ACCENT AND SPEECH SOUNDS IN BILINGUAL CHILDREN

Tema

Between September and December 2023, Babylonia collected questions from parents regarding their children's language development. This article aims to answer the following questions about foreign accent in children and speech sound errors.

– Hello, I'm French and I live in the United States. My 8-year-old son speaks French and English. Since he was very little, he has spoken French with a slight American accent. This has always surprised me, because he's not surrounded by French-speaking Americans. I thought the accent was something you picked up "by ear "*! Is it actually linked to the physiognomy of the mouth?

***For example, one year he had a Romanian teacher at school. And for the first few days, he'd come home speaking French with a Romanian accent! [this is the English version of a question originally asked in French]**

– How can I address speech sound errors or articulation difficulties?

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The first question I would like to answer in this contribution presents the interesting case of an eight-year-old boy who lives in the United States and who speaks French with an American accent, although he has only ever heard French spoken by his mother who is a native speaker of French. Where indeed does the American accent in his French come from?

First, it is important to define what a foreign accent is. We may perceive a foreign accent when someone does not sound like a person who learned that language as their only language. Flege (1981) referred to differences in pronunciation between native and non-native speakers when defining accent; only the latter group have an accent. However, we will avoid the terms native versus non-native speech because these terms are difficult to define and may be associated with a "deficit view" of second language learning. Perception of a foreign accent may come from a variety of factors that include mispronunciations of sounds. A German speaker of English may say "I tink so" instead of "I think so" because he/she is unable to say the "th" sound of English, a sound that does not occur in German. Perception of a foreign accent may also come about from prosodic differences. Prosody refers to variations in loudness, pitch, and timing that create differences in the rhythm and in the melody of speech. English has different prosody to French. English gives greater emphasis to the first syllable of a word (it is louder, longer and has a higher pitch than the other syllables) whereas French gives greater emphasis to the last syllable of a word. An English speaker of French may sound like he/she has an accent because the speaker puts emphasis on different syllables to what a French speaker would (i.e., first syllable rather than last syllable). Many studies have been conducted on adult speakers acquiring a foreign or second language. It is generally acknowledged that adults have great difficulty ridding themselves of a foreign accent, whereas children acquiring their languages at a young age do

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not display evidence of foreign accents. There are two sets of studies, however, which contradict this generalization.

One set of studies has shown that children may speak the majority (and minority) languages that they are acquiring with a "foreign accent" because they are exposed to the speech of their parents who speak these languages also with a foreign accent. By "majority" language, I refer to the language of the broader society and by "minority" language, I refer to the language spoken by parents in the home which is not the same as the societal language. For example, in a study on the acquisition of Voice Onset Time (VOT), Stoehr et al. (2019) found that the VOT patterns of German-Dutch bilinguals (Dutch being the majority language), aged three to six years, were closely related to those of their parents. First of all, what is VOT? It refers to the time period between the start of voicing (vibration in the voice box) and the start of articulation (movements of the tongue and lips in the mouth). It helps to distinguish sounds such as /b, d, g/ from sounds such as /p, t, k/. Language differ in their VOT values. German, for example, has different VOT values to Dutch. Stoehr et al. (2019) measured the VOTs of the bilingual children's mothers who had learned German from early childhood and who had moved to the Netherlands before their children were born. They found that the mothers spoke Dutch with VOT values that were not Dutch-like but they also produced German with VOT values that were different from Germans who had lived all their lives in Germany and spoke only German. That is, their German VOTs had become more Dutch-like, possibly because of the restricted use of their German in the Netherlands. The process in which a speaker loses proficiency in language is called "attrition". Thus, the bilingual children's VOT values were affected by their mothers' accented Dutch and by their mothers' "attrited" speech in German. Stoehr et al. (2019) did not refer to the bilingual children as having "foreign accents", but differences in VOT values are often associated with the perception of a foreign accent (Flege, 1981).

Returning to the case of the bilingual French-English child living in the United States, his accented French may indeed come from the speech input of the mother who unconsciously has started to speak French with an American accent.

A second set of studies shows that accented speech may be the result of cross-linguistic interaction. Cross-linguistic interaction refers to the influence of one language upon another, resulting

How can I address speech sound errors or articulation difficulties?

in differences in a bilingual's speech in comparison to a monolingual's. The comparison of bilingual with monolingual speech should not in any way infer that monolingual speech is the standard or norm, but it is a way to determine if linguistic changes occur due to being bilingual. Cross-linguistic interaction has been studied in many different language domains including those referring to sounds (phonetics and phonology), words and their meanings (lexico-semantics), and sentence structure (syntax). In the area of phonetics and phonology, several studies have documented cross-linguistic interaction in the production of speech sounds and in prosody (Kehoe, 2015). The bilingual French-English child in the abstract may produce French using an English /r/, that is, an /r/ produced with the tongue tip in the centre or towards the front of the mouth, rather than a French /r/ with the back of the tongue against the back of the mouth. He may produce vowels in a different way than French speakers, making the vowel longer and with a slightly different quality similar to how the vowel is pronounced in English (French /o/ "eau" said with English pronunciation "ow" as in "snow"). He may speak French with different prosody to that of a French speaker (see above), giving greater emphasis to the first rather than to the last syllable of a word. These examples of transfer from English to French would give the impression of a foreign accent in French. This child may be particularly susceptible to having a foreign accent because he is dominant in English. He lives in an English-speaking environment and he probably hears, proportion-wise, a greater amount of English than French. It should be noted that transfer of phonetic/phonological features from one language to another is not common in young children exposed to two languages from birth. However, there is a great deal of individual variation and some bilinguals have been observed to display high degrees of transfer (Kehoe, 2015).

