

S P R I N G - S U M M E R 2 0 1 2

the  
**Pop Lab Bulletin**

## The Word Learning Study

This research examined how children with autism spectrum disorders learn words, compared to children who are developing typically. We studied strategies children use to learn new words, how they generalize the words they learn to other objects, and how they engage in pretend play. We also investigated parent behaviours during interaction, such as the speech they produce, and how they point out and label objects. Our goal is to better understand processes of word learning and the variability in language development observed among children with ASD. In the long term, the knowledge gained will help to improve language therapies and outcomes.

**The members of the Pop Lab thank you for participating in our word learning study.**

**We hope you enjoy this newsletter !**

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## What is autism ?

Autism Spectrum Disorders (ASD) are a varied group of neurobiological conditions. Currently ASD is defined by behaviours, and these are observable within the first three years of life. Individuals with ASD face challenges in social interaction and communication, demonstrate focused interests and a desire for sameness or routine, and often have sensory symptoms or show repetitive behaviours, but these can manifest in very different ways. Therefore ASD is described as a spectrum, encompassing many different levels of abilities and needs.



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## 🌀 Word learning

Though we don't often think of babies as language users, most 6-month-old infants are already capable of associating the words "mommy" and "daddy" with the faces of their mother and father. Even before their first birthday, infants can already understand many of their first words. Although learning new words may seem like a simple feat, it involves using social, categorization and memory skills to map and retain new words. For example, when a parent says the word "swing" while playing with his/her child at a playground, the child could take advantage of the parent's social cues (such as their eye gaze and pointing gesture toward the swing) to map "swing" to the swing rather than to objects in the surroundings, such as a slide or the ropes the swing is hanging from. This method of communicating about an object using social cues is called *joint attention*.



One of the major goals of our study was to explore the types of information that are available to children with ASD in their language environment, and the sorts of information they use to learn new words. We found that both children with and without ASD received similar social cues from their parents during play sessions, and that parents adapted the way they communicated to their child's language level. In addition, a similar proportion of children with and without ASD (who had similar language levels) were able to learn new words by following social cues. Typically, this ability develops around the age of 18 months. We found a strong positive relationship between language level and the ability to use social cues to learn words. Moreover, a similar number of children in each group generalized these new words to photographs of the same object, showing that they understood the word as representing a category rather than associating it with a particular instance of the object.

### 🌸 To find out more...

#### English

The Hanen Centre, Helping You Help Children Communicate (2011)

Website: <http://www.hanen.org/Helpful-Info/Parent-Tips.aspx>

#### Français

Beauchemin, M., Martin, S. & Ménard, S. (2000) : L'apprentissage des sons et des phrases. Un trésor à découvrir. Éditions Hors Collections - Grand public de l'Hôpital Sainte-Justine et Cité de la Santé de Laval.  
 Disponible: <http://www.editions-chu-sainte-justine.org/livres/apprentissage-des-sons-des-phrases-146.html>

## 🌿 Parental input

Have you ever wondered if the words your child hears can influence their language development? Just think about all the words your child hears during feeding time, getting dressed, playtime, or reading! Research has shown that the language children hear can affect their later vocabulary. For example, simply hearing many different words is associated with larger vocabulary and something as simple as hearing the word “ball” many times can help a child learn that word faster. What does this mean? It means you can help your child learn language in a variety of ways.

For one, researchers have found that reading with your child, even before they are speaking, can help develop his or her language. It is important to not only read to your child, but to try and keep them actively involved. Depending on your child’s language level, you can name pictures, explain the meanings of words, or ask questions about the pictures. In addition, if you choose an

interesting book for your child and read it a few times over a week, your child will become more and more familiar with the story. Then, when they feel more comfortable with the story, they can also interact with you by reading along, naming the same pictures, or asking you questions. Reading with your child will not only benefit your child’s language skills, but is also a fun activity to share!

In our study we found that the nature of language heard by children with and without autism during play sessions with a parent was in fact very similar. We are now looking to see how children with and without autism use the language they hear to learn new words.

From breakfast to bedtime, children hear thousands of different words every day. Remember to take the time to make storybook reading and other activities a fun way to interact together. A little language heard can go a long way!

🌸 **To find out more...**

### English

- Hart, B., Risley, T. (1995). *Meaningful Differences in the Everyday Experience of Young American Children*. Baltimore, MD: Paul H. Brookes Publishing Co.

For a summary of Hart & Risley’s findings:

[http://www.strategiesforchildren.org/eea/6research\\_summaries/05\\_MeaningfulDifferences.pdf](http://www.strategiesforchildren.org/eea/6research_summaries/05_MeaningfulDifferences.pdf)

- Gebers, J. L. (2002). *Books Are For Talking, Too!* Location: Pro. Ed.

Book review:

<http://www.proedinc.com/customer/productView.aspx?ID=1871>

### Français

Éditions Scholastic (2012). *Sur le chemin de la lecture*.

Disponible: <http://www.scholastic.ca/editions/familles/conseils.htm>



## 🌀 Play and language development

Did you know that playing with your child could be an excellent way to promote your child's language development? Parent-child play may influence language development in a number of different ways. Play skills in toddlers and preschoolers tend to develop in parallel to language skills. *Pretend play*, which involves modifying reality while playing, typically begins to emerge between a child's first and second birthday, just when language development begins to accelerate. Parent-child play allows parents to engage their toddlers in *pretend play*, by acting out a tea party or by taking on make-believe roles, for example. Also, young children may learn language more easily when parents talk about things that children are already interested in. During play children are likely to be paying close attention to their toys. This creates many opportunities for parents to take advantage of their child's focused attention when providing linguistic input. For example, if a child playing with a toy truck says "big truck," the parent could expand that statement into a complete sentence and add more information by saying "Yes, that's a big red fire truck." In addition to being fun, play makes it easier for parents to provide language stimulation about things their child is already interested in.

