Language Development Lab
Spring/Summer 2014 Newsletter

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Congratulations to former lab member Tamara Hudon, PhD, for successfully defending her thesis in fall 2013!

Language Development Lab
u.Ottawa
Le labo du développement du langage

From the Director

Let me begin by sincerely thanking all the parents and babies who have participated in our studies. We are learning so much about early language development, both in monolingual and in bilingual infants, from your participation, and we are happy to share these findings with you via this newsletter. Whether you have participated in a study or not, I would also like to thank you for your interest in our research. As with all research enterprises, this work would be impossible without a dedicated research team. My graduate students and collaborators will share their findings as well. We are always happy to answer any questions you may have about our research or about language development during infancy. Feel free to contact us! Once again, thank you for your continuing support and ongoing interest.

Ongoing Studies

Learning new words, but can we prove it?
We know that infants as young as 6 months old can understand some words in everyday situations, but we would like to show this in a research setting to see how powerful these abilities are. Our research suggests 11-month-olds are more able to learn these words in a very short experiment than younger infants. In a follow-up study, we are presenting the same words in sentences to determine whether hearing a word in context will help these powerful word-learning abilities to emerge earlier.

What is the effect of lexical stress on word-learning?
In this study we are looking at the effect of lexical stress on learning phonetically similar words (i.e. words that differ by only one phoneme, like cat and rat for example). Lexical stress refers to the emphasis of one syllable in contrast to the other, for example you reCORD a REcord. In English, lexical stress is usually on the first syllable of each word, while in French it is usually on the last syllable of a sentence. Previous studies suggest that lexical stress could help infants to identify words in running speech. The current study aims to show whether lexical stress allows babies to hear the difference between similar-sounding words and whether that is dependent on the language(s) they are learning (e.g., an English baby may hear the difference on a stressed first syllable more than a French baby).

The effect of mixed-up labels on word-learning
Previous work has demonstrated that a brief training period with familiar word-object pairings (e.g. seeing a shoe and hearing "shoe") will help infants to subsequently learn a completely new word-object pairing. In our study, we will present three familiar objects but will mix up their names (e.g., they will see a shoe, but hear "kitty"). We would like to see whether this "mixed up" training phase would help or hinder infants' abilities to learn new words in detail. If it hinders these abilities, this would be good evidence that babies tap into their knowledge that nouns go with objects, and not that any pre-exposure to words and objects will enhance word learning. We are collaborating with Dr. Laurel Fais at UBC for this study.

Do monolingual and bilingual infants cope with accented speech differently?
Previous studies have demonstrated that young infants have a hard time recognizing that a word stays the same even if it is said with a different accent. For example, young English learning infants don't recognize that a "ball" is still a "ball" when it is said with a Mandarin accent. Bilingual infants may recognize accented words as "good enough" since they are more accustomed to hearing accented speech. This may be due to experience with the accent being tested (if one parent has a Mandarin accent for example), or it may be due to bilingual infants accepting a broader range of pronunciations in general. So far, our findings suggest the latter case may be true, but research is still under way.

New (Really Exciting) Studies

Using words to form categories
Research has shown that hearing a word in a familiar or an unfamiliar language while seeing an object on-screen can help 3-6-month-olds categorize objects, but hearing a non-linguistic sound does not have this effect. We would like to see how bilingual infants perform in comparison to monolinguals. In this study, we show infants many examples of an object on a screen (for example, many different types of cars). Once they get bored of this, we show them a member of the category (such as a car) and another type of object (such as a boat) to see whether babies understand that a new car, as opposed to another type of vehicle, belongs to the category "car." This study is in collaboration with Dr. Sandra Waxman at Northwestern University.

Some Recent Publications

Fennell, C. T. & Byers-Heinlein, K. (2014). You sound like Mommy: Bilingual and monolingual infants learn words best from speakers typical of their language environments. *International Journal of Behavioral Development , 309 (38),* 309-316.

Byers-Heinlein, K. & **Fennell, C. T.** (2014). Perceptual narrowing in the context of increased variation: Insights from bilingual infants. *Developmental Psychobiology, 56 (2),* 274-291.