four Korean children who were learning English in school (two females and two males in each group). Children were instructed to repeat each sentence after their parents until they could produce it without lengthy pauses or disfluencies.

Procedure Children were seated at a small table in a large, sound attenuated booth while their parents watched from outside on a live video feed. A Windows Surface Pro tablet, positioned flat on the table in front of the child, was used to present experimental stimuli and was controlled (via a presentation clicker) by a native English-speaking experimenter who sat next to participants on the floor.

Altogether children completed eight experimental trials (4 male, 4 female). At the start of each trial, still images of two children appeared on the tablet screen, and the experimenter said, "Here are two kids – let's hear what they sound like." Children then proceeded to hear the voice of the child on the left produce two neutral sentences, followed by the same neutral sentences from child on the right. After hearing both speakers, the experimenter asked, "Which one would you like to be friends with?" Children indicated their response by touching the image of the child they preferred on the touch screen.

In half of the trials, the voice on the left was Canadian-accented, and for the other half, the voice on the right. For each pair of child images, whether the voice on the left was Canadian-accented or Korean-accented was counterbalanced between participants.

Following the friend preference task, children's linguistic abilities were assessed on the Structured Photographic Expressive Language Test (SPELT-3), In this test, children were presented with images and asked questions about them in order to elicit their morphological and syntactic knowledge (e.g., use of pronouns, negation, modals, etc.). Children's responses were video recorded for subsequent coding.

Finally, parents completed a language questionnaire, indicating the percentage of time their child hears English as well as the extent to which their child is exposed to accented English (i.e., accents other than the locally dominant accent of English), ranging on a scale from 1 (almost always hearing the locally dominant accent) to 7 (almost always hearing other accents).

Results

A mixed-effects repeated logistic regression model, constructed with the lme4 package in R (Bates, Maechler, Bolker, & Walker, 2015), was used to predict children's friend preferences (i.e., their likelihood of selecting the native-accented speaker). Age (centered at the mean), Percent English Exposure (centered at 85%), and Accent Exposure (centered at 4, i.e., 50%) were included as fixed effects, along with random intercepts for Subject and Item. Interactions between the fixed factors were not significant in the output, $\chi^2(4) = 1.70$, $p = .79$, and were therefore dropped from the model). One worry was that English Exposure and Accent Exposure might be highly correlated, leading to issues with collinearity, but tests indicated that multicollinearity was not a concern (Age, *VIF* = 1.04, Percent English, *VIF* = 1.08, and Accent Exposure, *VIF* = 1.04). The results of the model are presented in Table 1.

Consistent with previous literature, children overall exhibited a bias for native-accented speakers, selecting the native-accented child in 73% of trials. This was significantly greater than chance, as suggested by the significant intercept term ($\beta = 1.03$, $SE = 0.12$, $z = 8.48$, $p < .001$), showing overall a greater likelihood of selecting Canadian-accented speakers than Korean-accented speakers.

