Text change blindness and alternative focus sets
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One influential theoretical approach to focus proposes that focus status indicates the presence of alternatives that are relevant for interpretation (Féry & Krifka, 2008; Rooth, 1992). The interpretation (and thus processing) of focus crucially involves not only the focus referent itself, but also the set of alternatives to that referent, no matter whether those alternatives are given explicitly or implicitly. We used a text-change methodology to investigate whether members of alternative focus sets were processed as part of focus interpretation.

Previous work using text-change has found that readers are poorer at detecting whether a single word has changed between two presentations of a text if the changed word in the second presentation (the replacement) is semantically related to the word in the first presentation (the original) (Sanford & Sturt, 2002). Detection accuracy is improved when the changed word is focused (Sturt et al., 2004), and some evidence suggests this focusing effect may be due to an increased strength of representation of the focused referent and a suppression of the non-focused referents in the text (Sanford et al., 2009).

However, no prior work has explicitly examined focus-alternative replacements, and it is not known whether detection accuracy will be influenced by replacements taken from implicit or explicit alternative sets. According to the alternative focus approach, in a constrained context there should be a finite set of alternatives that will be considered as part of interpreting the focus referent, even when an alternative set is not explicitly given. If this set of alternatives is considered as part of focus processing, then it could interfere with readers’ ability to accurately determine whether the focus was the previously given referent or the activated alternative. This means that change detection should become more difficult when the changed word comes from the set of alternatives in the text, and further, that this should be the case even if the alternative set is not explicitly given as a set. However, it is also possible that focus is not interpreted against an alternative set if one is not provided. In this case, we would expect to see no increased difficulty for detection for members of an alternative set.

We tested these predictions with short passages that contained question-answer pairs and clefts to manipulate focus and alternative set membership. In the example, the words in square brackets show the original word followed by the replacement. The replacement was a previously unmentioned word (New), from an explicit alternative set (Explicit set), from an implicit set (Implicit set), or a previously mentioned word that was not part of the alternative set (Other). Target words were controlled for frequency

Our results show that detection accuracy for new replacements was 97%, which was significantly higher than all other replacement types (Explicit: 81%, Implicit: 83%, Other: 88%). The accuracy rate for other replacements was numerically larger than for explicit and implicit replacements, but only reached marginal significance in comparisons against the explicit replacement. These results are consistent with the idea that focus alternatives are considered as part of focus processing.

Stimulus Example
First two sentences (all conditions): A chef and a waiter were quickly plating some dishes in the kitchen. There were several things they needed to work with, including zucchini, spinach and some rice.

New ending: The waiter asked what the chef’s favorite part of the dish was, the zucchini or the spinach. According to the chef, it was the [zucchini/broccoli] that was his favorite. He’d loved it since he was a kid.

Explicit ending: The waiter asked what the chef’s favorite part of the dish was, the zucchini or the spinach. According to the chef, it was the [zucchini/spinach] that was his favorite. He’d loved it since he was a kid.

Implicit ending: The waiter asked what the chef’s favorite part of the dish was. According to the chef, it was the [zucchini/spinach] that was his favorite. He’d loved it since he was a kid.

Other ending: The waiter asked what the chef’s favorite part of the dish was, the zucchini or the spinach. According to the chef, it was the [zucchini/rice] that was his favorite. He’d loved it since he was a kid.