We know from many studies, including our own, that higher language skills are related to greater pretend play. Previous studies have shown that children with ASD may have delayed play skills. In our study, however, children with and without ASD, who had similar language levels, demonstrated similar play skills.

 To find out more...

### English

American Speech-Language-Hearing association (2012): Activities to Encourage Speech and Language Development. website : <http://www.asha.org/public/speech/development/parent-stim-activities.htm>

### Français

Francine Ferland (2004) : Et si on jouait? Le jeu durant l'enfance et pour toute la vie. Éditions de l'Hôpital Sainte-Justine.

Disponible : <http://www.editions-chu-sainte-justine.org/livres/jouait-54.html>



## Myths about Autism

### **1. Myth: *The measles, mumps and rubella (MMR) vaccine is a direct cause of autism spectrum disorder.***

This controversy emerged with the publication of a scientific article published in the *The Lancet* in 1998, in which the authors associated the triple vaccine with developmental regression related to autism, based on a study with 12 children who, as later discovered, were self-selected. However, several subsequent studies with thousands of participants failed to support this association. Moreover, identification of violations in the ethical conduct of the study led *The Lancet* to retract it from the published record in 2010.



### **2. Myth: *Autism is caused by parents' emotional distance or lack of affection.***

Also known as the “refrigerator mother” theory of autism, this idea was proposed by Leo Kanner, who first identified autism as a disorder in 1943. It was championed by Bruno Bettelheim and other psychoanalysts in the 1950s and 1960s. Regrettably, the lack of a biomedical explanation for autism allowed the idea to spread into the popular media and medical establishment. Bernard Rimland published a book in 1964 that disputed this view and proposed an alternative theory, still espoused today, that autism is biologically-based and has a neurological cause.

### **3. Myth: *All individuals with autism fit a particular profile.***

Autism Spectrum Disorders fall along a wide *spectrum* of behaviour and level of functioning, meaning that there may be more unique than shared characteristics between any people on the spectrum. Many individuals with ASD have strengths in attending to detail, organizing and retaining information, music, and visual arts. They also have emotional bonds with their family members and others, and need to have social connections like anyone else, though they may express themselves in different ways. Most importantly, they are individuals with their particular strengths and weaknesses.



### To find out more...

#### English

Fombonne et al. (2006): Pervasive developmental disorders in Montreal, Quebec, Canada: prevalence and links with immunizations. *Pediatrics*, 118(1), 139-150.  
website: <http://www.pediatricsdigest.mobi/content/118/1/e139.full>

Immunization Action Coalition (2008). MMR vaccine does not cause autism, Examine the evidence !  
website : <http://www.immunize.org/catg.d/p4026.pdf>

Rimland, B. (1964). *Infantile autism: The syndrome and its implications for a neural theory of behavior*. East Norwalk, CT, US: Appleton-Century-Crofts.

#### Français

Paediatrics and Child Health (2001). Le vaccin contre la rougeole, la rubéole et les oreillons et les troubles envahissants du développement : Une simple hypothèse  
Disponible : <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2804766/>

# Hidden Word Puzzle

Find and cross out the words below in the grid and you will find a hidden sentence in the remaining letters !

**A**  
adjustment  
age  
attachment  
autism  
attention

**B**  
boy  
behavior

**C**  
coo  
child  
contact  
communication

**D**  
development  
diet

**E**  
emotion

**F**  
feelings  
fun

**G**  
girl  
gaze  
gift

**H**  
help  
hope  
home

**I**  
imagine

**J**  
joy

**L**  
learning  
love  
laugh

**N**  
noise

**P**  
play  
parent  
progress

**S**  
social  
siblings  
smile  
study

**T**  
therapy  
toys

**U**  
upset

**W**  
words

**Y**  
young



C	O	N	T	A	C	T	E	N	I	G	A	M	I	A
H	O	W	E	S	I	B	L	I	N	G	S	T	Y	D
I	C	M	H	A	L	E	S	Y	O	T	M	N	O	J
L	K	E	M	O	H	H	Y	O	N	E	I	D	U	U
D	E	E	V	U	L	A	I	C	O	S	L	E	N	S
N	Z	E	P	U	N	V	F	O	I	P	E	V	G	T
U	A	E	M	O	T	I	O	N	T	U	S	E	S	M
F	G	P	L	E	H	O	C	R	N	Y	I	L	G	E
L	S	D	R	O	W	R	O	A	E	T	O	O	N	N
A	T	T	A	C	H	M	E	N	T	F	N	P	I	T
U	U	U	R	Y	O	B	A	U	T	I	S	M	L	E
G	D	T	O	A	T	E	I	D	A	G	O	E	E	G
H	Y	J	I	L	E	A	R	N	I	N	G	N	E	A
L	R	I	G	P	T	H	E	R	A	P	Y	T	F	M
P	R	O	G	R	E	S	S	E	T	N	E	R	A	P

ANSWER : \_\_\_\_\_  
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