

Correction and acceptance by contrastive focus

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Abstract

An account is presented of the focus properties, common ground effect and dialogue behaviour of the accented German discourse marker *doch* and the accented sentence negation *nicht*. It is argued that *doch* and *nicht* evoke as a focus alternative the logical complement of the proposition expressed by the sentence in which they occur, and that an analysis in terms of contrastive focus accounts for their effect on the common ground and their function in dialogue.

1 Introduction

Recently, there has been an increased interest in the relation between information structure and discourse structure (cf. e.g. (Kruijff-Korbayová and Steedman, 2003; Umbach, 2004; Jasinskaja et al., 2004)). This paper aims at contributing to the ongoing discussion by extending its scope further to dialogue structure. I present an account of the dialogue function of utterances containing focussed constituents of a type that has been scarcely studied with respect to their focus properties, namely the accented German discourse marker *doch* and the accented sentence negation *nicht*. I suggest that the focus properties of these items in the type of utterances I discuss are best captured in terms of contrastive focus, which in a focus-semantic framework such as Rooth (1992) allows viewing them as having anaphoric properties. These anaphoric properties are furthermore seen as responsible for a pattern I observe with respect to the behaviour of focussed *doch* and *nicht* in dialogue: typically, utterances containing accented *doch* and *nicht* serve as corrections in dialogue. However,

when the context does not license an utterance to be corrected, the use of *doch* and *nicht* is not infelicitous but the utterance is interpreted as acceptance. On my account, accented *doch* and *nicht* evoke as a focus alternative the logical complement of the proposition expressed by the sentence in which they occur. When the context contains a suitable antecedent to which the focus alternative can be linked, then the utterance is interpreted as a correction, when not, it is interpreted as acceptance.

I argue furthermore that an analysis of *doch* and *nicht* in terms of contrastive focus accounts for their invariant effect on the common ground irrespective of their use in corrections or acceptances. I suggest that a taxonomy of dialogue moves that takes into consideration how the common ground is established and changed, such as the one proposed in Traum (1994), is needed to capture the dialogue behaviour of the utterances containing these focussed expressions.

The paper is organised as follows. Section 2 introduces the notion of correction and discusses examples of corrections involving focussed *doch* and *nicht*. Section 3 deals with the focus properties of *doch* and *nicht* and Section 4 explores the notion of contrastive focus with respect to correction utterances containing these expressions. Section 5 discusses examples of acceptance with focussed *doch* and *nicht* and the question of the suitable dialogue move taxonomy. The results are summarised in Section 6.

2 Correction

One of the most comprehensive treatments of correction I am aware of is Steube (2001). One condition for interpreting an utterance as correction is according to her that the sentence that is corrected,

called *corrigendum*, is explicitly given immediately before the correcting sentence, called *corrigens*. I will adopt this terminology in what follows. According to Steube, the semantics of corrections boils down to indicating that the corrigendum is not true or correct. In terms of pragmatics, corrections suggest that the corrigendum should be removed from the common ground (CG). The corrigens proposes furthermore a replacement to be added to the CG instead of the corrigendum.

Steube (2001) distinguishes two types of correction constructions. The first type involves a complex sentence as corrigens, where the first part contains the explicitly negated corrigendum and the second part, introduced by *but* in English and *sondern* in German, provides the replacement, cf. (1a).¹ The second type is called “backward-related corrections with contrastive focus” and is illustrated by (1b). It involves a corrigens which contains a contrastively focussed replacement of the constituent to be corrected.

- (1) A: [Paul]_F kommt.
 'Paul is coming'
 a. B: Nicht [Paul]_F kommt, sondern [Peter]_{CF}.
 'Not Paul is coming but Peter.'
 b. B: [Peter]_{CF} kommt.
 'Peter is coming.'

The cases of correction I will discuss here involve the focussed discourse marker *doch* and the focussed sentence negation *nicht*. They are not considered by Steube but can nevertheless be assigned to her second type of correction constructions, namely the backward-related corrections with contrastive focus. What is particular about corrections with focussed *doch* and *nicht* is that they involve two sentences which differ only in their polarity, which suggests that the polarity is the only part of the sentence that is corrected.²

Let's look at some examples. In corrections, accented *doch* has two possible realisations: (i) as a sentence equivalent, where it is categorised as a response particle, and (ii) in the middle field of the German sentence, where it is categorised as an adverb.³ The response particle (henceforth, RP)

¹F denotes focus and CF contrastive focus.

