**Latest News**

**12.22.17**
Northeastern Co-op, Parker Robbins, has his last day in the lab. In January, he is studying abroad in Paris, and then will return to Northeastern University to finish his undergraduate degree.

**12.8.17**
L3’s undergraduate research assistants present on the projects that they completed this semester. Afterwards, we celebrated with a Yankee Swap... best gift goes out to Tiwa!

**11.10.17**
L3’s undergraduate research assistants write a blog post to explain the work our lab does to collect data through VerbCorner. View it on gameswithwords.org under “Leah Jumped the Morp Fracky: Early Findings of VerbCorner.”

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### Semester Projects

**Vocabulary Development Project: Verb Learning**

Our team of Kid Testers has been working on designing, piloting, and finishing several studies that investigate vocabulary development in children ages 3-6. We have partnered with five schools and run a total of 167 participants. Kid Testers include: Zach, Casey, Parker, and Nicola.

*Transfer Verbs (Give/Get)*

We are close to completing the testing phase of this study, which investigates verbs like *give* and *get* to determine which class (if either) is acquired first, as well as which of the twelve give/get verbs used are learned earliest. In this study, children watch videos on an iPad that out these verbs, and answers questions about what they saw to test their understanding.

*Motion Verbs (Chase/Flee)*

We have finished the final testing of our puppet study, which investigates the development of verbs like *chase* and *flee*. In this study, the Kid Testers would ask children to use puppets to act out sentences involving eight of these verbs. Overall, we found that children perform better as age increases, but that verb type (i.e., *chase* vs. *flee*) was not a significant predictor of performance.

*Emotion Verbs (Fear/Frighten)*

We are close to wrapping up The Truth Value Judgement study, which investigates the development of psych verbs, which are verbs that describe states of mind such as *fear* and *frighten*. After hearing stories about animals, children listen to a summary of the situation by a Mickey Mouse puppet. Next, they have to determine whether Mickey’s statement is true or false by giving him either a cookie or coal. We can then use their response to check their understanding of the verbs. We are excited to launch a Spanish version of this study this spring!

**VerbCorner**

VerbCorner is a part of L3’s gameswithwords.org site, used to collect data through crowdsourcing. VerbCorner aims to discover a possible relationship between word meaning and placement in a sentence. Before a task is launched on the site, it must go through multiple piloting phases on Amazon Mechanical Turk. This semester, Mariela,
Lily, Kayley, Katherine, and Olivia have been working on repiloting three tasks from the summer that look at words indicating possession, togetherness, and emotional feelings. While a few of the tasks are still in the process of being redesigned for improved reliability, our task examining the relationship between the meaning and placement of verbs entailing possession will be adapted for the gameswithwords.org website later in the year!

Replication

Experiment 1: Saffran, Johnson, Aslin, & Newport (1999)

This semester, L3 completed an in-lab replication of Experiment 1 of "Word Segmentation: The Role of Distributional Cues" by Saffran et. al (1996). This study found that adults can learn to segment “words” simply by listening to a long string of syllables. Like the Saffran paper, we found strong evidence for this ability to segment words in a nonsense language (a phenomena called statistical word segmentation). However, we did not find support for many of the important modulators of this effect.

Meta-Analysis: The Effect of Working Memory on Long Term Memory

One of our previous studies examined the effect of working memory on long-term memory. To better understand where our results fall within the larger literature, we are conducting a meta analysis on this effect. RAs, Tony, Julie, & Jason are compiling data from multiple psych studies that examine whether maintenance in working memory can affect long term memory. We hope to begin to analyze these aggregate results next semester!

Many Labs

During the 2016-2017 school year, Lauren and Lily worked on replicating Eric van Dijk’s 2008 study on the effect of emotions in negotiations as part of the Center for Open Science’s efforts to determine the reliability of many psychology experiment findings. Van Dijk’s 2008 results were not able to be replicated in the 2015 Reproducibility Project, so L3 (along with many other labs) reproduced the experiment to examine if Van Dijk’s results were incorrect or if the original replication in 2015 was flawed. We found mixed results from our data, and are working on determining the predictors of replication.

Neural Networks

The Native language Identification project is working towards classifying essays from language proficiency exams (like the TOEFL CAES, and FCE) by the native language of the essay writer to ultimately study critical periods from a computational standpoint. Tiwa is using a variety of classifiers to compare accuracy, precision, and recall between the essays. The classifying models enable quantification of language acquisition, and by coupling them with data on when and how the participants learned their language, we think it will be possible to find correlations between age of acquisition and proficiency.

Lifespan Development

RAs Affy and Jungho are working on a project to design better ways to analyze our lifespan development data. They are interested in determining when cognitive functioning peaks and distinguishing between different patterns of development for various cognitive functioning (such as working memory). This semester, they were able to improve the speed and complexity of their analyses, as well as improve our documentation, therefore improving the reproducibility of our analyses.