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Children's Willingness to Accept Labels in Two Languages:

The Role of Exposure

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Children's Willingness to Accept Labels in Two Languages:
The Role of Exposure

by

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Thesis

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Abstract

Children's Willingness to Accept Labels in Two Languages:

The Role of Exposure

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Despite the increasing number of bilingual education programs in the US, the topic of children's willingness to accept and learn new vocabulary from non-native speakers has been understudied. The present study focuses on the role of exposure to a non-English language, by investigating how varying amounts and sources of exposure play a role in children's openness to accepting labels in Spanish. Ninety-eight 4- to 6-year old participants of varying language backgrounds were presented with novel object labels in Spanish and English, and were asked to endorse either or both labels. Children with large amounts of exposure to, but not fluent in, Spanish were more likely than minimally exposed monolingual children to endorse both the English and Spanish label, and importantly, did not differ from bilingual children. Monolingual children with minimal exposure to Spanish were the least likely of these three groups to endorse non-native labels. Language Awareness is also considered as a factor that may contribute to children's willingness to endorse native and non-native labels.

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Chapter 1: Introduction

Bilingual education programs are becoming increasingly popular in states like California and Texas. In the Austin, Texas Independent School District alone, 16 public schools currently offer dual-language enrollment, whereas only 6 years ago, no school in this district did. Dual Immersion education programs are meant to serve as an additive approach to bilingual education, in that children can retain their heritage language skills while acquiring English. Originally, these programs were intended to serve 'limited English proficient' children (Orr, 2011). Increasingly, however, these programs are enabling monolingual English-speaking children to learn a second language.

One of the reasons for the increased interest in dual-language programs is a change in perspective on bilingualism. Although acquiring two languages as a young child was once considered a disadvantage and a potential deterrent to developing language proficiently (Fernandez, 2006), recent research has shown that there are cognitive advantages to being bilingual. Evidence has been found for cognitive flexibility not only in the context of language (e.g., the ability to distinguish sentences that are grammatically correct but semantically incorrect; Bialytok, 2001) but also in other domains. There is an advantage in tasks that assess executive function (e.g., switching between tasks or inhibiting undesired responses; Bialystok, 1999; Bialystok & Feng, 2009) as well as a delay in the onset of diseases like dementia and Alzheimer's in adults who are bilingual when compared to their monolingual counterparts (Bialystok, Poarch, Luo, & Craik, 2014; Craik, Bialystok, & Freedman, 2010).

Given the increase in young children's enrollment in dual-language programs, it could be valuable to investigate children's cognitive process when hearing a non-native language. This has been largely understudied. In particular, little research has focused on children's willingness to accept words from non-native speakers. Furthermore, the process that occurs when monolingual

children encounter a non-native speaker is likely very different than that of bilingual children, and this has been understudied as well.

Hearing a Non-native Speaker

The experience of learning from a non-native speaker, as in these dual-language programs, may be very different for English-speaking children than for bilingual children. Kinzler and colleagues have argued that language can serve as a social marker; therefore, children showing a preference for native-language speakers do so as reflection of ingroup preference (Kinzler, Dupoux, & Spelke, 2007). This is seen when one attributes positive characteristics to other members of one's own group (Aboud, 2003). There is the possibility that monolingual children will express an ingroup bias when presented with an English speaker as well as a speaker of a non-native language (because these children are members of the English-speaking group). With bilingual children, however, there is the possibility of having two ingroups. Spanish-English bilingual children, for example, may not express a preference for either a Spanish or English speaker, but have equal preference for both speakers because the speakers are both representative of their two social groups.

Results of studies with adults suggest that listeners attribute positive traits (e.g., likeableness, higher socioeconomic status) to speakers of their own linguistic community (e.g., Lambert, Anisfield, & Yeni-Komshian, 1965; Labov, 2006). Kinzler, Shutts, DeJesus, & Spelke (2009) have demonstrated similar findings with children: when presented with photographs and voice recordings of novel children, preschool-aged children elected to be friends with speakers of their native language rather than non-native-language or non-native-accented speakers.

A related possibility is that children may affiliate language with social status. Examples of the potential affiliation of social status and language are not new. In the case of Lambert, Hodgson, Gardner, & Fillenbaum (1960), both English- and French-speaking adult participants rated English speakers as

having more positive physical and character traits than French speakers (e.g., good looks, height, sense of humor, leadership, intelligence). It is possible that, regardless of participant's native language, English-speakers were considered to have higher status than French-speakers, and were thus viewed as being more deserving of positive qualities.

In line with this, Kinzler and colleagues (2012) have investigated the possibility that children associate language –in this case English – with greater social status when pitted against other languages. In a study conducted in South Africa, where English speakers often hold higher positions in politics and education, South African children appeared to regard English with higher status and often preferred speakers of English to speakers of two tribal languages, including their native language.

Bilingual children may show status-related biases such as those observed by Kinzler et al. (2012). With the knowledge that more successful persons of the community speak English, bilingual children may express biases towards English. Thus, they might prefer to learn new words in English when also given the option to learn new words in other languages.

In the case of bilingual children, a more socially-motivated process may also occur. In Texas specifically, roughly one-third of children 5 years and older speak a language other than English at home—the most common of which is Spanish (U.S. Census Bureau, 2007). Some of these children are from immigrant families, in which there are often social stigmas in association with their bilingual skills. English-dominant Hispanic peers see Spanish-dominant students as poorly immersed, uneducated, and/or backward (Matute-Bianchi, 1991). Ironically, English-dominant students are viewed negatively for being "White-washed," or as traitors of their heritage (Block, 2011). Many bilingual children also report feeling less intelligent, less friendly, and less self-confident in their second language (Marcos, Eisma, & Guimon, 1977). These social experiences are an important factor to consider when presenting children with the option of

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accepting labels in various languages, as the current study will. Bilingual children may be less motivated to endorse a Spanish label if they associate the language with negative experiences, and may also feel conflicted if they have had negative experiences when speaking in English.

Vocabulary size may be another factor affecting monolingual children's willingness to accept labels from a non-native speaker. Koenig & Woodward (2012) suggest that vocabulary growth in one's native language may "accelerate or promote word learning in a foreign language" (p. 332). In their study, English-speaking toddlers were most willing to endorse Dutch labels when their native vocabulary was high, when compared to their low-vocabulary counterparts. These findings suggest that proficiency with just one language increases children's openness to different speakers and their willingness to accept two labels in different languages for a single object.

Another possibility is that bilingual children are more open than monolingual children to learn words in two languages. Past research suggests that bilingual children are more willing than monolingual children to accept two labels for a particular object, particularly if those labels are in two different languages (e.g., Davidson & Tell, 2005; Byers-Heinlein, Chen, & Xu, 2014). Monolingual children show *some* willingness to accept two labels for objects, but only in certain circumstances. In Au and Glusman (1990) and Bhagwat and Casasola (2012), monolingual children were willing to endorse English labels only when it was made explicitly clear that the label was in Spanish and when the speaker who provided it requested the label.

Being willing to accept labels from different languages could require that children first reflect on the fact that they are speakers of a language (or of more than one language).

Language Awareness

Alegre (2000) defined language awareness as "the ability to reflect on languages and to verbalize that reflection (p. 93; translated by Sá & Melo, 2007).

