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Perspective-free pragmatics: Broken precedents and the recovery-from-preemption hypothesis ☆

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Abstract

When speakers refer to the same referent multiple times in a conversation, they tend to follow established patterns of usage, known as *conversational precedents*. Research has found that listeners expect speakers to follow precedents, and that this expectation guides their search for referents (Barr, D. J., & Keysar, B. (2002). Anchoring comprehension in linguistic precedents. *Journal of Memory and Language*, *46*, 391–418). Recently, Metzing and Brennan (2003) (Metzing, C., & Brennan, S. E. (2003). When conceptual pacts are broken: partner-specific effects on the comprehension of referring expressions. *Journal of Memory and Language*, *49*, 201–213) reported a speaker-specific effect for broken precedents that suggests early use of speaker information when precedents are broken. Results from two eyetracking experiments show that this speaker effect results from the late use of speaker information to recover from an early, partner-independent preemption effect. When a new description is heard, existing precedents preempt the mapping of the new description to an old referent. Later, listeners use speaker-information to inhibit precedents that are not known to the current speaker. Time-course data, as well as the results of a cognitive load manipulation, suggest that the preemption and speaker effects are supported by distinct processing systems. Our findings indicate that certain pragmatic effects in language comprehension are based on general expectations about language use, rather than assumptions about the beliefs and goals of particular speakers.
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Introduction

An important topic in psycholinguistic research is how comprehenders integrate linguistic and contextual information to interpret conversational references.

Speakers and listeners face uncertainty in processing referring expressions because any given object can be categorized in multiple ways, each corresponding to a different linguistic encoding; for example, a given book can be referred to as *the book*, *the thing on the table*, *the large object*, and so on. In dialogue, where referents are often referred to multiple times, interlocutors can reduce some of this uncertainty by establishing temporary conventions regarding how particular referents are to be described (Barr & Keysar, 2002; Brennan & Clark, 1996; Clark & Wilkes-Gibbs, 1986; Garrod & Anderson, 1987). These conventions, known as *conceptual pacts*

(Brennan & Clark, 1996) or as *precedents* (Barr & Keysar, 2002), impact how people produce and comprehend referring expressions.

Precedents are important for theories of language use because research indicates that consistency in naming can overrule other factors in determining how a referent is to be described (Brennan & Clark, 1996). Speakers do not simply choose a description for a referent based solely on the referent's similarity to a given category, but tend to favor descriptions that they have used in the past. Evidence for this can be seen in the phenomenon of *entrainment* (Garrod & Anderson, 1987). Through repeated use, an expression comes to designate a particular referent more and more rigidly, progressively taking on more name-like properties (Carroll, 1980). Entrainment has been shown to influence speakers' lexical choices: although speakers normally refer to objects at a 'generic' or basic-level (Cruse, 1977; Rosch, Mervis, Gray, Johnson, & Boyes-Braem, 1976), they sometimes will overspecify a referent to maintain consistency with an established precedent (Brennan & Clark, 1996). Thus, a speaker who has habitually referred to a shoe using the specific term *loafer* is likely to continue using the specific term *loafer* rather than *shoe*, even when no other shoe is present in the set of contextually given objects.

Precedents have important implications for language comprehension as well, because listeners expect consistency in speakers' descriptions, and these expectations guide how listeners search for referents (Barr & Keysar, 2002; Metzing & Brennan, 2003). Past research on precedent use in language comprehension has observed two key effects. First, precedents benefit comprehension by reducing uncertainty and making processing more efficient. When a speaker follows a precedent, listeners can access the appropriate referent from memory, thereby circumventing an effortful search of context (Barr & Keysar, 2002). Second, when a precedent is broken—that is, when an old referent is described in a new way—comprehension is impaired (Metzing & Brennan, 2003).

In this article, our general aim is to investigate the cognitive basis of precedent effects in language comprehension. Does precedent use involve assessments of shared knowledge, or can it be explained on the basis of simpler kinds of processing that do not involve such assessments? More specifically, do listeners interpret speech against the background of precedents established with the current conversational partner, or do they access any precedents that are available, regardless of who established them?

Precedent use in comprehension: Partner-specific or partner-independent?

One possible explanation for how precedents benefit comprehension assumes that listeners access a specialized body of knowledge known as *common ground* (Clark & Carlson, 1981; Clark & Marshall, 1981), the set of information that interlocutors share and know that they share. Precedents form part of the common ground between interlocutors by virtue of their *linguistic co-presence*; that is, because the speaker and listener were both present when the precedent was established. Common ground theory assumes that listeners constrain the set of information they consider during comprehension to their common ground with the speaker (Clark & Carlson, 1981). Under this explanation, the benefit of a particular precedent should be partner-specific: it should be observed when listeners interpret speech from the speaker who established the precedent, but not when they interpret speech from another speaker who lacks knowledge of the precedent.

Barr and Keysar (2002) tested this prediction in a series of eyetracking experiments. In their Experiment 2, listeners played a referential communication game in which they rearranged objects in a grid based on spoken instructions from two speakers. These objects were unfamiliar and lacked conventional names. Listeners' eye movements were monitored as they interpreted certain test instructions from a speaker in which a target object was mentioned. Barr and Keysar manipulated two variables: (1) whether or not a precedent had been previously established for the target object; and (2) whether the precedent was in common ground with the current speaker. To examine the benefit of the precedent, Barr and Keysar measured the latency of listeners' first fixation to the target object from the onset of the referring expression. They found that listeners were faster to identify referents when precedents existed than when they did not, but this benefit was just as large when the precedent was in common ground as when it was not. This supported the idea that precedent use is partner-independent: it is based on the availability of the precedent, and not on common ground. Barr and Keysar (2002) suggested that a listener's use of precedents that are not in common ground could be a systematic source of misunderstanding in conversation, since there is no guarantee that two people who use the same term are using it to refer to the same referent.

Metzing and Brennan (2003) suggested that an important additional test case can be found in the comprehension of broken precedents, wherein a new description is used to refer to an old referent. Like Barr and Keysar (2002), Metzing and Brennan conducted an eyetracking experiment in which participants interpreted references from two different speakers. They manipulated whether an old precedent was broken or maintained in referring to a target object, as well as the identity of the speaker referring to the target. In one condition, the speaker who referred to the target was the same speaker who had originally established a precedent for that object. In another condition, the speaker was