

Using *Use*: A Prototype Analysis

In 1993, the Supreme Court ruled that a man who had traded a firearm for cocaine had *used a firearm* (Cunningham & Fillmore, 1995; Geis, 1995), but had he? This study examines the meaning of the verb *use*. We employ a prototype analysis based on meaning components similar to that utilized by Coleman and Kay (1981) for the verb *lie*. Thus, this study addresses two questions: Does *use* exhibit a prototype structure akin to that found for *lie* (Coleman & Kay, 1981)? If so, what semantic components participate in its meaning, and what are their relative contributions?

We hypothesized that the meaning of the verb *use* relies on three primary components: how canonical the object is for the action; whether or not there is a change in the environment as a result of the action; and whether or not the actor acts purposefully. To test the proposed components of meaning and to look for prototype effects, we created scenarios in which we independently varied the presence or absence of each of the three components under consideration, for a total of eight scenario types. These scenarios were built around five different categories of tools - garden, cleaning, construction, kitchen, and office - for a total of 40 scenarios. The scenarios were presented individually in random order on a computer screen, along with a rating scale on which participants were asked to indicate how convinced they were that the actor had used the object.

Our results suggest that the three components (*canonicity*, *change*, and *purposeful action*) all contribute to the meaning of *use*, as in each case participants' ratings were higher for stories in which the component was present than for those in which it was absent (all p 's < .0001). Further, in support of a prototype analysis, ratings were higher when more components were present in the story. However, the contributions of the individual components differed, with the largest effect evident for *purposeful action*, followed by *change*, and the smallest effect for *canonicity*, suggesting that the components may be differentially weighted. Moreover, there was a significant interaction between the three components, $F(1,43) = 4.40$, $p < .05$. The effect of *change* – higher ratings when present than when absent – was modulated according to whether or not *purposeful action* was involved, with a larger effect when the actor had acted purposefully than when *purposeful action* was absent. In contrast, the effect of *canonicity* – higher ratings when present than when absent – was modulated according to the presence or absence of both of the other components, with a larger effect when exactly one other component was present than when both were present or both were absent. Taken together, these results suggest a prototype structure for the verb *use*, with *canonicity* subordinate to *change* which is in turn subordinated to *purposeful action*.

Ultimately, our findings suggest that *use* exhibits the hypothesized prototype structure. All three components contribute to the meaning, though they are differently weighted.

References

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- Cunningham, C. D., & Fillmore, C. J. (1995). Using common sense: A linguistic perspective on judicial interpretations of 'use a firearm'. *Washington University Law Quarterly*, 73(3), 1159-1214.
- Geis, M. L. (1995). The meaning of *meaning* in the law. *Washington University Law Quarterly*, 73(3), 1125-1144.