Bilingualism may be associated with language awareness, and language awareness could conceivably promote accepting labels of speakers of two languages. Consequently, it may be of value to explore children's language awareness.

Language awareness has been investigated with immigrant children whose heritage language is different from their host country (e.g., Martin, 2012; Melo-Pfeifer, 2015) by implementing drawings or 'visual' narratives. Krumm & Jenkins (2001), among the first to implement this method, presented elementary-aged children with empty silhouettes then asked them to complete the silhouettes with colors representing the languages that they know. Martin (2012) provided 10 and 14-year old children with the same instructions and a similar silhouette, but also first asked children about their language experiences (e.g., what languages they are learning, what languages they prefer, etc.), which in effect, primed these children to think about the languages they know and how they think about those languages.

Taking a slightly different approach, Melo-Pfeifer (2015) provided children with blank pages, and simply asked them to "draw [themselves] using the languages [they] know" (p. 202). Melo-Pfeifer then categorized the content of children's drawings based on the children's knowledge of the languages they speak, or how they identify as speakers of these languages.

In all of these drawing studies, children often selected particular colors or drew national flags to represent a language; some even included talk-bubbles or other people (e.g., their parent) to show from whom they learned that language. Although drawing tasks can be difficult to work with, they are gaining some interest as a method of assessing children's language awareness.

Considering Exposure as a Predictor

Past research has taken a dichotomous approach in comparing bilingual children and monolingual children when looking at label-learning. In many communities, however, particularly in Texas, many children who are not

bilingual nonetheless have substantial exposure to non-English languages. This raises the question of exposure effects on willingness to accept labels from different languages.

It is possible that, as a result of greater amount of exposure to a second language, children begin to appreciate that there can be 2 different labels across different languages for the same object. As a result, children with substantial amounts of exposure, despite not being fluent in a second language, may show greater willingness to accept labels from 2 different speakers than children with limited exposure to a non-native language.

Current Study

The proposed study will extend beyond past research by considering the variability of exposure as a predictor for children's label endorsements. In this study, I will assess the variability of monolingual English-speaking children's exposure to a non-English language and how this variability in exposure might affect children's openness towards labels provided by a non-English speaker. It will also explore the willingness of bilingual children to learn from speakers of both of the languages that they are proficient in.

In order to explore the possibility that language awareness may be a related component to the acceptance of 2 labels, the study has incorporated a drawing task, similar to that used by Martin (2012).

There are several potential outcomes when young children are presented with the option to endorse labels from English and non-English speakers. It is likely that monolingual children will comply with theories of ingroup biases, and that bilingual children will be more open to endorsing the labels in two different languages—particularly as the two speakers used in the current study will be speakers of both of their native languages. Language awareness also may be influenced by amount of exposure these topics.

Chapter 2: Methods

Methods Overview

For the current study, English-speaking children, ages 4-6 were recruited from the local Austin, Texas community. The following question was addressed: Does variation in language experience have an effect on children's openness to learning from Spanish speakers? Spanish and English were selected as the stimulus languages for this study because they are the most predominant in the local community. According to a 2011 U.S. Census Report, 29.21% of Texan residents 5 years or older speak Spanish as their preferred language at home, trailed by Vietnamese at 0.75%, Chinese at 0.56%, and even fewer for other languages (Ryan, 2013).

Children were grouped by the amount of exposure to Spanish; there was a Spanish-English bilingual group, as reported by parents, and two monolingual groups in which children were minimally exposed to Spanish, or more substantially exposed.

It is possible that a particular amount or source of experience with Spanish will co-vary with more openness to learning from a non-native speaker. Children's parents completed a questionnaire addressing the child's exposure to various languages, which was used as a source for identifying these children on a continuum of exposure and comparing exposure levels to willingness to adopt labels in a non-English language.

For the primary task, children watched a short video of two females introducing several objects in English and Spanish, including two novel items; children were asked to endorse either or both of the labels provided for each novel object. Children also completed a questionnaire consisting of queries about the child's experiences with non-native languages, preferences for languages, and self-reported attempts to speak non-English languages.

Children were additionally assessed on their receptive vocabulary skills, using the Peabody Picture Vocabulary Test (PPVT) and the Spanish version of

this, the Test de Vocabulario Peabody (TVIP). Finally, they completed a drawing activity similar to that of Martin (2012), as a measure of Language Awareness.

Participants

Sixty-eight English-speaking children participated in this study (36 female, 32 male). Two additional children were excluded for fussiness. Additionally, some children were excluded from individual analyses due to experimental error or missing data; these exclusions are described for each measure. Of these 68 children, 14 were assigned to the Bilingual category, 26 were assigned to Exposure-Plus, and 28 were Exposure-Minus; these categorizations will be described below.

Seventy-one percent of child participants were identified by their parents as White or European, 1% as American Indian or Alaska Native, 13% as Asian, and 15% as Mixed; 38% of these children were also identified as Hispanic.

Materials

Objects

Three familiar objects (a toy dinosaur, a toy train, and a baby doll) as well as two novel, abstract-looking objects were used. Familiar objects were selected so that their labels are cognates in Spanish and English. Cognates were used so that monolingual children understood that the Spanish speaker was labeling accurately. Novel object labels were constructed to be phonologically consistent with the pertinent language. English labels for familiar objects consisted of the following: *Train, Baby, Dinosaur*. Spanish labels for familiar objects consisted of the following: *Tren, Bebe, Dinosaurio*. English labels for novel objects consisted of the following: *Wibber, Rompet*. Spanish labels for novel objects consisted of the following: *Bufo, Chisa*

Video Stimulus

Two female speakers played the role of informants, labeling all objects. Speakers were Spanish-English bilingual undergraduate students at the University of Texas in Austin and were similar in age, appearance, and accent in

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both languages (Mexican-Spanish and American English). The video began with each speaker introducing herself as either Mary (English speaker) or Ana (Spanish speaker). Each informant consistently spoke one language throughout the experiment. Each actress played the role both of Mary and Ana; the actress playing each role was counterbalanced between participants. The order of language was also counterbalanced. Along with introducing her name, each informant listed several gender-neutral interests such as her favorite color, pass-time, and pet's name (e.g., "Hello my name is Mary. It's very nice to meet you! Let me tell you a little about myself. My favorite color is orange. When I have free time, I like to play soccer. At home, I have a pet rabbit named Snuggles").

After Mary and Ana introduced themselves, the researcher paused the video and informed the child that a word game would commence in which the two informants would teach the child new words. Each informant then took turns presenting the three familiar objects described above. In between the presentation of the Spanish label and the English label for each object, the researcher asked the child to recall the two labels. These recall responses were not analyzed, but were meant to establish the child's understanding of the task. After the three familiar objects were labeled, the first novel object was presented with the Spanish and English label (e.g., 'Chisa' and 'Rompet'). After both Ana and Mary presented the novel object labels, the researcher asked the child to endorse one or both of the labels. The same procedure occurred for the second novel object (labels 'Bufo' and 'Wibber'). A script for this video presentation in included in Appendix A.

