

Curiosity is [image]: A crosslinguistic analysis of metaphor production and interpretation using a multimodal task

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In this poster presentation, we present ongoing research that analyzes participants' metaphor production and interpretation using prompts from two different modes of communication (text and image) and two different languages (Japanese and English). In order to do this, we developed material, which consists of 20 topic prompts (e.g., friendship) in the textual mode and six unique images (e.g., space heater, castle, colored pencils, etc.) for each topic prompt, as potential sources to complete the metaphor. These images were selected as having potential semantic features that could be mapped onto the topic (e.g., warmth, protection, variety). Using nonverbal stimuli for the source provided the participants a more direct experience of the underlying concept and richer modal-specific simulation of it. Moreover, we focused primarily on abstract topics in order to get participants to construct relational metaphors, where the topic and source share a system of higher-order relations, as compared to attributive metaphors, where they share object attributes (e.g., shape, color, length, etc.). These types of metaphor require deeper processing and are typically preferred than the shallow matching of concrete properties in attributive metaphors (Clement & Gentner, 1991). The material was developed simultaneously in both Japanese and English, everything besides the language, was identical (topic items, images, and order presented). Participants saw the topic on a computer screen and then the six images. They first chose one of the images to complete the metaphor and then provided an interpretation of it.

In this poster, we also discuss preliminary results from the data collection. The first aim of this study was to look at preferential source selections by the participants for the different topics to see if some sources had a higher frequency than others. To do this, we used descriptive statistics to show these variations. In the second part of this exploratory study, our aim was to uncover some of the online strategies used by the participants when interpreting the newly generated metaphors. These interpretations required them to find some relational structure between the selected image and the abstract topic. In order to model these interpretations, we adapted the coding categories developed in Wu and Barsalou (2009) and further revised by McRae, Cree, Seidenberg, and McNorgan (2005). For the purposes of this study, we only used three of the four general codes (entity properties, situation properties, and introspective properties). Data suggests that the semantic features used for the interpretations rely on a narrow number of these coding categories, especially the global systemic property of the entity in the image (entity properties), the typical goal or function of the entity within a situation (situation properties), and causal relationships of the entity (introspection properties). We will present these initial findings and discuss some limitations and direction for future research.

Finally, using participants with varying first languages allowed us to perform cross-linguistic analyses between the responses completed in English and those completed in Japanese in order to look for similarities and differences between the two languages. Using data from the before mentioned descriptive statistics and semantic feature models, we discuss possible influences the first language has on preferential sources for metaphors and the structural knowledge used to interpret them.

References

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