Table 1: Log odds of selecting native-accented speakers as friends

Predictor	Estimate	*SE*	*z*	*p*
Intercept	1.03	0.12	8.49	< .001
Age	0.06	0.02	3.18	.001
English Exposure	0.02	0.01	2.43	0.02
Accent Exposure	0.05	0.05	0.91	0.36

```
glmer(Native ~ Age + EngExposure + AccExposure + (1 | Subject) + (1 | Item), family = "binomial", data = data)
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The model additionally revealed a main effect of Age ($\beta = 0.06$, $SE = 0.02$, $z = 3.18$, $p = .001$), with older children more likely to select native-speakers than non-native speakers, as shown in Figure 2. We return to this in the discussion.

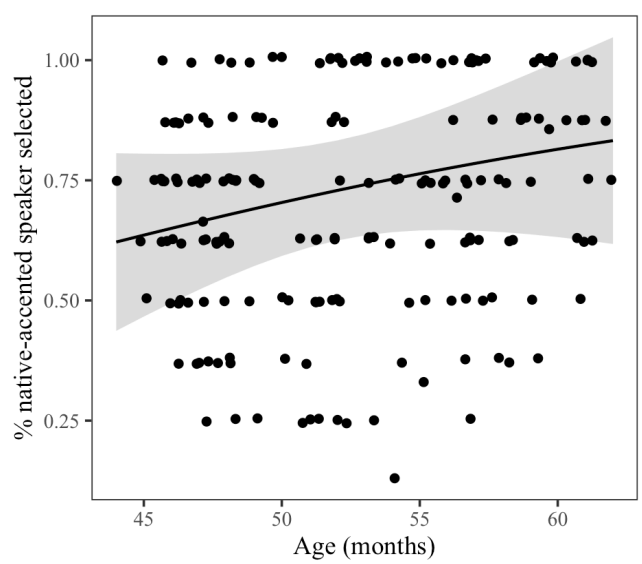

Figure 2: The percentage of trials children selected the native-accented child by age.

Interestingly, there was also a significant main effect of English Exposure ($\beta = 0.02$, $SE = 0.01$, $z = 2.43$, $p = .02$), whereby children with greater exposure to English were more likely to select the native-accented speaker over the foreign-accented speaker, as depicted in Figure 3.

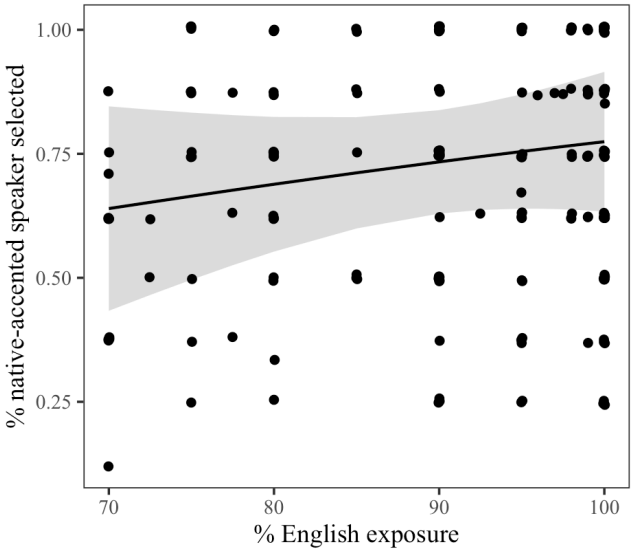

Figure 3: The percentage of trials children selected the native-accented child by percentage of exposure to English.

Unlike previous literature, which has found no differences in friend preferences between children with limited exposure to other languages and child with regular exposure to multiple languages (DeJesus et al., 2017; Souza et al., 2013), this study provides evidence that exposure to additional languages *does indeed* decrease biases for native speakers, even when controlling for exposure to non-local accents, which was not found to uniquely predict children's friend selection behavior ($\beta = 0.05$, $SE = 0.05$, $z = 0.91$, $p = 0.36$) above and beyond English Exposure.

We were additionally interested in the extent to which parental reports of language and accent exposure correlated with children's linguistic abilities, specifically their morphosyntactic knowledge of English, as measured with SPELT-3. To test this, a linear regression model was used to predict raw SPELT-3 scores, with mean centered Age, mean percent Exposure to English, and centered Accent Exposure included as fixed effects. This model produced a significant effect of Age ($\beta = 0.39$, $SE = 0.08$, $t = 5.07$, $p < .001$), with older children scoring higher on SPELT-3 than younger children, as well as a significant effect of English Exposure ($\beta = 0.14$, $SE = 0.04$, $t = 3.67$, $p < .001$), in which children with greater exposure to English scored higher on SPELT-3 than children with less exposure to English, as shown in Figure 4. As with children's preferences for native speakers, exposure to non-local accents did not predict children's SPELT-3 scores ($\beta = -0.35$, $SE = 0.22$, $t = -1.57$, $p = .12$).

Thus, younger children, and children with less exposure to English, exhibited less morphosyntactic knowledge, as measured by SPELT-3. This raises the possibility, discussed in greater detail in the discussion, that the decrease in biases observed in children with less exposure to English might have less to do with becoming more tolerant of different varieties as a function of increased variability in language input, and more to do with differences in individual linguistic abilities (e.g., ability to discriminate between accents, understand the utterances, etc.).

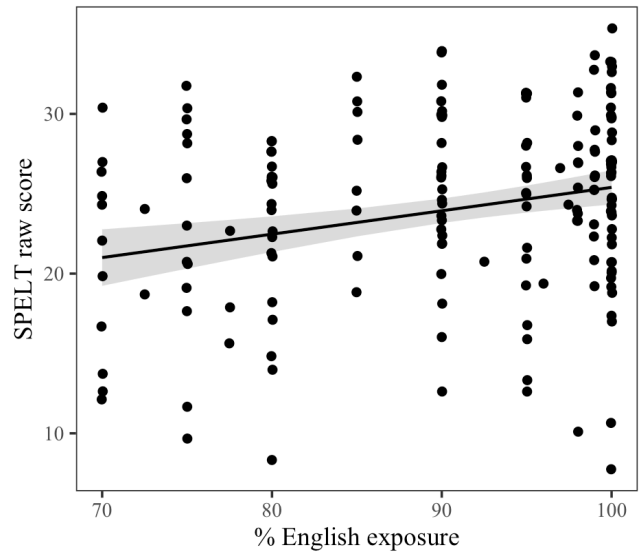

Figure 4: The relationship between parental reports of English exposure and children's linguistic abilities, as measured by SPELT-3.

Discussion