²This is reminiscent of what is known as “verum focus” (“polarity focus”). I'll point at some differences in Sec. 3.

³Adverbial *doch* can also occupy the initial field of the German sentence, where it is also accented, but without serving correction purposes.

doch has the function of refuting an immediately preceding negated sentence, thus asserting that the positive counterpart of the sentence is true. Intuitively, (2B) rejects the preceding statement that Karl was not at the party and asserts that, on the contrary, he was at the party:

- (2) A: Karl war nicht auf meiner Party.
 'Karl was not at my party.'
 B: DOCH.⁴ (= Karl war auf deiner Party.)
 'He was indeed.'

From a dialogue structural point of view, (2B) serves as a correction. As a sentence equivalent, RP asserts the positive counterpart *p* of the proposition $\neg p$ expressed by the preceding sentence, as indicated in the example.⁵ (2B) suggests that the proposition $\neg p$ expressed by the preceding sentence is not true and that it is not accepted as an update of the CG. The proposition *p* asserted by (2B) is suggested as a replacement to be added to the CG (cf. also Zeevat (2005) who points out that the intended change of stressed *doch* to the CG is a combination of retraction of not- ϕ and the addition of ϕ as a replacement, where ϕ is the content of the utterance).

A similar effect can be observed in the case of the other accented use of *doch* we will consider, namely adverbial *doch* in the middle field. In (3),⁶ the *doch* utterance serves as a (self)correction.⁷ A₂ offers a replacement *p* for the proposition $\neg p$ expressed by A₁ to be added to the CG:⁸

- (3) A₁: **es geht nicht**.
 'it does not work'
 B₁: du musst die Schraube drehen, [...]
 'you must turn the screw'

⁴Small capitals denote accent.

⁵The preceding utterance may be uttered by the same speaker (self-correction) or a different speaker (correction).

⁶This example is taken from the Baufix corpus, <http://www.sfb360.uni-bielefeld.de/transkript/>

⁷The same example could be modified into a proper correction:

- (1) A₁: **es geht nicht**.
 'it does not work'
 B₁: du musst die Schraube drehen, [...]
 'you must turn the screw'
 A₂: [...] hast recht
 'you are right'
 B₂: Na siehst du? **es geht DOCH**
 'What did I tell you? It works.'

⁸Self-corrections like (3) are at the same time cases of belief revision, which can be seen as a special case of revision of the CG, cf. Section 5.

A₂: [...] hast recht, **es geht** DOCH
'you are right, it works'

One difference here compared to the RP use of *doch* is that the corrigendum lies further back in the dialogue context, which however does not affect the correction interpretation of (3A₂).⁹

Finally, accented sentence negation *nicht* can also serve as a correction (cf. also Zeevat (2004)). Consider (4), where we have a similar situation as in (2), except for the fact that the polarity of the sentences is switched:

- (4) A: Karl war auf meiner Party.
'Karl was at my party.'
B: Er war NICHT da.
'He wasn't there.'

(4B) negates (4A), asserting thus the logical complement $\neg p$ of the proposition p expressed by (4A). Just like (2B), (4B) suggests that the proposition expressed by the preceding utterance, here p , is not true and therefore not accepted as an update of the CG. (4B) expressing $\neg p$ is offered as an update instead.

According to Steube, the entities in the focus domain of the contrastive focus replace type-identical entities of the corresponding corrigenda. In the examples of *doch* and *nicht* above, however, the entities that are proposed as replacements are the entire negative or positive propositions expressed by the respective corrigens (2B), (3B) and (4B). Nevertheless, the domain of the contrastive focus of *doch* and *nicht* cannot be seen as stretching over the entire sentence, since only the polarity is corrected, the rest being known from the context (given). The entities that are replaced are the reversed polarity propositions expressed by the respective corrigenda (2A), (3A) and (4A), i.e., the entire corrigens replaces the entire corrigendum.