In sum, I have offered two possible but not mutually exclusive explanations for the bilingual French-English child's accented French. He may speak French with a foreign accent because he receives input from his native French-speaking mother whose speech exhibits attrition. That is, her French has started to be become more (American) English-sounding. He may also produce French with English phonetic features, due to the transfer of phonetic features from English to French, a phenomenon referred to as cross-linguistic interaction. Transfer effects may arise because he lives in an English-speaking community and is likely dominant in English.

Speech sound errors or articulation difficulties

The second question in this contribution asks how to address speech sound errors or articulation difficulties. The writer does not specify whether she is referring to bilingual or monolingual children. In the spirit of this forum, I will refer to both groups of children.

All children at the age of two to three years make speech sound errors. They exhibit phonological simplifications such as omitting sounds at the ends of words (e.g., "dog" -> "do") or omitting sounds within consonant sequences (e.g., "brush" -> "bush"). These simplifications influence speech intelligibility. Two-year-old children are intelligible 70% of the time whereas three-year-old children are intelligible 80% of the time. Four-year-old children are intelligible most of the time; however, they may still have difficulty pronouncing late-acquired sounds such as /ʃ/ (the first sound in "shoe") and /ʒ/ (the middle sound in "measure") and they may omit sounds in multisyllabic words (e.g., "hippopotamus" -> "hipotmus"). Between the age of four to seven years, these speech-sound difficulties resolve and most six to seven-year olds don't present with speech sound errors. If a child displays some phonological simplifications at two to three years of age and some errors on isolated sounds at four to five years, there may be no need for

concern. Parents should give good speech input to their children, always providing the phonologically correct model and, if possible, providing several models in a row (e.g., Child: That is a "do"; Mother: Yes, that is a "DOG" and here is a big "DOG" and, over there, is a little "DOG") and over time, these errors should resolve. Modeling correct pronunciation is a more effective and natural approach than correcting your child's pronunciation all the time, which may lead to frustration and interfere with the flow of conversation.

Some children may continue to display phonological simplifications beyond the age of two to three years. They may make errors not only on late-acquired sounds but on sounds that are acquired at an early age (e.g., errors on "k" and "g"). They may exhibit processes not seen in typical development such as omitting sounds at the beginning rather than at the ends of words. Their speech may be subject to great variability and be intelligible only 50% of the time. These children may be diagnosed as having a speech sound disorder by a speech-language therapist. A speech sound disorder is a childhood communication impairment involving difficulty with the perception, motor production (articulation) and/or phonological representation of speech which impacts speech intelligibility. Speech sound disorders are present in 7-10% of children. Numerous studies attest to the fact that speech sound disorders may have long-term negative consequences on a child's social-emotional, educational, and professional development. Even the presence of a mild disorder (e.g., misarticulation of "s" or "r", often referred to as a "lisp") may significantly influence a child's social interactions and interpersonal relations. Thus, it is important that parents seek the advice of a speech-language therapist if they have any concerns about their child's speech sound development (for more details about this, please read the contribution by Agnès Witko in this issue).

The discussion above refers to children in general, but what happens if your child is bilingual? Many studies have compared the speech sound acquisition of bilingual and monolingual children (Amengual, 2024). The findings generally show no major differences in the speech development of bilingual and monolingual children. Bilinguals may perform better, less well, or similarly to monolingual children. Nevertheless, several studies report qualitative differences between bilinguals and monolinguals in their speech sound acquisition and greater variability in bilingual speech patterns. As discussed above, bilinguals may display evidence of cross-linguistic interaction in their speech (not possible in monolinguals). For example, a bilingual German-English child may produce the English /r/ as a German /r/. That is, the child may produce /r/ with the back of the tongue against the back of the mouth rather than with the tip of the tongue in the centre or towards the front of the mouth as in English (these are the main ways to produce /r/ in German and English; however, there is considerable variation in how /r/ is produced across dialects and individuals speakers). The mispronunciation of /r/ is not a speech sound error as such but is an example of the influence of German phonetics on English. In general, cross-linguistic interaction is a transient period in a bilingual child's phonological development (Kehoe, 2015).

The presence of speech sound "errors" in bilingual children due to cross-linguistic interaction complicates the diagnostic process for speech-language therapists. In a speech evaluation, the therapist needs to separate those sound differences due to cross-linguistic interaction from those due to a true speech sound disorder. In such a situation, the speech-language therapist needs to conduct a contrastive analysis, which involves taking into consideration the sound structures of the languages the child is acquiring to eliminate those errors which could potentially be due to cross-linguistic interaction. For example, Preston & Seki (2011) did not consider substitutions of /l/ and /r/ as errors in the English of a Japanese-English bilingual child with a speech sound disorder because /l/ and /r/ are not sounds in Japanese (or at least they are not phonetically similar to those in English). They did, however, consider substitutions of "s" and "sh" (the first sounds in "Sue" and "shoe") as being errors due to a speech sound disorder. Such substitutions were present in both Japanese and English and were highly inconsistent. They are also errors commonly seen in monolingual Japanese and English-speaking children with speech sound disorders. Thus, an understanding of the speech patterns that could be plausibly related to a child learning a second language is important for a speech-language therapist to diagnose speech sound disorders in bilingual children.

In sum, bilingual or monolingual children who present with a considerable numbers of speech sound errors should be seen by a speech-language therapist in order to determine whether their errors are developmentally appropriate, reflect a speech sound disorder, or, in the case of bilingual children, are due to cross-linguistic interaction. If a child is diagnosed with a speech sound disorder, an individually-tailored speech intervention will be set up which puts emphasis on phonological or motoric aspects of speech production, and on the perception of speech sounds. Such interventions are generally effective in remediating speech sound errors.

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