A crowdsourcing study of logical metonymy

Logical metonymies are constructions where verbs like *enjoy* or *begin*, which usually subcategorize for an event (EV, e.g. *begin the holiday*), are combined with an entity (EN, e.g. *begin the newspaper*) [Pustejovsky, 1995]. Their interpretation seems to require the recovery of covert events (CE) (*begin the newspaper → begin reading the newspaper*).

The traditional hypothesis [Pustejovsky, 1995] claimed that CEs are triggered by the object type (EN vs. EV) and retrieved from the lexical entry of the object (qualia). However, in some cases CE interpretations are possible just as well with EV objects (e.g. *enjoy watching the fight*). Furthermore, qualia cannot account for the full range of CEs (e.g. *begin reviewing the book*).

Behavioral studies [Pylkkänen and McElree, 2006] have established empirical correlates of increased processing costs, but have not addressed what factors triggers CE interpretation and what range of CEs is retrieved. Crowdsourcing experiments allow us to exploit non-expert annotation, intuitions from native speakers and elicitation of interpretation to answer these questions.

We have conducted four experiments that collect judgments for EN vs. EV nouns (Experiment 1), elicit CE vs. non-CE interpretations (Experiment 2) and validate the elicited CE interpretations (Experiment 3 and 4). The results conform to our intuitions: CEs for EN objects go beyond qualia interpretation (e.g. *start the portrait → drawing, painting, modeling, critiquing*), and EV objects can also elicit CE readings (e.g. *finish the holiday → celebrating, planning, preparing*). This points towards a dynamic, world-knowledge based interpretation of logical metonymy [Matsuki et al., 2011, Asher, 2010].

References

N. Asher. *Lexical Meaning in Context*. Cambridge University Press, 2010.

K. Matsuki, T. Chow, M. Hare, J. L. Elman, C. Scheepers, and K. McRae. Event-based plausibility immediately inuences on-line language comprehension. *Journal of Experimental Psychology: Learning, Memory, & Cognition*, 2011. In press.

J. Pustejovsky. *The Generative Lexicon*. MIT Press, Cambridge MA, 1995.

L. Pylkkänen and B. McElree. The syntax-semantic interface: On-line composition of sentence meaning. In M. Traxler and M. A. Gernsbacher, editors, *Handbook of Psycholinguistics*, pages 537–577. Elsevier, 2nd edition, 2006.