Choosing referring expressions: Are the grammatical role, linguistic competitor and visual competitor effects influenced by the presence of an addressee?

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Theories of reference claim that language users tend to produce reduced referring expressions such as pronouns when the referent is highly salient, but more explicit expressions such as repeated names and noun phrases when the referent is less salient (e.g., Ariel, 1990; Givón, 1983). Speakers are less likely to produce pronouns (rather than names or noun phrases) when the referent is an object than a subject in the preceding sentence (e.g., Brennan, 1995; Fletcher, 1984), when a competitor is mentioned than when it is not (Arnold & Griffin, 2007; Fukumura, Van Gompel, & Pickering, 2010) and when a competitor is visually present than when it is not (Fukumura et al., 2010).

An important question is whether these saliency effects are driven by the needs of the addressee, that is, whether the speaker takes into account various saliency factors because the expression has to be understood by an addressee, or whether they are unaffected by the presence of an addressee. We therefore manipulated the saliency of the referent while speakers produced referring expressions either for an addressee (Experiment 1) or in the absence of an addressee (Experiment 2). We were interested in three questions: (1) Is the effect of grammatical role (or order of mention) influenced by the presence of an addressee? (2) Is the effect of presence/absence of a linguistic competitor influenced by it? (3) Is the visual competitor effect influenced by it?

Each experiment had four conditions (Figs. 1a-d).

<table>
<thead>
<tr>
<th>Condition</th>
<th>Context sentence</th>
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<tr>
<td>a. Object antecedent, competitor linguistically and visually present</td>
<td>A supporter kicks a footballer.</td>
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<tr>
<td>b. Subject antecedent, competitor linguistically and visually present</td>
<td>A footballer kicks a supporter.</td>
</tr>
<tr>
<td>c. Subject antecedent, competitor linguistically absent but visually present</td>
<td>A footballer fails.</td>
</tr>
<tr>
<td>d. Subject antecedent, competitor linguistically and visually absent</td>
<td>A footballer fails.</td>
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Figure 1: Context sentence and picture in the four item conditions.
Participants first heard a context sentence while they saw a picture. Next, they saw another picture (Fig. 2), which showed an action of the referent that the participant had to describe. Participants could either refer using a pronoun or a noun phrase (he/the footballer throws a bottle). In Experiment 1, they described the picture to a confederate, while in Experiment 2 there was no addressee.

The results are in Figs. 3.

Participants produced fewer pronouns (and more noun phrases) when the antecedent was an object (1a) than subject (1b), but this was unaffected by whether an addressee was present or not. They also produced fewer pronouns when the competitor was linguistically present (1b) than absent (1c), and again this did not interact with addressee presence. This suggests that the grammatical role and linguistic competitor effects are not driven by cooperativeness to the addressee. It is unlikely that the absence of an interaction was due to a weak addressee manipulation, because the visual competitor effect was significantly modulated by addressee presence: In Experiment 1, participants produced fewer pronouns when the competitor was visually present (1c) than absent (1d), but there was no significant effect in Experiment 2. This suggests that the visual competitor effect is at least partly due to cooperativeness with the addressee. We argue that in the absence of an addressee, speakers only use the linguistic discourse for their choice of referring expression, whereas in the presence of an addressee, they also use the visual context.