Language Questionnaire for Child

This was a series of open-ended questions, designed specifically for the present study, regarding the child's experience with language(s) in the home and at school (if applicable). Other questions addressed potential favoritism between known languages, potential hesitancy to use one or more language in particular settings, whether children speak to peers in a non-English language, and also a

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question on children's knowledge of the term 'bilingual.' These questions were included to address exposure to non-English languages that the parents may not have been aware of, as well as to assess children's reflections about language. This questionnaire can be found in the Appendix B.

Peabody Picture Vocabulary Test (PPVT)

The PPVT-III (Version 3) with Form IIIA (Dunn & Dunn, 1997) is an age- and grade-based standardized vocabulary test (M=100, SD=15) for children ages 2 to adults 90+ years old, that assesses vocabulary in American English. It consists of slides with 4 line drawings per slide. A total of 228 words are available, becoming more difficult as the individual being tested progresses through the slides. Line drawings consist of an action (e.g., throwing a ball) or a particular object (e.g., a ball). The tester speaks the target word aloud (e.g., "throwing"), and the individual is asked to select (by pointing to) the accurate drawing for that spoken word. After 8 incorrect responses within a set of 12 slides, the test is terminated. This gives rise to a variable length of time per individual that is dependent on the individual's performance. The standardized PPVT score was used to assess children's receptive vocabulary in English.

Test de Vocabulario en Imágenes Peabody (TVIP)

This task is also published by the American Guidance Service (Dunn & Dunn, 1986) is very similar and is based on the PPVT-R (the second version of the PPVT) but is conducted in and assesses vocabulary in Mexican Spanish. Four line drawings per slide are presented and the participant was asked to indicate the correct one, just as in the PPVT. Scoring is also standardized, though this assessment contains fewer words (125 words) and is terminated when the individual has inaccurately identified 6 items within a set of 8. The standardized TVIP score was used to assess children's receptive vocabulary in Spanish.

Language Silhouette Activity

This is a black and white silhouette of a person, designed to assess language awareness. A female silhouette (longer hair and wearing a dress) was

given to female children and male (shorter hair and pants) to males. The current study implemented instructions very similar to those given in Martin (2012). Instructions were meant to be vague so that the children felt uninhibited in choosing what pattern(s) to draw with. Instructions were repeated twice at the beginning and, if the child asked questions while drawing, the same instructions were repeated – no further details were provided. This activity was not timed. After each child completed the drawing, the researcher asked 3 follow-up questions (listed in the procedure); these questions were included in order to assess the child's understanding of the purpose of the activity (and ability to follow instructions), and to gain a better understanding of the child's language awareness. The silhouette and follow-up questions may be found in Appendix C.

Language Background Questionnaire for Parent

In order to assess children's exposure to and knowledge of languages other than English, parents completed several tables and open-ended questions about the source and frequency of the languages their children hear. This measure was developed specifically for the present study. Parents were asked which languages the child is exposed to. For these languages, parents specified the number of hours per week that the child hears from the following sources: Parents, Babysitter, Peers, Teacher, and/or Extended Family Members. In addition, parents were asked to rate their child's proficiency in each of the languages to which they are exposed (i.e., knowing only a few words in that language, knowing several words and phrases, or knowing the language fluently).

Children with 3 or fewer hours per week of exposure to Spanish (from all sources combined) were categorized into the *Exposure-Minus* group. Children with more than 3 hours per week of exposure, but not fluent in Spanish, were categorized into the *Exposure-Plus* group. Children fluent in Spanish, and thus heavily exposed to a non-English language, were categorized into the *Bilingual*

group. These cut-offs were determined after conducting a pilot study, which will be described below.

Although the language of interest for this study was Spanish, at least 3 copies of this questionnaire were given to the parent to allow for the possibility that the child is exposed to as many as three languages. More copies were given upon request. The Language Background Questionnaire for Parents can be found in Appendix D.

Procedure

Most children were tested in a lab setting on the main UT Austin campus; others were tested in a small, quiet room at a participating preschool or daycare. For children participating in the lab setting, parents provided informed consent immediately before the experiment began, while childcare parents were sent study information and instructions and were asked to return the consent and questionnaire forms to the childcare facility.

At the time of testing, the researcher introduced him/herself and told the children the following:

"Alright (name of child), so you know how around the world people speak a little differently? They speak in different languages, right? You and I are speaking in English right now. I have two friends that we're going to meet on this video, one will be speaking in English, and the other one will be speaking in Spanish. Are you ready to meet them?"

The video was played as described above. Children were offered the opportunity to play segments of the video more than once if struggling to recall any of the labels. After the two speakers labeled one novel object, the researcher asked the child to endorse the label or labels provided:

"Okay (name of child), what do you think is the right name for this toy? Rompet? Chisa? Or are both names okay? Chisa? Rompet? Or are both names okay?"

Unlike previous studies that employ a similar paradigm in which children are asked to endorse only one of two or more labels, children in the current study were given three options: to endorse the label presented by (1) the English speaker, (2) the Spanish speaker, or (3) both speakers.

The researcher recorded all of the children's responses then administered the TVIP to bilingual children[1], following standard procedure for this assessment. The TVIP was introduced with

> "Now we are going to move on to a new word game. For this game, I'm going to say a word, and you have to point to the picture that you think that word is."

The assessment began with practice slides, in which the researcher spoke the target word aloud, children pointed to one of the four drawings on each training slide, and the researcher provided feedback. Children were encouraged to guess if they were unsure or hesitant. Once the children seemed to understand how to "play" with the TVIP, the remainder of the assessment was administered as described above. The researcher recorded all of the children's responses, terminated the assessment upon 6 errors within a section of 8 slides, and then transitioned to administering the PPVT using standard procedure for this assessment. The PPVT was introduced with "Great job! Now we are going to play another word game that is a lot like this one, but with English words."

Like in the TVIP, the assessment began with practice items in which the researcher spoke the target word aloud, children selected a drawing on one of the training slides, and the researcher provided feedback, making corrections when necessary. Once the children seemed to understand how to "play" with the PPVT, the remainder of the assessment was administered. Children were encouraged to guess if they were unsure or hesitant. The researcher recorded all

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[1] Initially, all children were assessed using the TVIP, however, almost all monolingual children failed to establish a basal set, and thus did not produce a standardized score. Therefore, the TVIP was used to assess bilingual children only.

of the children's responses then transitioned to administering the Language Silhouette Activity.

The transition to this activity began with

"Okay, now for our last game, we're going to color! After we are finished with coloring, you get to pick a little prize from our prize box. Here's what we're going to color, now let me tell you how to play. You have to pick one color for each language that you know, and then color this [point to silhouette] with what you chose. Got that? You pick one color for each language that you speak, and then color this [point to silhouette] with what you chose. "

Children colored the silhouette in whatever way that they chose. The researcher addressed any and all questions by repeating the instructions in the original form, and did not provide any more guidance than this. When the children completed coloring, the researcher confirmed that they were finished and asked the following questions:

1) Why did you color it this way?

2) Do you remember the rule for this activity? [The researcher repeated the rule as given at the beginning of the activity]

3) Do you feel like you followed the rule in your picture? How?

At the completion of this activity, children were thanked and given the opportunity to select a "thank you" gift from a prize box.

Hypotheses

In consideration of the previous research, as well as the results of the preliminary study (discussed below), these were my predictions:

Monolingual children with little exposure to non-English languages would more often endorse the English label. This could be explained based on the theory of ingroup bias or the fact that English is the familiar language for these children.

