

The prosody of contrastive focus and VERUM focus in rejections

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Rejections are speech acts by which a speaker signals that they do not accept a proposition p associated with the previous utterance into the common ground. Rejections may simply negate the truth of p , e.g., by *No!*, and then the speaker may add a correction. Rejections may also directly correct the previous utterance. Hence, corrections are a subtype of rejections. Corrections typically contain (narrow) contrastive focus, or, if the rejected proposition is negative ($\neg p$), they may also contain so-called VERUM focus, by which a speaker highlights the truth of p .

In German, contrastive narrow focus has been proposed to be marked with increased prosodic prominence of the accent on the focused expression compared to non-contrastive narrow focus [1, 2, 3]. However, the manipulation of the focus structure of the target utterance involved a confounded manipulation of contrast and correction: Narrow non-contrastive focus was elicited in assertions (e.g., A: *What does Nina want to tailor?* B: *Nina wants to tailor blouses_{Foc}*), and contrastive focus in corrections (e.g., *Does Nina want to tailor trousers?* B: *Nina ... blouses_{Foc}*). Thus, it is unclear if the observed prominence increase is a result of contrast marking or of speech act marking. The present study aims to disentangle the effects of contrast and of speech act by investigating focus types in rejections only: If we find effects of contrast, contrast marking is not dependent on speech act marking.

The second aim of this study is to investigate the prosody of German rejections more generally. For other languages (e.g., English and Catalan), rejections have been observed to be marked by the so-called contradiction contour (a rise-fall-rise), but this contour is also associated with other meaning components (e.g., obviousness). For German, no such contradiction contour has been described but there is evidence on the prosody of VERUM focus, which is marked by an accent on the finite verb, with different accent types depending on discourse context [4, 5, 6]. For perception, [7] found that for the marking of VERUM in utterances rejecting negative assertions L*+H is most appropriate, L+H* less appropriate and H* least appropriate. [7] also found that prosodic marking of lexical contrast in corrections is judged as most appropriate with L+H* and least appropriate with L*+H.

We present evidence from a production study (24 participants; 1116 utterances), which compared rejections whose information structure was manipulated by the context in a triadic pseudo-dialogue. The target sentences were transitive with an auxiliary, a lexical verb, an adverb and a modal particle (signaling that the addressee should already be aware of the truth of the sentence); see Table 1. There were four conditions: the object and lexical verb were either both new ($O_N V_N$ = broad focus) or both given ($O_G V_G$), or there was narrow contrastive focus on either the object ($O_C V_G$) or the lexical verb ($O_G V_C$). In broad-focus assertions, the nuclear accent in a transitive sentence would be on the object.

Fig. 1 shows nuclear accent locations by condition. In $O_N V_N$, most nuclear accents were on the object, but there was also a high proportion of VERUM focus marking on the auxiliary (19% of utterances) and late nuclear accents on the lexical verb (11%). In $O_G V_G$, most utterances contained VERUM focus marking (52%) or an accent on *doch* (31%). Finally, contrastive focus on the object or the lexical verb attracted the nuclear accent to that element, with a stronger tendency for the object (97%) than for the lexical verb (79%). VERUM focus was very rare in either narrow-focus condition.

Regarding accent types, we focus here on L+H*, which was associated with contrast, as expected. The proportion of L+H* (relative to H*) significantly increased for contrastive relative to new objects (mixed models; $p < 0.001$), and L+H* was by far the most common accent type on contrastive verbs (Fig. 3). However, L+H* was also more common than H* on new objects, and commonly occurred with VERUM focus (in line with [7]). Comparing accented objects in broad focus ($O_N V_N$) and contrastive focus, the stressed syllables of contrastive objects were significantly longer than those of new objects ($p < 0.001$). Pitch excursion was higher, but not significantly so (Fig. 2).

Overall, we find accentuation patterns in rejections that are different from what is known for assertions: In the absence of lexical contrast, there frequently is VERUM focus marking as well as accentuation of the modal particle *doch* (an interesting finding because unaccented and accented *doch* have been argued to have different meanings [8]). As for the relationship between contrast and speech act marking (corrections), we find that contrast marking is independent of speech act marking.

Table 1: *Overview of experimental contexts for one item*

O _N V _N :	I don't think that Nina wants to make clothes herself in that workshop.
O _C V _G / O _G V _C :	I think that Nina wants to {tailor trousers / embroider blouses}.
O _G V _G :	I hope Nina doesn't want to tailor blouses in that workshop.
Target:	Nina will da doch Blusen schneidern! <i>Nina wants there MP blouses tailor</i> 'Nina (does) want(s) to tailor blouses there!'

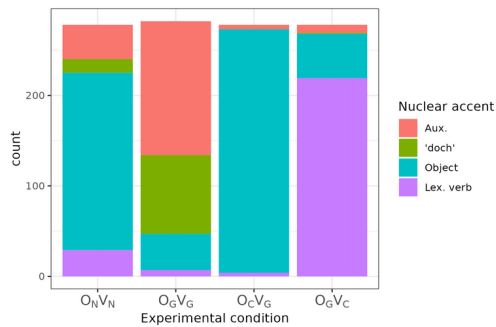


Figure 1: *Nuclear accent location by experimental condition.*

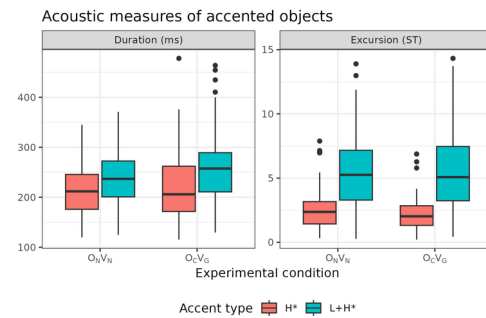


Figure 2: *Acoustic measures of accented objects, broad vs. contrastive object focus.*

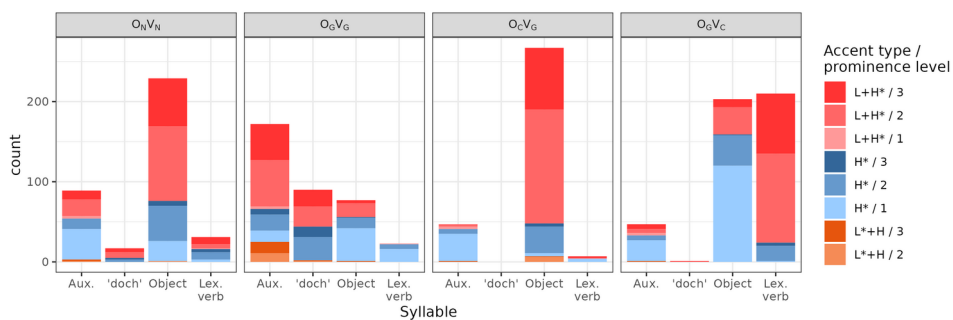


Figure 3: *Combinations of accent type and prominence levels, most common accent types only.*

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