



ELSEVIER

Contents lists available at ScienceDirect

Journal of Experimental Child Psychology

journal homepage: www.elsevier.com/locate/jecp



Metacognitive developments in word learning: Mutual exclusivity and theory of mind



Cornelia Gollek^{a,*}, Martin J. Doherty^b

^a Division of Psychology, School of Natural Sciences, University of Stirling, Stirling FK9 4LA, Scotland, UK

^b School of Psychology, University of East Anglia, Norwich, Norfolk NR4 7TJ, UK

ARTICLE INFO

Article history:

Received 26 August 2015

Revised 11 March 2016

Keywords:

Word learning

Mutual exclusivity bias

Disambiguation effect

Theory of mind

Alternative naming

Pragmatics

ABSTRACT

This project examined the flexibility with which children can use pragmatic information to determine word reference. Extensive previous research shows that children choose an unfamiliar object as referent of a novel name—the disambiguation effect. We added a pragmatic cue indirectly indicating a familiar object as intended referent. In three experiments, preschool children's ability to take this cue into account was specifically associated with false belief understanding and the ability to produce familiar alternative names (e.g., rabbit, animal) for a given referent. The association was predicted by the hypothesis that all three tasks require an understanding of perspective (linguistic or mental). The findings indicate that perspectival understanding is required to take into account indirect pragmatic information to suspend the disambiguation effect. Implications for lexical principles and sociopragmatic theories of word learning are discussed.

© 2016 Elsevier Inc. All rights reserved.

Introduction

A frequent observation, both in word learning research and in everyday life, is that young children appear to assume that each object kind has only one name. This tendency can be demonstrated experimentally using what is known as the *disambiguation paradigm* (e.g., Markman & Wachtel, 1988; Merriman & Bowman, 1989). In the presence of a familiar nameable object and an unfamiliar object,

* Corresponding author at: School of Social Sciences, Psychology, University of Dundee, Dundee DD1 4HN, Scotland, UK.

E-mail address: c.gollek@dundee.ac.uk (C. Gollek).

children are asked to pick the referent of a novel name. For example, when shown a familiar apple and an unfamiliar whisk and asked to pick the “hinkle”, children typically choose the novel object. This disambiguation effect is very robust and has been used extensively in research. It can be demonstrated from late infancy (e.g., Halberda, 2003; Markman, Wasow, & Hansen, 2003). It also constitutes a test case for differing theories about the nature of word learning and about the relationship between word learning and metacognitive development. Determining the underlying cause of disambiguation is of broad theoretical importance.

There are three general explanations of the phenomenon. (Others have proposed combinations of these explanations or hybrid accounts [e.g., Hollich, Hirsh-Pasek, & Golinkoff, 2000a], but we focus on these three for brevity.) The phenomenon is frequently identified as the *mutual exclusivity bias* (e.g., Markman, 1989; Merriman & Bowman, 1989), based on the idea that children assume word extensions to be mutually exclusive. Other lexical principles accounts have been proposed in which children prefer to map novel names to nameless categories (N3C; Golinkoff, Mervis, & Hirsh-Pasek, 1994) or vice versa (bias to fill lexical gaps; Merriman & Bowman, 1989). Unlike the mutual exclusivity bias, neither account predicts difficulty in mapping novel names to nameable categories if other options are not apparent.

According to these accounts, the bias exists to aid word learning. It has frequently been noted (e.g., Quine, 1960) that the number of possible meanings of an unknown word is indefinitely high, but children nevertheless readily learn nouns. One possible way of narrowing down the number of plausible meanings is to assume that a novel word cannot refer to objects that one can already name. For basic-level categories, this assumption is typically true and, thus, could be a useful initial approximation. Later in development, as children encounter more superordinate, subordinate, and otherwise overlapping terms, the bias is assumed to be relaxed, possibly on a case-by-case basis (Markman, 1989, p. 215).

The main competitor to this view is the sociopragmatic account, according to which lexical principles are unnecessary. Instead, children are able to infer word meanings by judging others' communicative intentions (Bloom, 2000; Diesendruck & Markson, 2001; Tomasello, 2000) and other theory of mind judgments (Diesendruck, 2005; Diesendruck & Markson, 2001). To do this, children employ two connected pragmatic principles proposed by Clark (1988), namely the principles of conventionality and contrast: “For certain meanings, there is a conventional form that speakers expect to be used in the language community; that is, if one does not use the conventional form that might have been expected, it is because one has some other, contrasting meaning in mind” (p. 319). Thus, in the Disambiguation task, children infer that, had the experimenter wanted to refer to the familiar object, she would have used the familiar name. Because she did not, the experimenter must have some other meaning in mind and the novel object is the most straightforward possibility.

In support of the sociopragmatic claim, Diesendruck and Markson (2001) showed that a disambiguation effect occurs not only with novel labels but also with idiosyncratic facts about objects. Children were shown two novel objects and told a fact about one of them (e.g., “My uncle gave this to me”). Children were then asked for “the one my cat likes to play with.” Most 3- and 4-year-olds chose the previously unmentioned object. If the same bias occurs with multiple labels and multiple facts, it cannot be a specifically lexical bias. As Diesendruck and Markson (2001, p. 639) cautioned, however, it remains to be shown that it is the same bias; lexical constraints could underlie disambiguation with labels, and pragmatic constraints could underlie disambiguation with facts. Consistent with this possibility, a comparison of fact and label version of the Disambiguation task with the same participants found no correlation with both typical participants and participants with autism (de Marchena, Eigsti, Worek, Ono, & Snedeker, 2011). Scofield and Behrend (2007) examined the two versions developmentally and found that 2-year-olds showed the disambiguation effect for labels (81%) but not for facts (19%), whereas performance on the two versions was equivalent by 4 years of age.

A third account differs from the other two accounts in that it sees the disambiguation phenomenon as a result of a cognitive limitation rather than a word-learning strategy or sophisticated sensitivity to speaker intention. This may seem counterintuitive because choosing the novel object as referent for a novel word is typically the best guess, and adults usually do this. However, adults can also hypothesize that the novel word may be an alternative label for the familiar object. There are good reasons to think that younger children cannot do this. Doherty and Perner (1998) showed children objects for which

Download English Version:

<https://daneshyari.com/en/article/7274654>

Download Persian Version:

<https://daneshyari.com/article/7274654>

[Daneshyari.com](https://daneshyari.com)