A second prediction was that Spanish-English bilingual children would more often endorse both the English and the Spanish label. This could be predicted by the literature suggesting that bilingual children are more open to multiple labels and the fact that these children are proficient with both languages of the study and may treat both speakers are representatives of children's ingroups.

A third prediction was that children with a substantial amount of exposure to a non-English language would express greater language awareness, as measured by the language silhouette task, than those with minimal amounts of exposure, which might attribute to their willingness to endorse the labels of both the Spanish and English speaker.

Chapter 3: Pilot Study

Methods

A pilot study was conducted in which 36 4- to 6-year old participants were assessed at the University of Texas at Austin, using methods generally similar to the proposed study but with earlier versions of the questionnaires and some procedural differences. Furthermore, children of all language backgrounds, including those proficient in a second language other than Spanish, were included.

In the pilot study, children were categorized based on qualitative descriptions rather than quantitative scores. Children with very minimal exposure to a non-English language (e.g., watching "Dora the Explorer" for a limited amount of time, or having an extended family member who spoke a non-English language during infrequent visits with the child) were placed into the Exposure-Minus group (n=14). Children with more substantial exposure from various sources but who were not bilingual qualified for the Exposure-Plus Group (n=15). Children fluent in more than one language were placed in the Bilingual group (n=7), 5 of these bilingual children were proficient in a second language that was not Spanish (i.e., Vietnamese, Italian, Mandarin, Swedish, French).

Results and Discussion

The pilot data suggest support for my predictions: Bilingual children tended to endorse both languages across the two trials more frequently than children in the minimal exposure group. Bilingual children endorsed both languages across the 2 trials 65.3% of the time, and Exposure-Minus children did so only 37% of the time. The Exposure-Plus children were also more likely to endorse both labels more frequently than the Exposure-Minus children, at 61.5% of the time. Notably, the Exposure-Plus children's percentage is very similar to that of the bilingual children (61.5% vs. 65.3%).

Additionally an analysis of the various sources of exposure showed that children exposed to non-English-speaking peers (as evidenced on the Language Background Questionnaires for Parents) more often endorsed both labels, X^2 (2, $N = 29$) = 3.95, $p < .05$, than children that were not exposed to these kinds of peers.

The pilot data suggest that not only are bilingual children willing to learn labels from speakers of two different languages, but that children with substantial exposure to a second language are equally willing to do so. This suggests that bilingualism, or substantial exposure to any second language, promotes a general inclination to learn from speakers of different languages. The main study continued to investigate this.

There were some limitations to the pilot study, which the main study rectified: The original way in which the Language Background Questionnaire for Parents was designed did not provide quantitative information about children's exposure to non-English language(s). This did not allow me to look at exposure as a continuum, or to consider the relative contributions of difference sources of exposure to children's performance. Also, this questionnaire was originally not formatted to be as comprehensive in addressing various sources of exposure to non-English languages (i.e., it did not include Extended Family, or a babysitter/nanny option). The pilot study did, however, provide insight about what can be anticipated upon recording more quantitative data from the Language Background Questionnaire for Parents.

Chapter 4: Results

Children's Willingness to Accept Both Labels

   The procedure for the main study was fundamentally the same as that of the pilot study; the only difference between the pilot study and the main study was a change in one novel label ('meep' to 'wibber' so that all novel labels had two syllables). Therefore, I have combined pilot data with the main study data in the analysis for this task. Ninety-eight children participated in this task, 41 children were of the Exposure-Minus category, 41 were in the Exposure-Plus category, and 16 were Spanish-English Bilingual. Children fluent in a second language other than Spanish (n=5) were excluded. One additional child was excluded due to fussiness.

   Coding of children's responses was as follows: children received a score of 2 if they endorsed both the English label and the Spanish label for the two novel objects, children received a score of 1 if they endorsed both the English label and the Spanish label for only one novel object, and children received a score of 0 if they endorsed neither of the two novel objects with the Spanish and English label (i.e., they selected either the Spanish or English label on both trials).

   In the case that children endorsed only a single label (either the Spanish label or the English label, but not both), the English label (i.e., *wibber* or *rompet*) was most frequently (73.3% of the time) the label of choice.

   A series of 2x3 Chi-squared tests were used to compare each of the three exposure categories; for each Chi-Squared test, the number of children who scored 0, 1, or 2, was compared across two exposure categories. Because each child's data was used in two comparisons, a p-value of .025 was used to correct for the multiple comparisons. With the correction, there was a marginally significant difference between Exposure-Minus and Exposure-Plus, $X^2(2, N = 82) = 7.27$, $p = .026$. The difference between Bilingual and Exposure-Minus approached significance, $X^2(2, N = 57) = 5.23$, $p = .072$. There was no statistical

difference between Bilingual and Exposure-Plus, $X^2(2, N = 57) = 1.07$, $p = 0.59$. A graph of the percentages of each score type (across conditions) can be seen in Figure 1.
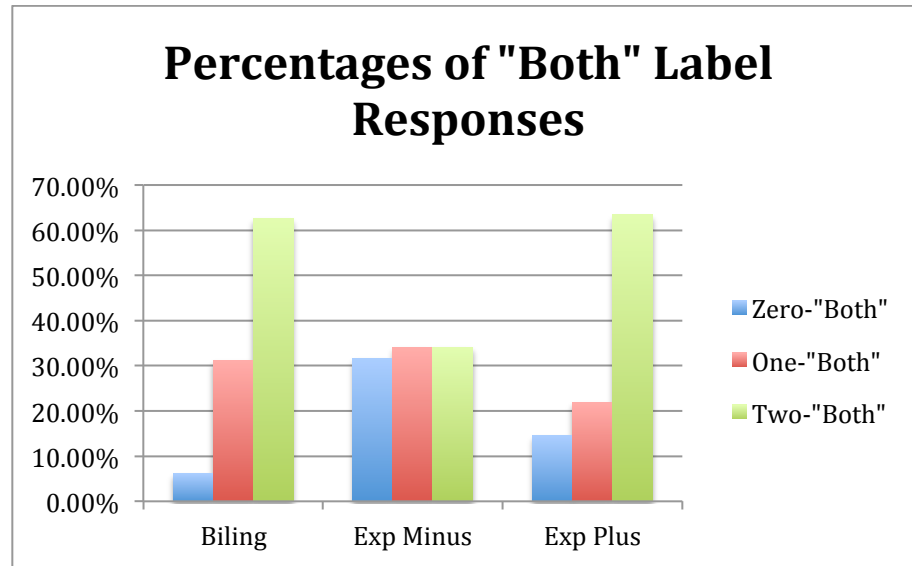

Figure 1: Two-"Both" refers to the proportion of children who endorsed both the Spanish and English labels across the two trials. One-"Both" refers to the proportion children who endorsed both languages in only one of the two trials, and Zero-"Both" refers to the proportion children who in neither trial endorsed both the Spanish and English labels.

A multinomial logistic regression was implemented in order to assess whether an age effect occurred on this task. Children were grouped by year (i.e., 4-year old vs. 5-year old vs. 6-year old). No developmental effect was found.