Steube points out further that the correcting speaker regards the entity that is replaced by the corresponding entity in the focus domain of the contrastive focus as an untrue alternative. In alternative semantics, however, focussed expressions give rise to alternatives of the entire underlying proposition rather than of just the focussed element (Rooth, 1992). Moreover, contrastive focus evokes an alternative proposition that should be

⁹Exchanges like A: *Es geht nicht*. B: *Es geht* DOCH. are considered marginal by native speakers. The shorter follow-up utterance with the RP, B: DOCH, is preferred.

anaphorically recoverable from the context.¹⁰ Intuitively, in our examples this alternative coincides with the corrigendum.

In order to spell out these intuitions in a more precise way, we next turn to the question of the focus properties of *doch* and *nicht*.

3 The focus properties of *doch* and *nicht*

In alternative semantics (Rooth, 1992), a focussed expression is accounted for by assuming that it adds a focus semantic value $[[\cdot]]^f$ to the semantic interpretation of the sentence. The focus semantic value represents a set of alternatives - a set of propositions which contrast with the ordinary semantic value $[[\cdot]]^o$ and which are "obtainable from the ordinary semantic value by making a substitution in the position corresponding to the focussed phrase" (ibid., p. 76). The ordinary semantic value is always an element of the focus semantic value. The set of alternatives is salient but not necessarily explicitly mentioned and contains only alternatives which are type-identical with the focussed expression.

In what follows, I examine what the focus sets of alternatives evoked by *doch* and *nicht* look like. I start with the focussed sentence negation *nicht* since it, in contrast to *doch*, has been studied before from this angle, albeit only rudimentarily, to my knowledge.

3.1 Focussed *nicht*

Höhle (1992) suggests that the focussed sentence negation constitutes a set of alternatives together with expressions like *vielleicht* ('maybe'), *bestimmt* ('surely') and *wahrscheinlich* ('probably') by means of which the speaker "expresses his opinion with respect to the truth content of the contextually given thought".¹¹ Höhle's considerations regarding this issue are very brief and remain at the intuitive level. On closer examination, they do not prove right. Consider the examples on which Höhle bases his assumption:

- (5) A: VIELLEICHT hört er ihr zu.
'Maybe he listens to her.'
A': er hört ihr BESTIMMT zu
'Sure he listens to her.'

¹⁰Steube's treatment of contrastive focus seems to be consistent with this view but is set in the more cognitively oriented "two-level semantics" framework.

¹¹Höhle suggests furthermore that focussed sentence negation and verum focus give rise to one and the same set of alternatives.

B: (nein) er hört ihr NICHT zu
'(no) he does not listen to her'

The focussed negation particle *nicht* in (5B) seems to be contrasted with neither *vielleicht* nor *bestimmt* but just with the positive counterpart *p* of the proposition $\neg p$ expressed by (5B).¹² This is suggested by the fact that (5B) can only be interpreted as 'it is not the case that he listens to her' and not as 'it is not the case that it is possible/certain that he listens to her'. The reason for that is the fact that epistemic modals such as *vielleicht* and *bestimmt* do not contribute to the propositional content of the sentence and thus cannot be challenged by another speaker (cf. also Romero (2005)).

This suggests that the set of alternatives evoked by focussed *nicht* contains only two elements: the negated proposition that is asserted and represents the ordinary semantic value of the sentence, $\llbracket [S \text{er hört ihr nicht zu}] \rrbracket^o$, and its positive counterpart: $\llbracket [S \text{er hört ihr [NICHT]}_F \text{zu}] \rrbracket^f = \{ \llbracket [S \text{er hört ihr nicht zu}] \rrbracket^o, \llbracket [S \text{er hört ihr zu}] \rrbracket^o \}$. This can be generalised as $\llbracket [S [\text{nicht}]_F S] \rrbracket^f = \{-p, p\}$, where *p* is the proposition expressed by the sentence *S*.

3.2 Focussed *doch*

As in the case of focussed *nicht*, *doch* cannot be understood as being contrasted with modal expressions: (6B) asserts that Karl has lied, rather than that he has *actually* not lied (as opposed to him *possibly* not lying):

- (6) A: Karl hat vielleicht nicht gelogen.
'Maybe Karl did not lie.'
B: DOCH. (=Karl hat gelogen.)
'He has indeed.'

