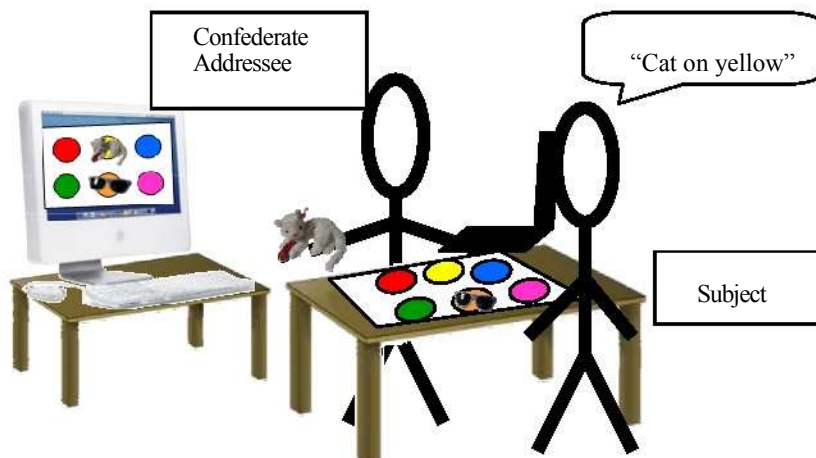


## The Effects of Addressee Attention on Prosodic Prominence

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How do speakers accommodate distracted listeners? Specifically, how does prosody change when speakers know that their addressees are multitasking? Two conflicting possibilities are considered. First, speakers might produce more acoustic prominence for distracted addressees, to ensure that important information is communicated. Prominence, as expressed by pitch and duration, among other prosodic features, is used to signal important or new information (Brown 1983, Sityaev 2000). The second possibility is that speakers might disengage from the task and use less acoustic prominence with distracted addressees. This possibility is suggested by findings that speakers produce less detailed stories when speaking to inattentive listeners (Kuhlen & Brennan 2010, Pasupathi et al. 1998). However, task demands may influence prosodic choices. Previous studies have used narrative tasks, in which there are few consequences if information is not correctly conveyed. Perhaps speakers would use more acoustic prominence to communicate important information to distracted listeners if this information were necessary for task completion. If so, a further question is whether speakers produce increased prosodic prominence globally (e.g. more extreme acoustic features overall), or produce specific acoustic prominence on the most relevant information. Such questions are relevant to models of language production because they examine how prosody is influenced by audience design. Speaker internal constraints on planning and production are known to influence prosody (Bell et al. 2003, Lam & Watson 2010), but whether prosody is influenced by addressees' attention remains underspecified.

We studied the effects of addressees' attention on speakers' prosody with two instruction-giving experiments. In both experiments, speakers (task participants) instructed listeners (confederates) to move objects to locations on a board. Objects were put on the table in pairs. Speakers viewed a computer screen that was out of sight of the listeners, which showed the object to be moved and its intended location. In Experiment 1 the target item was the second of two items, and therefore predictable. In Experiment 2 the target word was the first of two items and therefore relatively unpredictable. Target words were normed for length and frequency. In the distraction condition, addressees were also completing a demanding secondary computer task; in the attentive condition they paid full attention.



Results demonstrated that speakers modify their speech for distracted listeners, and in an instruction-giving task they specifically use more acoustically prominent (longer) pronunciations for distracted listeners. Moreover, this effect was localized to the most task-relevant information, i.e. the object that the addressee needed to move. This effect was strongest for predictable targets (Experiment 1 items). This finding suggests that speakers are more likely to reduce predictable targets with attentive than distracted addressees. We also observed nonprosodic adjustments to addressee distraction. Speakers used more words, were more likely to use determiners (the), and used more specific referring expressions to refer to the objects with distracted addressees.

In sum, speakers responded to addressee distraction with specific adjustments to words with high informational content. Speakers provided more, rather than less, prosodic prominence to distracted listeners, when task demands place a high value on information being conveyed correctly.

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