Assessing Different Sources of Exposure

All 68 participating parents completed the Language Background Questionnaire; none were excluded for this task. On the Language Background Questionnaire, parents reported the number of hours per week that their children were exposed to non-English languages from various sources. Some parents did not complete this form with hours per week but, rather, they entered the number of hours per day that the child heard non-English languages. In this case, I considered typical lifestyles (i.e., I assumed parents work only 5 days per

week, that children attend school only 5 days per week, and that if children are hearing Spanish from an extended family member on a daily basis, this member likely lives in the same home as the child). Thus, I multiplied the number of hours per day by 5 for the sources *Teacher, Babysitter*, and *Peers*, and multiplied by 7 for *Parents* and *Extended Family*.

All 68 parents listed Spanish as a language of exposure, but 26 parents listed languages in addition to Spanish (Chinese, Japanese, German, Italian, French, Urdu, Hebrew, Tagalog, ASL, Vietnamese, Hindi, and Farsi). In 21 of these cases, however, exposure to these languages was less than 2 hours per week. For this reason, and given the lack of receptive vocabulary measures for these other languages, as well as the lack of comparison to children fluent in these other languages, I did not include exposure to additional languages in the analyses.

It was also the case that some parents reported differences between the amounts of exposure from each of the two parents. For example, some parents indicated that only the mother was fluent in Spanish and therefore exposed the child to a large amount of hours of Spanish, but that the father only practiced a few Spanish words with the child on a weekly basis. There were 6 cases of this kind of discrepancy, and for these cases, the higher of the two reported numbers was used for the *Parent* source in the analysis.

A multinomial logistical regression was implemented, with the number of hours of exposure from the various sources of exposure as the independent variable, and children's response scores as the dependent variable. This as done in order to assess whether a particular source (or sources) was more predictive of children's willingness to endorse labels in Spanish and English. As before, response scores were coded as 0, 1, or 2. The number of hours of exposure per week from each source was entered as a continuous covariate. Because the majority of bilingual children were receiving exposure of up to 77 hours per week (creating a lot of variability in this model), only Exposure-Minus and Exposure-Plus groups were compared. Additionally, for sources *Sibling* and

Babysitter, not enough data were available (i.e., many children did not have a sibling or babysitter, and therefore there were many zeros in these data). For this reason, the model was run to include *Parent, Peer, Teacher,* and *Extended Family.*

The multinomial logistical regression model approached significance, $X^2(8, N = 53) = 12.7, p = .12$, and a marginal difference for *Extended Family* was found, $X^2(2, N = 53) = 5.51, p = .06$

Vocabulary Assessments (PPVT & TVIP)

Only 14 children, across all three categories, established a standard score on the TVIP, 11 of whom were Spanish-English bilingual children. One possible reason for why children with substantial exposure to Spanish (some of whom were reported to be hearing up to 30 hours of Spanish per week) performed poorly on the TVIP is that a number of the images seem to be outdated. Indeed, some parents who were able to obverse their children during the assessment indicated that they had not shown some of these images to their children (e.g., a camcorder, or Walkman), and so they were not surprised when their child was unable to identify it.

Only one child was unable to establish a basal for the PPVT, so did not produce a standardized score. Consequently, this child was excluded from this analysis. For the remaining 67 children who did complete this assessment, a One-Way ANOVA was conducted with exposure category as a between-subjects factor and the PPVT standardized score as the dependent variable; the effect of exposure category did not reach significance, $F(2, 65) = 0.88, p = .42$.

Language Silhouette

The procedure for the Language Silhouette did not change between the pilot and main study, so I have combined the two data sets for this analysis. Ninety-three children participated in this activity; an additional 5 children were excluded due to experimental error or missing data. Of these 93 children, 31

were from the Exposure-Minus category, 40 were from the Exposure-Plus category, and 22 were Bilingual.

In an initial analysis, drawings were coded to determine whether any consistent patterns emerged. Features considered were 1) whether children adhered to the given rule and selected only one color to represent each of the languages they knew, 2) whether children's drawings expressed evidence of language dominance (e.g., one color taking up the majority of the silhouette), and finally, 3) whether children chose to draw particular body parts to represent something about their language skills/knowledge.

Unfortunately, in using this coding method, no consistent patterns or coloring methods were evident within or across groups. Only some drawings adhered strictly to the "one color per language" rule. For example, some children chose several colors to represent a single language and were explicit in saying that the set of colors referred to their language. It was impossible to determine whether other children may have thought this way as well, but simply did not give an explicit explanation of their rationale. For this reason, only the follow-up questions for this task were considered in the analysis.

In assessing the follow-up responses, evidence of language awareness (that there are various languages in the world) was coded. This included, but was not limited to, explanations about the child's language dominance (that only small or large parts of the body were filled in with a color because that represents the child's perceived proficiency in that language), the selected color to represent each language, or some combination of these explanations. Evidence of language awareness (e.g., "I chose red for English and blue for Spanish because those are my 2 favorite colors") was coded with a '1'. A score of '0' represented no evidence of language awareness, (e.g., "I colored my pink shirt, and my hair is brown so I chose brown, and I have green shoes, and I couldn't find the color tan so I colored the skin yellow") or a response that was otherwise incoherent (e.g., "I have a pink cat at home"). Four examples of the

Language Silhouette Activity can be found in Appendix E, two of which indicate language awareness and two that do not.

A series of 2x2 Chi-squared tests were used to compare each of the three exposure categories; for each Chi-Squared test, the number of children who did and did not express language awareness was compared across two exposure categories. Because each child's data was used in two comparisons, a p-value of .025 was used. As seen in Figure 2, children in the Exposure-Minus category tended to express less language awareness in explanations of their coloring than Bilinguals, χ^2 (1, N = 53), = 2.52, p = .112, or than children in the Exposure-Plus category χ^2(1, N =71) = 3.04, p = .081. Children in Exposure -Plus category did not differ at all from Bilingual children χ^2(1, N = 62) = 0, p = 1.00.
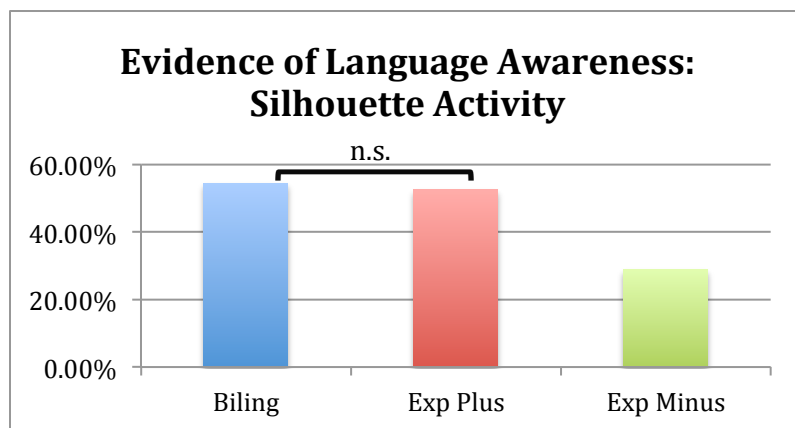
Figure 2: Percentages of children that expressed evidence of Language Awareness on the Silhouette Activity. Comparisons across the three exposure categories can be observed.