This suggests that just like focussed sentence negation, RP *doch* contrasts the asserted proposition with its negative counterpart. In other words, the focus semantic value of RP *doch* is the set containing its ordinary semantic value $\llbracket [S \text{doch}] \rrbracket^o = p$ and the alternative that contrasts with it, namely $\neg p$. I.e., $\llbracket [S [\text{doch}]_F] \rrbracket^f = \{p, \neg p\}$, where *p* is a

¹²This is also one of the differences to verum focus, which serves not only to establish a contrast between true and false, but also between possibly true/false and actually true/false, cf.:

- (1) A: VIELLEICHT hört er ihr zu.
'Maybe he listens to her.'
B: er HÖRT ihr zu
'He DOES listen to her.'

proposition negated (or asserted, cf. (14)) by the immediately preceding sentence. The same applies also for adverbial *doch*: in (7) (a modified version of (3)), *doch* is contrasted with the negation in (7A₁) rather than with the modal expression *bestimmt*:

- (7) A₁: es geht BESTIMMT nicht.
'it certainly does not work'
B₁: du musst die Schraube drehen, [...]
A₂: [...] hast recht, es geht DOCH

In other words, $\llbracket [S \text{doch}]_F S \rrbracket^f = \{p, \neg p\}$. Note however that, in contrast to the RP *doch*, the proposition asserted by adverbial *doch* may also be negative (cf. *Es geht DOCH nicht*).

This means that the focus sets of alternatives evoked by focussed *doch* and *nicht* are identical ($\llbracket [S \text{doch}]_F \rrbracket^f = \llbracket [S \text{nicht}]_F \rrbracket^f$), the difference being the distinct ordinary semantic values that are elements of the focus set of alternatives: *p* for the RP *doch*, $\neg p$ for *nicht* and either of the two in the case of adverbial *doch*.

4 Contrastive focus

Following Rooth (1992), focus may have two main functions, depending on how the uttered sentence is understood against the salient set of alternatives: exhaustive focus and contrastive focus. In the case of exhaustive focus, the function of the accent is to signal that the focussed expression is the only one that is true out of the set of alternatives, e.g., in question-answer pairs. In the case of contrastive focus, accent signals that the focussed expression contrasts with a previously uttered member of the focus set of alternatives. Following Rooth (1992), a phrase α is contrasting with a phrase β , if $\llbracket [\beta] \rrbracket^o \in \llbracket [\alpha] \rrbracket^f$ and $\llbracket [\beta] \rrbracket^o \neq \llbracket [\alpha] \rrbracket^o$.

Focus on *nicht* may be exhaustive, such as in question-answer contexts like (8):

- (8) A: War Karl auf deiner Party? $p \vee \neg p$
'Was Karl at your party?'
B: Nein, er war NICHT da. $\neg p$
'No, he wasn't there.'

Here, the answer given, $\neg p$, is suggested as the only one that is true out of the set of alternatives $\{p, \neg p\}$ determined by the question.

On the other hand, in a context like (9A), the focus on *nicht* is contrastive. Here, the ordinary semantic value *p* of the contrasting phrase *S* is a previously uttered member of the focus set of alternatives evoked by *nicht*:

- (9) A: Karl war auf deiner Party. $\llbracket S \rrbracket^o = p$
 'Karl was at your party.'
 B: Er war NICHT da. $\llbracket [S[\text{nicht}]_F S] \rrbracket^f =$
 $\{\neg p, p\}$
 'He wasn't there.'

Focus on *doch* seems to be always contrastive: in (10), what answers the question is $\neg p$ and not *doch* $\neg p$. In fact, the latter provides additional information about the expectations of the speaker, presenting thus an overinformative answer: Focus on *doch* signals that the opposite, p , was expected to hold:

- (10) A: War Karl auf deiner Party? $p \vee \neg p$
 'Was Karl at your party?'
 B: Nein, er war DOCH nicht da. $\neg p$
 'No, he wasn't there after all.'

