



Language Learning Lab at Boston College
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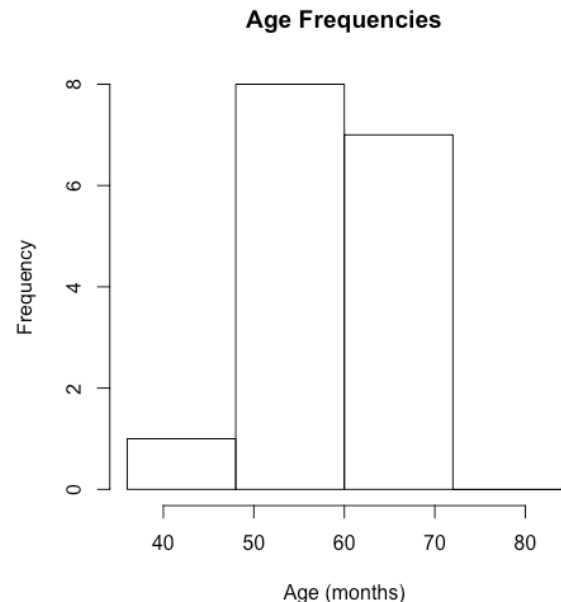


How The Holy Name School Has Helped Our Lab:

Thanks to the Holy Name School, we have been able to collect data from over 100 children in our desired age range! This new testing site has made it possible to expand upon previous research that has been performed by our principle investigator, Joshua Hartshorne. The Holy Name School has allowed us to test more participants in a few weeks than we would have if we were restricted to testing in our lab at Boston College.

Our Current Research:

Our current study explores whether apparent variability in subject/object mapping may result from differences in verbs' underlying meanings. For example, we have demonstrated that verbs like *fear* describe an attitude towards some entity whereas verbs like *frighten* describe an emotional episode caused by another person or object. We are currently studying children between the ages of three and five to compare and contrast the differences in our findings. The present study we are conducting at the Holy Name School uses puppets and carefully crafted sentences to see how children understand various *fear* and *frighten* verbs in different sentence structures. The children are introduced to a set of hand puppets that they are then given the opportunity to try it for themselves. They are then asked to act out the sentences to a "story" that our research assistants read aloud to them.



This is a bar graph of the age range of the participants that the Language Learning Lab tested at the Holy Name School on 5/3/17.

How Our Research Helps the Children:

Our experiments further the children's interest and building excitement for science. The Holy Name School's mission statement, which is centered on supporting kids' healthy development, is exemplified by the work that we do with the kids. The one-on-one interactions with our research assistants introduce the children to the possibility of a career in the sciences. Many of our participants have continued to talk about the meanings of certain verbs even after testing is complete. Our study continues to promote conversations about verbs and verb learning by creating an opportunity to question words that they do not understand.

Our Preliminary Findings:

Dr. Hartshorne's work has demonstrated that fear-type and frighten-type verbs are used in distinct ways. The difference between using "fear" or "frighten" type verbs is used to guide the type of subject connected to it. We have previously found that this ability emerges by four to five years of age, which is early enough in development to influence how verbs are learned. The results of our studies conflict with the previous belief about how fear and frighten-type verbs are processed by children and adults. Children and adults typically use the "frighten" type of verb when the meaning of the verb justifies it, showing that it is used successfully. We would like to continue to collect data that supports our theory: Psych verbs describing the participant's feelings towards an object (fear-type verbs) project their experience onto the subject, whereas verbs describing a specific moment in which someone is caused to feel some emotion (frighten-type verbs) map the subject onto the object. Our studies have three implications: First, the data shows that this pattern of using "fear" to describe an object and using "frighten" to describe the subject occurs in several languages. Furthermore, it shows that these verbs demonstrate linking patterns, which are present across unrelated languages. Lastly, it suggests that these two classes reflect a more established rule of language.

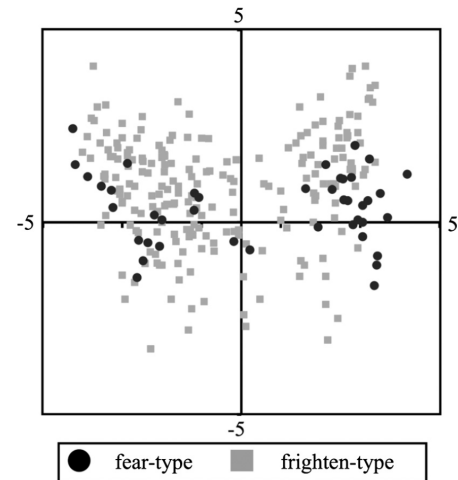
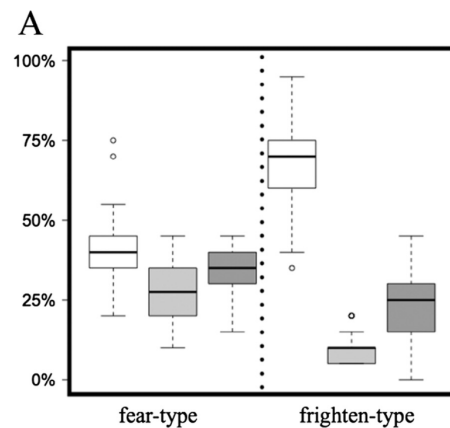


Fig. 1. Valence (x-axis) and arousal (y-axis) for 42 fear-type and 216 frighten-type verbs listed in [Levin \(1993\)](#), rated by 18 naïve participants on 11-point Likert scales (negative-positive, asleep-excited).



On behalf of the Language Learning Lab at Boston College, we would like to extend our sincere thanks and appreciation to the Holy Name School for allowing us to conduct our research on their property. Our preliminary results have already begun to show effects in our data based on samples taken from your school. Your support and cooperation has benefited for research in many ways. Finally, as we continue our language studies, we would love to continue the partnership we have formed with the Holy Name School. We plan on contacting the Holy Name with more opportunities to engage in our research. It is our hope that your school has also benefitted from partnering with the Language Learning Lab!