Previous research has found that children prefer native speakers over non-native speakers; when choosing between a native speaker or a foreign language/foreign-accented speaker, children will tend to select native speakers when asked whom they want to be friends with (e.g., Kinzler et al., 2007). Even bilingual children, and children regularly exposed to non-local accents—who might be expected to exhibit less of a bias for native-accented speech—have similarly been found to prefer native-accented speakers over foreign-accented speakers to the same extent as children who are not exposed to different language varieties (DeJesus et al., 2017; Paquette-Smith et al., 2019; Souza et al., 2013). In the present study, we revisited this issue, testing whether exposure to other languages and/or accents influence children's friendship preferences.

Overall, children were significantly more likely to prefer native-accented speakers over foreign-accented speakers, replicating previous studies demonstrating a strong bias for the locally dominant or prestigious accent (e.g., Arredondo & Gelman, 2019; Day, 1980; Kinzler et al., 2007; Kinzler et al., 2012). Even when living in a multicultural city, with exposure to different language varieties, children nevertheless exhibited strong preferences for the locally dominant/prestigious language variety.

In addition, the study revealed a significant effect of age, not present in previous studies which have tended to focus on older children in narrower age ranges. Specifically, older children were increasingly more likely to favor native over non-native speakers, in line with previous literature showing that younger, 3- to 4-year-old children often fail in

experiments to exhibit in-group biases on some tasks in comparison to their elementary school-aged counterparts (e.g., Dunham & Emory, 2014; Kenward & Dahl, 2011; Liberman et al., 2018). In other words, as children age, in-group preferences often become more pronounced, as evidenced in the present study, with higher selections of native speakers for older children compared to younger children.

Finally, unlike previous studies, which found no effect of accent or language exposure on children's friend preferences, in the current study, children who were exposed to other languages (but not children exposed to non-local accents) were significantly less likely to prefer native-accented speakers compared to children almost exclusively exposed to English.

It is unclear why children who are exposed to other languages less likely to prefer native-accented speakers as friends. One possibility is that experience with other languages (esp. positive experience) might cause children to be more tolerant of speakers of other language varieties, making them more or less likely to exclusively prefer native speakers over non-native speakers. Indeed, when exposed to nice foreigners (compared to relatively meaner native speakers), children's preferences have been shown to reverse in favor of foreign-accented speakers, suggesting that positive experiences with speakers of other varieties can mitigate or change biases for members of certain social categories (Kinzler & DeJesus, 2013a).

The fact that this effect appears through exposure to multiple languages and not through exposure to multiple accents is puzzling, however, especially since all the stimuli were presented to participants in English. This could suggest a possible role of linguistic ability in children's friend preferences. Children getting less overall exposure to English are not as skilled in English as children who are almost exclusively exposed to English, as indicated by the correlation between SPELT-3 scores and English Exposure. As a result, children with less exposure to English might process accented speech differently than children with greater exposure to English. For example, they may focus more resources on processing the linguistic content, and pay less attention to differences in accent. Or they may simply not have developed the same level of sociolinguistic awareness as their more monolingual peers, being less cognizant of the social prestige of English in the community and the social costs associated with endorsing speakers of other accents.