In corrections like (11), the expectation (here $\neg p$) that is a member of the focus set of alternatives evoked by *doch*, is previously mentioned:

- (11) A₁: es geht nicht. $\llbracket S \rrbracket^o = \neg p$
 B₁: [...]
 A₂: [...] es geht DOCH
 $\llbracket [S[\text{doch}]_F S] \rrbracket^f = \{p, \neg p\}$

Similarly, focus on RP *doch* seems to be always contrastive: although *doch* answers the question $\neg p$? in (12), the context does not license a set of alternatives from which one could be chosen and presented as the only true one.¹³

- (12) A: War Karl nicht auf deiner Party? $\neg p$?
 'Wasn't Karl at your party?'
 B: DOCH. p
 'He was indeed.'

An analysis of the RP *doch* in terms of contrastive focus correctly predicts that the ordinary semantic value $\neg p$ of the contrasting phrase S is a previously uttered member of the focus set of alternatives evoked by *doch*:

- (13) A: K war nicht auf der Party. $\llbracket S \rrbracket^o = \neg p$
 B: DOCH. $\llbracket [S[\text{doch}]_F S] \rrbracket^f = \{p, \neg p\}$

¹³That focus on the RP *doch* cannot be interpreted as exhaustive is also suggested by the fact that even though *doch* can be used in the context of (8A), it is not understood as an answer to a polar question but to the biased question $\neg p$?, cf. also (14) in Section 5.

5 Contrastive focus, discourse relations and dialogue moves

The focus properties of *doch* and *nicht* and their function as contrastive focus presented in the previous two sections account for their use in corrections: the preceding context contains a corrigendum which is an element of the focus set of alternatives of *doch* and *nicht* respectively.

Correction is usually viewed as a discourse relation which also can manifest itself in dialogue (cf. Asher (1998)). Umbach (2004) relates the discourse relation of correction to the information structural notion of contrast between alternatives. She views correction as a special case of contrast where one element of the set of alternatives evoked by an accented expression is excluded by substitution: the asserted element is presented as a replacement for the alternative, suggesting that the former should be added to the CG and the latter removed from it. Umbach assigns the same interpretation to contrastive focus, i.e. a common property of correction and contrastive focus is the exclusion of an alternative by means of substitution. This view is consistent with Steube (2001) and the data I presented.¹⁴

It can be argued, however, that the effect of contrastive focus on the CG we witnessed in the case of corrections with focussed *doch* and *nicht*, is preserved also in contexts in which the same utterances indicate agreement. The following examples illustrate this point.

In some cases, the RP *doch* can indicate acceptance. There it is used as a response to a positively formulated statement, cf. (14). The use of the RP is however understood as the result of reinterpreting the preceding utterance as expressing a negative bias towards the truth of the proposition, as the reconstructed negated question suggests (cf. Helbig (1988)):

¹⁴Note, however, that Rooth's notion of contrastive focus (CF) cannot be equated with correction: no substitution is involved in his example *An American_F farmer was talking to a Canadian_F farmer*. This sentence can be interpreted as correction only when produced with *contrastive accents* on the focussed expressions. Thus, we need to distinguish two different concepts of CF: a broader, Roothian one in terms of contextual boundedness (corresponding to Umbach's contrast) involving normal accent, and a narrower one involving contrastive accent and signalling additionally context revision (corresponding to Steube's and Umbach's CF). In the case of *doch* and *nicht* we are dealing with the narrower notion, although the nature of their accent type has not been extensively studied yet.

- (14) A: Das war sehr freundlich von ihm. p (\rightarrow
 War das nicht sehr freundlich von ihm?
 $\neg p$?)
 'This was very nice of him. (Wasn't it?)'
 B: DOCH, das muss man sagen.
 'It certainly was.'

Although (14B) does not serve as a correction since the context does not provide an explicit corrigendum, accent on *doch* evokes the alternative proposition $\neg p$ and indicates that this proposition should be retracted from the CG and replaced by its positive counterpart p .

The same effect can be observed with respect to the adverbial *doch*. Consider (15B), which does not serve the purpose of correcting, but is rather interpreted as the speaker accepting the information p just received and expressing an earlier opposite expectation $\neg p$. The latter is a member of the focus set of alternatives that *doch* gives rise to. This alternative is moreover discarded, i.e. (15B) indicates that $\neg p$ should be retracted from the CG and replaced by p .¹⁵

- (15) A: Karl hat gelogen. p
 'Karl lied.'
 B: Er hat (also) DOCH gelogen. p
 'He lied after all.'