A Chi-squared analysis was also performed to assess the association between language awareness, as measured on silhouette explanations, and children's response scores. One child was excluded due to lack of data for response score. The analysis was conducted as a 2x3 table, with two levels of evidence of language awareness (Yes/No), and three levels of response score (0,1,2) and was significant, X^2(2, N = 91) = 11.86, p =.003.

A binomial logistic regression was implemented in order to assess whether an age effect occurred on this task. Children were grouped by year (i.e., 4-year old vs. 5-year old vs. 6-year old). No developmental effect was found.

Child Language Questionnaire

The child language questionnaire also included questions that could provide insight into children's awareness of language. Select questions on this assessment were analyzed for evidence of language awareness. Other questions were not included because they did not apply to all participants or the content overlapped with the selected questions.

Because the procedure did not change between the pilot and main study, I have combined the two data sets for this analysis. Ninety-two children participated in this assessment; an additional 6 children were excluded due to experimental error or missing data. Of the 92 children, 30 were from the Exposure-Minus category, 40 were from the Exposure-Plus Category, and 22 were Bilingual. Four questions from the questionnaire were selected, as they best addressed language awareness. The questions were as follows:

> 1) Which languages do you speak at home?
>
> 2) Which languages do you speak at school?
>
> 3) Which language is it easiest for you to say the things you want to say?
>
> 6a) Do you have a favorite language?
> 6b) Which language is your favorite?
> 6c) Why is_____ your favorite language?

A global score was assigned for Evidence of Language Awareness in responses to these four questions of the Child Language Questionnaire. Credit was given for responses that expressed an awareness of the child's language proficiency or the awareness that they are (or at some point were) learning a second language. Credit was given even in cases in which children provided

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single-word responses (e.g., to the question "What language do you speak at home?" children often responded "English") because any biases introduced by this decision would counter the hypothesis that minimally exposed monolingual children would be less likely to express language awareness. A global score was implemented because children sometimes expressed evidence of awareness in one question but not in another, and qualitatively, some responses were more evident of awareness, while some responses were ambiguous single word responses. An example of a child's response with evidence of language awareness is, "I speak English and sometimes I speak Spanish because my Spanish teacher teaches it to me." Two examples of a child's responses with poor language awareness are "I don't know how to speak languages at home" and "I speak normal."

A series of 2x2 Chi-squared tests were used to compare each of the three exposure categories; for each Chi-Squared test, the number of children who did and did not (Yes/No) express language awareness was compared across two exposure categories. Because each child's data was used in two comparisons, a p-value of .025 was used. As seen in Figure 3, children in the Exposure-Minus category were less likely to express language awareness when compared to either Exposure-Plus, $\chi^2(1, N = 70) = 5.82, p = .016$ or Bilingual children, $\chi^2 (1, N= 52) = 9.11, p = .003$. Like in the Language Silhouette Activity, children in the Exposure-Plus category did not differ from the Bilingual children, $\chi^2(1, N = 62) = 0.95, p = 0.330$. Using a sign test, the silhouette and questionnaire were also compared for matching evidence of language awareness. Despite the similar patterns between these two tasks, the number of children whose scores matched across tasks (53 out of 92) did not differ from chance, $p = 0.18$.
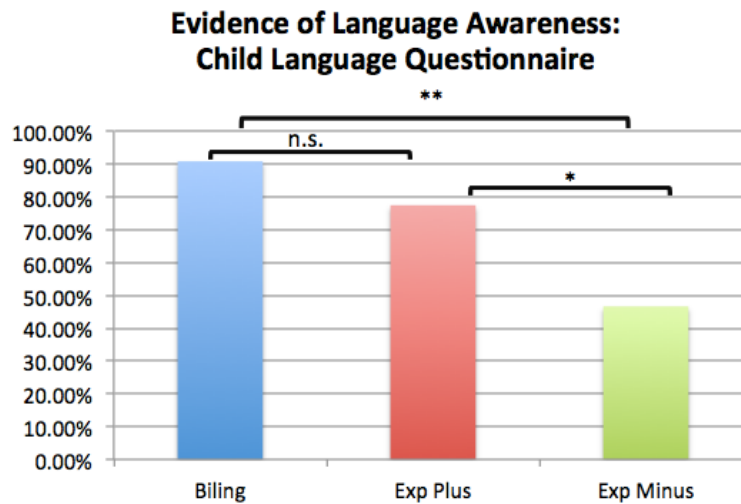
Evidence of Language Awareness:
Child Language Questionnaire

Figure 3: Percentages of children that expressed evidence of Language Awareness on selected questions of the Language Questionnaire. Comparisons across the three exposure categories can be observed.

A Chi-squared analysis was also performed to assess the association between language awareness, as measured by the global scores, and children's labeling response scores. The analysis was conducted as a 2x3 table, with two levels of evidence of language awareness (Yes/No), and three levels of response score (0,1,2). One child was excluded due to lack of data for response score. There was a marginally significant result, $X^2(2, N = 91) = 5.17$, $p = .08$.

A binomial logistic regression was implemented in order to assess whether an age effect occurred on this task. Children were grouped by year (i.e., 4-year old vs. 5-year old vs. 6-year old). An age effect was found, Wald $X^2(2, N = 92) = 14.96$, $p = .001$.

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Chapter 5: Discussion

Discussion Overview

My prediction was confirmed, Spanish-English bilingual children were more likely than those with minimal exposure to Spanish to endorse novel labels in both Spanish and English. Importantly, monolingual children with moderate exposure to Spanish did not differ from Bilinguals.

Consistent with this, on global scores from selected questions of the Child Language Questionnaire, monolingual children with minimal exposure were less likely than Bilingual and Exposure-Plus children to express evidence of language awareness. The Silhouette activity tended to show similar patterns, suggesting that this task, with additional modifications, could be a useful measure of language awareness.

There is no evidence, based on PPVT scores, that vocabulary knowledge played a role in children's willingness to endorse novel labels.

The findings from each task will be discussed in more detail in the following sections.

Children's Label Endorsements

Monolingual children with 3 or fewer hours per week of exposure to Spanish were less likely than children with greater amounts of exposure to endorse both the Spanish and English labels. Children with more than 3 hours per week of exposure to Spanish, but who were not fluent in this language, did not differ from Spanish-English bilingual children in their endorsements.

These findings suggest that substantial amounts of exposure promote children's willingness to accept labels in a non-native language, and that it is not necessary to be proficient in the second language.

While some of these results were marginal, I believe that moving forward, it may be useful to ask children for explanations of their label endorsements— this may prove to be yet another measure of language awareness and would also shed light on their thinking processes as they endorse native or non-native labels.

In the case that children endorsed only a single label for a novel object, my prediction was confirmed here as well. English was predominantly the language of choice across all three exposure groups (73.3% of Response Scores of 1 or 0). It is possible that monolingual English-speakers were doing this because of an ingroup bias, though it is also likely that they did this because English is the language that they are most familiar with. It was hoped that responses on the Child Language Questionnaire would explain this kind of trend.

Vocabulary Assessments

There was no effect of Exposure Category on children's performance on the PPVT. In fact, children performed at high levels across all three groups (most children received scores in the 90th percentile). The TVIP scores were of little use, and even some Spanish-speaking children failed to establish a basal score.