Another possibility is that children with less English exposure might find it more difficult to distinguish between the two types of accents in the experiment, leading to slightly lower preferences for native speakers. Indeed, at least with regards to regional dialects, children sometimes have difficulty discriminating between different language varieties (e.g., Girard, Floccia, & Goslin, 2008; but see Butler, Floccia, Goslin, & Panneton, 20011 and Nazzi, Jusczyk, & Johnson, 2000 showing that infants can distinguish between accents). However, given the distinctiveness of the Korean-accented sentences used in the experiment (see Experiment 3 of Paquette-Smith et al., 2019), and the fact that younger children still exhibited biases for the native-accented speakers, we doubt that children were unable to detect differences between the two types of speakers

The influence of linguistic ability might also help to explain the effect of age that was observed in the data: Younger children, who exhibited less linguistic competency than older children, as demonstrated by their lower SPELT-3 scores, also exhibited less of a preference for native-accented speakers. In other words, in the same way that children with less exposure to English exhibited lower linguistic competency (and decreased bias), so too do younger children, who have also been exposed to less English than older children, all things being equal.

This is not to say that language ability is the only or strongest factor influencing children's language-based friendship preferences. Previous research has shown that the particular sociocultural context that a child is raised in impacts their evaluations of other children's speech. For example, in one study, Xhosa speakers in South Africa were particularly likely to prefer English speakers over Xhosa speakers if they were primarily instructed in English in school, presumably because they were more sensitive to the social prestige of English (Kinzler et al., 2012). Similarly, Hawaiian kindergarteners living in high SES neighborhoods have been found to prefer standard English speakers, whereas children in lower SES neighborhoods preferred Hawaiian Creole speakers; this difference was arguably due to how each variety is valued in each respective community (Day, 1980.

These kinds of local, sociocultural phenomena might help to explain why this study observed an effect of language exposure on friendship preferences, while other studies have not (DeJesus et al., 2017; Souza et al., 2013). In previous studies, the additional language that children were being exposed to commanded a similar if not equal level of prestige to that of English within their respective communities, being recognized and taught institutionally and, in the case of Souza et al. (2013), societally. The children in our study, however, were growing up in a highly English dominant community, where their second language received minimal institutional backing. In this type of context, being exposed to a minority language may lead to more tolerance of other ways of speaking compared to contexts where a second language also enjoys relatively high prestige.

In conclusion, this is the first study we are aware of that observed an influence of language exposure on children's preferences for native-accent speech over foreign-accented speech. Unlike previous studies, we investigated both the influence of exposure to non-local accents and other languages in the same study with a larger than usual sample size (183 vs. around 40 in other studies). The reason(s) why exposure to other languages (and not accents) decreases biases for native-accented speakers still remain unclear. Although differences in English abilities resulting from less exposure to English might play an important role in determining children's preference behavior, future research

is needed to uncover the exact role language ability might play. Given the amount of unaccounted variability in children's preferences, more work needs to be done to understand what other factors might be at work in influencing children's friendship preferences.

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