Depending on whether the opposite expectation $\neg p$ was verbalised or not, (15B) may be seen as either a correction (with the respective verbalised expectation as corrigendum) or belief revision. Belief revision can be seen as a special case of CG-revision, since the CG (the things on which A and B agree) does not change with respect to a proposition p before p is added to or deleted from the set of private beliefs of the interlocutors.

Finally, utterances with the accented sentence negation *nicht* can also indicate acceptance. Consider (16) where the negated statement (16A) is accepted rather than denied by the negated statement in (16B). (16B) suggests furthermore that the opposite p was expected and that this expectation was not met.¹⁶

- (16) A: Karl hat nicht gelogen. $\neg p$
 'Karl did not lie.'

¹⁵The polarity of the sentences does not matter, as soon as it is the same in both utterances, i.e. we get the same interpretation when both sentences are negated, i.e. A: *Karl hat nicht gelogen*. B: *Er hat (also) DOCH nicht gelogen*.

¹⁶With a rising intonation, (16B) can be interpreted as a confirmation question motivated by a conflicting expectation, cf. Zeevat (2004).

- B: Er hat (also) NICHT gelogen. $\neg p$
 '(So) He did not lie after all.'

Like in the *doch* examples above, *nicht* in (16B) evokes an alternative proposition, here p , and indicates that it should be replaced in the CG by what is asserted, namely $\neg p$. The use of the modal particle *also* in (16B) is a further indication of this interpretation. The particle *also* refers to a consequence (explanation, constatement, confirmation, summary or result) from a preceding utterance or a deliberation of the speaker or the hearer (König et al., 1990). Without *also*, and with the proper intonation, the utterance may also be understood as a clarification question motivated by some conflicting expectation. That there is a conflicting expectation is indicated by the accent on *nicht*:

- (17) A: Karl hat nicht gelogen. $\neg p$
 'Karl did not lie.'
 B: Er hat NICHT gelogen? $\neg p$
 'He did not lie?'

All the same, questions like (17B) induce changes of the CG, as they, like corrections, occur in dialogue phases where the content of the CG is negotiated.¹⁷

I suggest to account for the acceptance cases by assuming that the focus sets of alternatives evoked by *doch* and *nicht* are accommodated. According to Rooth, the set of alternatives is salient but need not be explicitly mentioned. It could be argued that in the case of acceptance, accent on *doch* and *nicht* makes the set of alternatives salient.¹⁸

Accommodation seems to be an especially suitable way of accounting for cases like (14). Here, accommodation makes sure that the evoked alternative $\neg p$ is added to the context of interpreting the *doch*-utterance, which is equivalent to reinterpreting the preceding sentence (14A) as being negated.

In the case of adverbial *doch*, the evoked alternative may have been mentioned earlier in the dialogue, by either of the interlocutors, in which case it can be bound. The resulting utterance is a

¹⁷Another possible interpretation of (17B) is as a clarification request motivated by uncertainty on the part of B of whether he heard right. Intuitively, such a case fits into our analysis, since the part of the preceding utterance that requires clarification is its polarity.

¹⁸According to Zeevat (2004), a reason for prosodic prominence is that an alternative is activated. Here, however, the alternative becomes activated as a consequence of focussing, i.e. another reason for the prominence may be activation of nonsalient alternatives. In either case, contrastive focus requires that the alternative is removed from the CG and replaced by the prominent item.

(self)correction with respect to some earlier commitment and at the same time acceptance with respect to the immediately preceding contribution of the other interlocutor. The evoked alternative may however also represent a non-verbalised assumption of the speaker, in which case the information that the speaker used to believe the opposite is added to the CG, i.e. is accommodated.

The case of *nicht* seems to be analogous to adverbial *doch*, i.e. it is possible to imagine a situation where A or B has committed himself to the opposite belief at an earlier stage of the dialogue. Another possibility is that the belief was not manifested in the dialogue, in which case it must be accommodated.

