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Expressing generic concepts with and without a language model

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Abstract

Utterances expressing generic kinds ("birds fly") highlight qualities of a category that are stable and enduring, and thus provide insight into conceptual organization. To explore the role that linguistic input plays in children's production of generic nouns, we observed American and Chinese deaf children whose hearing losses prevented them from learning speech and whose hearing parents had not exposed them to sign. These children develop gesture systems that have language-like structure at many different levels. The specific question we addressed in this study was whether the gesture systems, developed without input from a conventional language model, would contain generics. We found that the deaf children used generics in the gestures they invented, and did so at about the same rate as hearing children growing up in the same cultures and learning English or Mandarin. Moreover, the deaf children produced more generics for animals than for artifacts, a bias found previously in adult English- and Mandarin-speakers and also found in both groups of hearing children in our current study. This bias has been hypothesized to reflect the different conceptual organizations underlying animal and artifact categories. Our results suggest that not only is a language model not necessary for young children to produce generic utterances, but the bias to produce more generics for animals than artifacts also does not require linguistic input to develop.

Keywords: Generics; Gesture; Homesign; Categories; Deaf children; Chinese; Language development; Conceptual development

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1. Introduction

Utterances expressing generic kinds ("birds fly") can provide insight into a speaker's categories.[1] They refer to an entire category of objects (birds as a class, not just the bird in my living room) and highlight qualities of that category that are stable, enduring, and timeless—not accidental, transient, or tied to a particular context (Lyons, 1977). For example, "birds fly" implies a property that applies to birds generally, whereas "this bird has a broken wing" implies a property that applies to a particular bird in a particular context. Generic utterances are thus made about categories that are coherent, stable entities, often called *kinds* (Gopnik & Meltzoff, 1997). The way in which languages express generics varies considerably (Krifka et al., 1995), but all languages provide some means for expressing generics. Indeed, Gelman and Tardif (1998) have recently found that, despite large differences in the devices English and Mandarin offer for expressing generics, speakers of both languages routinely use generics—even when talking to children as young as two years.

The fact that speakers use generics in their talk to very young children underscores the prevalence of such talk. However, it also raises the possibility that generic talk may be essential to teach children generics and to focus on certain types of classes. Gelman and Tardif (1998: 222–3) suggest two ways in which children could learn to focus on kinds from the generics adults produce. Generics point to properties that members of a kind have in common—properties that might be difficult for the child to observe directly (e.g. birds fly south in the winter). In addition, generics underscore the fact that members of a category have something in common, and thus that the category is a kind about which one can make a broad generalization. For example, telling a child that "birds fly" may not impart novel information even to a young child, but it does confirm *birds* as a stable category, a kind, about which propositions can be expressed.[2]

The question we address in this study is whether children who have not been exposed to an adult model for generics are nevertheless able to express generics. Deaf children born to hearing parents are often not exposed to a conventional sign language until adolescence. Moreover, if their hearing losses are so profound as to preclude the acquisition of spoken language, these children are unable to profit from the conventional spoken language that surrounds them. Despite their lack of access to a usable conventional language model, these deaf children invent gesture systems, called "home signs," to communicate with the hearing individuals in their worlds (Feldman, Goldin-Meadow, & Gleitman, 1978; Goldin-Meadow, 2003; Goldin-Meadow & Mylander, 1983, 1984). Do deaf children of hearing parents, raised in either an American or Chinese culture, use their gestures to express

[1] Generic utterances typically include those referring to generic kinds (e.g. 'birds fly') and those referring to generic events but not generic kinds (e.g. 'John smokes'); see Carlson and Pelletier (1995) for discussion. In this paper, we focus exclusively on the former.

[2] In fact, non-generic common nouns also refer to categories. For example, "that bird is flying" implies the existence of a category of *birds*, although it does so by referring to an individual bird rather than to a class of birds. Thus, every use of a common noun refers to a category of some sort. However, common nouns differ from generics in the scope of predication. Non-generic common nouns predicate something of an individual; generics predicate something of a kind. It is in this respect that we hypothesize that generics emphasize the coherence of a category—"birds fly" not only implies commonalities among members of the bird category but it also specifies a particular commonality in a way that "that bird is flying" does not.