Children's vocabulary played no significant role in their willingness to endorse Spanish labels. This contrasts with Koenig & Woodward's (2012) finding that monolingual English-speaking toddlers with high vocabularies were more likely to endorse Dutch labels, it is my finding that. It is important to note, however, that Koenig & Woodward (2012) implemented a different measure of vocabulary, the MacArthur-Bates Communicative Development Inventory (CDI), and that their participants were much younger.

Language Awareness Measures

Children's explanations for their silhouettes and their responses from the Child Language Questionnaire showed similar patterns of differentiation. This pattern of results suggests that both measures are capturing differences in language awareness between the three exposure groups. However, children's responses on the two measures were not consistently related. There are two potential explanations for this: 1) it is likely that because there was substantial variability within each of the two tasks, the relationship between the two is not robust; 2) it is also possible that each measure is capturing a slightly different facet of language awareness.

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In future research, I plan to incorporate additional, more probing questions into both of these measures. The Language Silhouette Activity would benefit from more specific questions about children's patterns and color choices, specifically questions about what the colors represent, and whether a specific body part is especially colored a different way. The Child Language Questionnaire would benefit from more specific questions about children's knowledge of the languages they speak. For example, because many children responded to the question "What language do you speak at home" with a single-word response, it may be productive to ask *who* they speak to at home, or why they speak to that person in that language; this would also clarify whether children are aware that one parent may speak a different language than their second parent.

It is likely that the coloring patterns were less apparent in the current study than in Martin (2012) and Krumm (2001) because my participants were younger and primarily monolingual speakers. Still, my results suggest that with the inclusion of explanations for children's drawings, this measure can be used to assess language awareness in children as young as 4 years old and also those with proficiency in only one language.

Using exploratory measures such as a visual narrative does involve some potential concerns. Researchers should be concerned that they are not coding drawings in the most systematic way, or are "not using the full potential of what is represented in order to uncover meanings and intentions" (Castelloti & Moore, 2009, p. 51). It is my belief that with the use of thorough follow-up questions to obtain children's explanations of their drawings, a more consistent and efficient categorization and analysis of drawings can be done.

Language Awareness and Willingness to Accept Labels

Language Awareness was associated with children's willingness to accept Spanish words. Although the Language Silhouette Activity and other 'visual narratives' such as this (e.g., Melo-Pfeifer, 2015) are exploratory, they have

shown to be promising forms of assessing children's processing of their linguistic knowledge and skills. In fact, a strong association was found between children's endorsement of labels and evidence of language awareness on the Language Silhouette Activity. This finding suggests that language awareness promotes willingness to accept the labels of non-native speakers.

Other Responses to Child Language Questionnaire

Children responded to questions about favoritism for a particular language and sometimes also discussed the desire to learn specific languages because their close friends spoke them. Still, no consistent evidence was found in the responses to these questions (explanations about a preference for English) that would suggest that children were consciously adhering to an ingroup bias or to language-status associations when endorsing English labels.

Furthermore, no evidence was found to suggest that Spanish-English bilingual children are thinking about or falling prey to the internal conflicts that Matute-Bianchi (1991), Block (2011) and Marcos et al. (1977) discuss. It is very possible that the children of the current study have not yet formed these kinds of social categorizations (i.e., that one language is more desirable). There are two potential reasons for this: 1) these children are still too young, unlike the participants in the above-mentioned studies who were adolescents, or 2) many of the bilingual children of this study were not from immigrant families (in fact, many of them were non-Hispanic enrolled in a dual-language program) and so they may not encounter these types of social stigmas.

General Discussion

The findings from this study show that a substantial amount of exposure is associated with children's willingness to accept labels in both Spanish and English. Whereas children with minimal exposure endorse both labels only about one-third of the time, both bilinguals and those with substantial exposure endorse both labels over 60% of the time. These observations suggest that monolingual children are not homogeneous, and should not be considered as

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such. It may be more useful to think about language exposure on a continuum, beginning with children with no exposure to a second language and increasing to children who are fluent in a second language.

The language awareness findings provide additional evidence that children with substantial exposure look quite different from those with minimal exposure. Children with greater exposure expressed evidence of language awareness on the global score of the language questionnaire, and did not differ from those fluent in Spanish. Importantly, my findings with these measures suggest that children who are not bilingual but have moderate exposure to a second language are similar to bilinguals with regard to their language awareness. This is an important finding and supports the notion that there is a need to consider exposure as a factor when working with monolingual children.

In the future, I would like to further explore the role of different sources of exposure in more detail. Although extended family does seem to play a particular role in children's label endorsements, I would like to create a more fine-grained language questionnaire to assess the hours of exposure from the other various sources. For example, as it seems that there may be variation between two parents, it could be useful to assess these more specific differences.

These findings suggest that children can greatly benefit from exposure to a non-native language. In fact, these results have some educational implications. Parents considering enrolling their children in a dual-language immersion might want to expose their children to a second language prior to entry into the program. Non-English exposure may help to promote willingness to accept, and therefore learn, a vocabulary in a second language.

Appendix

Appendix A: Video Script

Introduction

RA: Alright (name of child), so you know how around the world people speak a little differently? They speak in different languages, right? You and I are speaking in English right now. I have two friends that we're going to meet on this video, one will be speaking in English, and the other one will be speaking in Spanish. Are you ready to meet them?

M: Hello, my name is Mary. It's very nice to meet you! Let me tell you a little about myself. My favorite color is orange. When I have free time, I like to play soccer. At home, I have a pet rabbit named Snuggles.

A: Hola, mi nombre es Ana. Es un placer conocerte! Me gustaría decirte un poco de mi. Mi color favorito es el rojo. Cuando tengo tiempo libre, me encanta nadar. En casa, tengo un perro que se llama Bonbón.

RA: Okay now (name of child), Mary and Ana are going to start the word game. They're going to teach us the names of some toys, so we have to pay attention. Are you ready?

Familiar Object

M: Train. This is a train. See this train? This is a train.

A: Tren. Este es un tren. Ves el tren? Este es un tren.

RA: Okay (name of child), so what did Mary call this toy (point to toy)? What did Ana call it? [IF CHILD DOES NOT RECALL NAME, PLAY VIDEO CLIP AGAIN. ACCURATE RESPONSE IS NOT NECESSARY TO MOVE ON TO NEXT TOY]

Familiar Object

M: Dinosaur. This is a dinosaur. See this dinosaur? This is a dinosaur.

A: Dinosaurio. Este es un dinosaurio. Ves el dinosaurio? Este es un dinosaurio.

RA: Okay (name of child), so what did Mary call this toy (point to toy)? What did Ana call it? [IF CHILD DOES NOT RECALL NAME, PLAY VIDEO CLIP AGAIN. ACCURATE RESPONSE IS NOT NECESSARY TO MOVE ON TO NEXT TOY]

Familiar Object

M: Baby. This is a baby. See this baby? This is a baby.

A: Bebe. Este es un bebe. Ves el bebe? Este es un bebe.

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RA: Okay (<u>name of child</u>), so what did Mary call this toy (point to toy)? What did Ana call it? [IF CHILD DOES NOT RECALL NAME, PLAY CLIP VIDEO AGAIN. ACCURATE RESPONSE IS NOT NECESSARY TO MOVE ON TO NEXT TOY]

Novel Object

M: Rompet. This is a rompet. See this rompet? This is a rompet.