Thus, although context is what determines whether the utterances we discussed serve as corrections or acceptances in dialogue, contrastive focus has in either case the effect of inducing CG-revision. How can this be accounted for in terms of the dialogue move(s) that the respective utterance performs? A look at existing dialogue move classifications and coding schemes reveals that the majority of them do not provide for a level at which the CG-revision takes place (cf. e.g. (Alexandersson et al., 1998), (Allen and Core, 1996)). Corrections are missing from these schemes, the only possibility being to tag them as rejections at the level of their content. The only model that seems suitable to account for the data I presented is Traum's (1994) classification of conversation acts into four different types anchored at different levels of action "necessary to express the content and maintaining the coherence of conversation": turn-taking acts, grounding acts, core speech acts and argumentation acts. In this scheme, the CG-revision aspect of contrastive focus can be accounted for at the level of grounding. This is also consistent with Steube's view that a corrigens blocks the continuous development of a text or dialogue and complies with our characterisation of corrections as representing a process of negotiating the CG. More closely, the scheme provides a grounding act Repair defined as an utterance that changes the content of the discourse unit and that may be a correction of previously uttered material or addition of omitted material. Repairs are characterised furthermore as concerning merely the grounding of content. Thus, the cases of what I called "corrections" with focussed *doch* and *nicht* would be labelled Repair at the level

of grounding acts and Reject at the level of core speech acts. Analogously, the acceptance cases would represent the same grounding act of Repair, but a core speech act Accept.

6 Summary and conclusions

I argued that utterances containing focussed *doch* and *nicht* may function as either corrections or acceptances, depending on whether the preceding context contains an element of the set of alternatives that *doch* and *nicht* evoke, or not. In both the case of correction and acceptance, the focus on *doch* and *nicht* is contrastive and the utterance has the effect of revising the common ground. I suggest that a suitable dialogue move taxonomy has to provide for a level that captures the process of grounding.

It is a subject of further research to work out the broader implications that phenomena like the ones described here have for the relation between information structure and dialogue structure, as well as to work out the details of the analysis in a dynamic semantics framework.

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References

- Jan Alexandersson, Bianka Buschbeck-Wolf, and al. 1998. Dialogue acts in Verbmobil-2. Verbmobil-report nr.226, DFKI GmbH, Saarbrücken.
- James Allen and Mark Core. 1996. Draft of DAMSL. <http://www.cs.rochester.edu/research/speech/damsl>.
- Nicholas Asher. 1998. Varieties of discourse structure in dialogue. In *Proceedings of the 2nd International Workshop on Dialogue*, Twente.
- Gerhard Helbig. 1988. *Lexikon deutscher Partikeln*. Verlag Enzyklopädie, Leipzig.
- Tilman N. Höhle. 1992. Über Verum-Focus im Deutschen. In Joachim Jacobs, editor, *Informationsstruktur und Grammatik*. Westdeutscher Verlag, Opladen.
- Ekaterina Jasinskaja, Jörg Mayer, and David Schlangen. 2004. Discourse structure and information structure. In S. Ishihara, M. Schmitz, and A. Schwarz, editors, *Interdisciplinary Studies on Information Structure 1*. Universitätsverlag, Potsdam.

- Ekkehard König, Detlef Stark, and Susanne Requardt. 1990. *Adverbien und Partikeln. Ein deutsch-englisches Wörterbuch*. Julius Groos, Heidelberg.
- Ivana Kruijff-Korbayová and Marc Steedman. 2003. Discourse and information structure. *Journal of Logic, Language and Information*, (12):249–259.
- Maribel Romero. 2005. Biased yes/no questions, really, and answers. Presented at the Workshop on Formal and Computational Approaches to Discourse and Other Particles, Barcelona.
- Mats Rooth. 1992. A theory of focus interpretation. *Natural Language Semantics*, (1):75–116.
- Anita Steube. 2001. Correction by Contrastive Focus. *ZAS Papers in Linguistics* 23.
- David Traum. 1994. *A Computational Theory of Grounding in Natural Language Conversation*. Ph.D. thesis, University of Rochester.
- Carla Umbach. 2004. On the notion of contrast in information structure and discourse structure. *Journal of Semantics*, 21(2):155–175.
- Henk Zeevat. 2004. Contrastors. *Journal of Semantics*, 21(2):95–112.
- Henk Zeevat. 2005. A dynamic approach to discourse particles. In Kerstin Fischer, editor, *Approaches to Discourse Particles*. Elsevier, Amsterdam.