

Contrastive utterances make alternatives salient – cross-modal priming evidence

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Abstract

Sentences with contrastive intonation are assumed to presuppose contextual alternatives to the accented elements. Two cross-modal priming experiments tested in Dutch whether such contextual alternatives are automatically available to listeners. Contrastive associates – but not non-contrastive associates – were facilitated only when primes were produced in sentences with contrastive intonation, indicating that contrastive intonation makes unmentioned contextual alternatives immediately available. Possibly, contrastive contours trigger a “presupposition resolution mechanism” by which these alternatives become salient.

Index Terms: contrast, intonation, cross-modal priming

1. Introduction

Some intonation contours render utterances contrastive, i.e. they convey contrastive or corrective information (e.g., ‘DIRK photographed a FLAMINGO’). In addition to the literal meaning, such contrastive utterances presuppose contextual alternatives to the accented items (someone else photographing something else, cf. [1]). We tested whether listeners generate salient alternative concepts (e.g., ‘pelican’) upon hearing syntactically neutral sentences with contrastive accents.

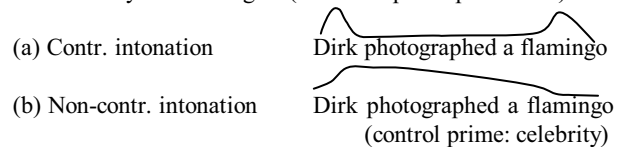
Previous eye tracking research has shown that listeners use intonational information, such as accentuation or pitch accent type, together with the situational context to identify whether an upcoming referent should be interpreted as given, new, or contrastive [2,3,4,5].

Contrastive utterances can also be produced without a preceding linguistic context and potentially generate extremely salient contrastive alternatives. In this study we used cross-modal associative priming [6,7] to investigate whether contrastive utterances *out of context* automatically make such alternatives salient. We tested whether the recognition of contrastive associates is facilitated by the presentation of a contrastive utterance compared to a non-contrastive one.

2. Method

Thirty-six Dutch trisyllabic primes (e.g., ‘flamingo’) with stress on the 2nd syllable were positioned sentence-finally. Contrastive alternatives (e.g., ‘pelican’) to the primes were selected and non-contrastive associates (e.g., ‘pink’) were collected using a web-based interface (free recall). Mean association strength on a scale from 1 (unrelated) to 7 (related) was 5.5 for prime and contrastive targets and 6.2 for prime and non-contrastive targets. For each sentence one unrelated control prime was selected (e.g. ‘celebrity’). The independent variables *intonation* (contrastive vs. non-contrastive) and *prime* (control vs. experimental) were crossed. Sentences with experimental and control primes were recorded with a contrastive (a) and non-contrastive (b)

intonation. Exp. 1 tested the recognition of contrastively related visual targets; Exp. 2 tested the recognition of non-contrastively related targets (40 Dutch participants each).



3. Results and Discussion

Log reaction times for correct responses (<1100ms) were analyzed with linear mixed-effects models with participants and items as crossed random factors. For contrastive alternatives, a significant interaction between *prime* and *intonation* ($F(1,1280)=4.4, p<0.05$) revealed faster responses to contrastive alternatives only after a contrastive intonation (on average 20ms, Fig. 1a). For non-contrastive associates a main effect of *prime* ($F(1,1334)=4.9, p<0.05$) showed faster responses (9 ms) independent of intonation (Fig. 1b).

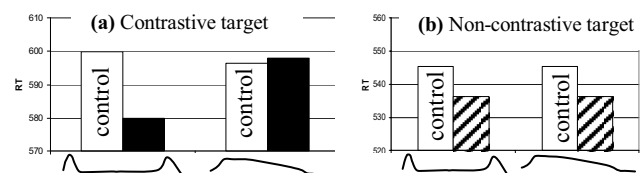


Figure 1: Effects for contrastive and non-contrastive targets

4. Conclusion

Sentences with contrastive intonation make conceptual alternatives very salient and hence easier to recognize – even in the absence of linguistic context. We suggest that contrastive contours trigger a “presupposition resolution mechanism”, which provides alternatives to the accented items.

5. References

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