A: Chisa. Esta es una chisa. Ves la chisa? Esta es una chisa.

RA: Okay (<u>name of child</u>), so what did Mary call this toy (point to toy)? What did Ana call it? [IF CHILD DOES NOT RECALL NAME, PLAY VIDEO CLIP AGAIN. ACCURATE RESPONSE *IS* NECESSARY. IF CHILD IS MISPROUNOUNCING, CORRECT FOR IT "Actually, I think she might be calling it _____, does that sound right?"]

RA: Okay (name of child), what do *you* think is the right name for this toy? Rompet? Chisa? Or are both names okay? What do you think? Chisa? Rompet? Or are both names okay?
Thank you.

Novel Object

M: Wibber. This is a wibber. See this wibber? This is a wibber.

A: Bufo. Este es un bufo. Ves el bufo? Este es un bufo.

RA: Okay (<u>name of child</u>), so what did Mary call this toy (point to toy)? What did Ana call it? [IF CHILD DOES NOT RECALL NAME, PLAY VIDEO CLIP AGAIN. ACCURATE RESPONSE *IS* NECESSARY. IF CHILD IS MISPROUNOUNCING, CORRECT FOR IT "Actually, I think she might be calling it _____, does that sound right?"]

RA: Okay (name of child), what do *you* think is the right name for this toy? Wibber? Bufo? Or are both names okay? What do you think? Bufo? Wibber? Or are both names okay?
Thank you.

Appendix B: Language Questionnaire for Child

Say to Child: *So you remember that we were talking about how people speak in different languages. Right now, I'm speaking in English, right? Now I'm going to ask you some questions about language.*

1) Which languages do you speak at home?

2) Which languages do you speak at school/child-care?

3) Which language is it easiest for you to say the things you want to say?

4) Do you have friends that speak something different than English?

5) Do you try to speak to <u>(friend stated above)</u> in that language/(<u>language that child specified above</u>)?

6) Which language is your favorite?

      6a) Why is_____ your favorite language?

7) Has anyone ever said something mean about how you speak (INSERT LANGUAGES THEY SPEAK)? [HAVE CHILD ELABORATE ON THIS—NOT JUST YES OR NO RESPONSE]

      Lang 1:   Lang 2:

8) Do you know what it means to be bilingual?

Appendix C: Language Silhouette
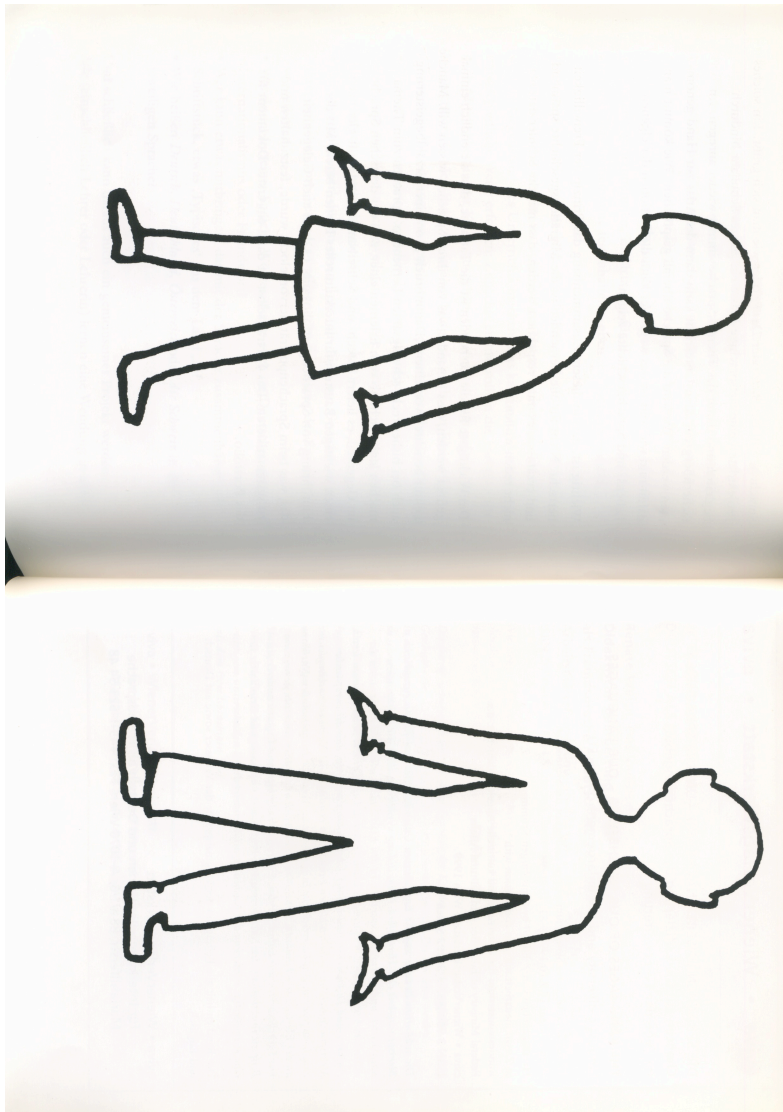
Follow-up Questions for Silhouette Activity:

1) Why did you color it this way?

2) Do you remember my one rule for this activity? [Researcher repeats rule]

3) Do you feel like you followed the rule in your picture? How?

Appendix D: Language Background Questionnaire for Parent

Date _____   Subj.ID _____

Language: _____

1) At what age did your child begin to learn this language? (e.g. since birth, or 3 years old)
_____

2) Please complete the following table with the typical number of waking **hours per week** that your child is exposed to this language from the following sources:

	Parent	Sibling(s)	Peers	Extended Family	Babysitter/ Nanny	Teacher(s)
Hours Per Week						

4) How would you classify your child's knowledge of this language?
(please check only ONE box):

☐ My child knows only a few words (e.g. numbers, greetings)
☐ My child knows many words and phrases in this language but cannot carry on a conversation
☐ My child is fluent in this language

5) Often we find that children's exposure to a particular language can change over the years (perhaps a babysitter who is no longer employed with your family spoke another language with your child, or perhaps your child attended a school in which another language was taught but your child no longer attends this school). Please use the space below to include details like these, or other information regarding your child's exposure to language that you believe were not covered in the above questions/check-boxes:

Figure E: **Examples of Completed Language Silhouettes**

Follow-up Questions for Silhouette Activity:

1) Why did you color it this way?

2) Do you remember my one rule for this activity?

   [Researcher repeats rule]

3) Do you feel like you followed the rule in your picture? How?

1) Because I speak 1 language, *points to Brown*, 2 language *points to Green, 3 language *points to Blue
2) You have to color each for whatever amount of language you speak
3) Because each color that I spoke was how many languages I speak. Brown is English, because I speak it the most, Green because I speak medium Spanish, and Blue's French

1) Because it would be beautiful
2) One color for each language I speak
3) I only used purple for English and pink for Spanish. Oh I changed it around, pink for English so there's a lot and little for purple because I only know a little bit of Spanish

1) Because it looks like me
2) Yes, because I followed the rule
3) By coloring

1) Because those are my favorite colors
2) Yes, say each color….yeah, I don't remember the rest
3) No. Because I didn't say…one of the sounds I make… like I didn't talk

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