SUMMER 2018
PROFESSOR SARAH CREEL'S
LANGUAGE ACQUISITION & SOUND RECOGNITION LAB

Who We Are

We are the Language Acquisition and Sound Recognition Lab, or LASR. Our home base is UC San Diego, where Professor Sarah Creel, Principal Investigator to this research, is a faculty member of the Cognitive Science Department. Along with our lab manager, Alicia Escobedo, graduate students Conor Frye, Carson Miller, and Reina Mizrahi, and an excellent crew of undergraduates from UCSD, we are investigating several aspects of children’s development of language and recognition of various sounds. We recruit preschool-aged children from the local San Diego community to participate in our computer tasks.

We appreciate the great help from our preschool directors and are always grateful for the teachers’ hospitality. All of the tasks, or games, that we play with children are fun and short (about 15 minutes), and award a little prize as a thank you for participating. We’d like to give a warm thank you to all the directors, teachers, parents, and children for helping us with our research, and hope to keep making great discoveries in this field!

PRESCHOOLERS SAY THE DARNEDEST THINGS

[Touches a picture of fire]
“Ouch! That’s hot!”

Experimenter: “Can you tell me what an accent is?”
Child: “It’s like falling or running into each other”

“I speak uno, dos, tres”

Experimenter: “Can you tell me what languages you speak?”
Child: “Letters!”

UC SAN DIEGO
Did you know that approximately 1 in 5 people in the US speak a language other than English at home (U.S. Census Bureau, 2015)? This means that a large number of children in the U.S. are exposed to more than one language from birth. Yet, most things we know about how children learn language don’t explicitly tell us how children learning two languages are able to learn them so easily. So how are children learning two languages at the same rate as one? Do they even know that they speak two languages? How do they decide which language to speak at any given time? While several studies have shown that children are able to learn two languages just as easily as [only] learning one, it is unclear how children are able to tell apart two languages. We attempted to address this question by studying whether children associate languages with individuals (e.g., Grandma speaks Spanish, Ms. Teacher speaks English).

In the first experiment, Spanish-English bilingual and English monolingual children, ages 3 to 5 years old, were introduced to a Spanish-speaking character and an English-speaking character. After, children were shown both characters on the screen while listening to a novel sentence in either language (Spanish or English) and were asked to point to the character they thought was speaking (“Can you show me who said that?”). If children are able to differentiate between the two languages, then they should be able to know who is speaking (English speaker vs. Spanish speaker). Results showed that both bilingual and monolingual children were able to tell apart the English speaker from the Spanish speaker. This supports the idea that young children are able to associate people with specific languages. For bilingual children, this might be what is helping decide what language to speak at any given time.

You may be wondering whether having not only different languages but also different voices matters. In the first experiment the Spanish speaker and the English speaker had different voices, so it could be that children rely on how different voices sound to tell apart two languages. In the second experiment, we studied whether English monolingual children (3 to 5 years old) were telling speakers apart based on voice and language differences. To test this we recorded Spanish-English bilinguals in both languages to have the same voice speaking in English and in Spanish.

After being introduced to a Spanish-speaking character (Voice A) and an English-speaking character (Voice B), the voices switched languages (Voice A – English, Voice B – Spanish). After the switch, children were asked to identify who was speaking. If they were paying attention to the language, and not the voice, then regardless of what voice they heard speaking English, they should pick the character they were introduced to in English. Results from this study showed that children were paying attention to the language and not the voice. This tells us that the language someone speaks is a strong cue for recognizing a speaker.

The last question we wanted to investigate was whether children could tell apart two languages they don’t know. In a third experiment, we tested whether 3 to 5 year-old English monolingual children could differentiate between a Spanish-speaking character and a Mandarin-speaking character. This study was similar to the first one in that children were introduced to the two characters (one Spanish, one Mandarin) and were then asked to pick who they thought was speaking while listening to a sentence in either language. Results showed that children were not able to correctly identify the Mandarin speaking character when listening to Mandarin or the Spanish speaking character when listening to Spanish. This finding suggests that while children are very good at identifying their own native language, being able to identify two unknown languages is something that might develop with age and/or increased exposure to other languages.

These studies begin to answer important questions about what children know about the language(s) they speak and how they might use that information in language comprehension.