The German response particle *doch* as a case of contrastive focus

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1 Introduction

The accented German response particle (henceforth, RP) *doch* 'though' is typically used to refute an immediately preceding negated utterance.[1] Semantically, its contribution consists in asserting the positive counterpart p of the negated proposition $\neg p$ expressed in the refuted utterance. For instance, (1B) denies the preceding statement (1A) that Karl was not at the party and asserts that, on the contrary, he was at the party:

(1)   A: Karl war nicht auf meiner Party. ($\neg p$)
          'Karl was not at my party.'
      B: DOCH.[2] (p)
          'He was INDEED.'

Response particles like *doch*, *ja* 'yes' and *nein* 'no' are *sentence equivalents* which can be seen as representing an underlying full-fledged sentence. Thus, the RP *doch* in (1B) can be seen as a short version of (2):

(2)   B: Er WAR auf deiner Party.
          'He was at your party.'

Now, (2) as an answer to (1A) is a case of what is known as **verum focus** (Höhle 1992). Höhle (1992) uses the term *verum focus* (henceforth, **VF**) to refer to cases where the finite verb or a subordinating particle such as *dass* 'that' and *ob* 'whether' carry the main accent in the sentence. An important characteristic of cases of VF is that "the thought expressed [by the sentence] is known from the context" (Höhle 1992: 113).[3] The function of VF according to Höhle consists in emphasising the truth value of the sentence, rather than the lexical meaning of the verb (or subordinator) on which the accent is placed. Thus, (2B) can be paraphrased as *it is true that Karl was at your party*.

Similarly, the RP *doch* in (1B) is used in a context in which the proposition it expresses is known from the context. Moreover, *doch* can also be seen as having the purpose of emphasising the truth value of the proposition it asserts. Consider the dialogues below. In (3a) and (3b), the accent is placed on the finite verb (VF) and the sentence negation respectively, determining the focus of the sentence as being its polarity. In both cases, *doch* is an adequate response. This is however not the case in (3c–3e) where the focus is not on the polarity but on other aspects of the sentence, suggesting different oppositions than the one between true and false: the train vs. the bus in (3c), being on time vs. being late in (3d) and arriving vs. departing in (3e).

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[2] Small capitals denote accent.

[3] According to Höhle the negation is not interpreted as part of the contextually given thought.

(3) a. A: Der Zug IST nicht pünktlich angekommen.
      'The train did not arrive on time.'

   B: DOCH.

   b. A: Der Zug ist NICHT pünktlich angekommen.

   B: DOCH.

   c. A: Der ZUG ist nicht pünktlich angekommen (, aber der BUS schon).
      'The train did not arrive on time, but the bus did.'

   B: # DOCH.

   d. A: Der Zug ist nicht PÜNKTLICH angekommen (, sondern mit grosser VER-
         SPÄTUNG).
      'The train did not arrive on time but with a big delay.'

   B: # DOCH.

   e. A: Der Zug ist nicht pünktlich ANGEKOMMEN (, sondern/aber pünktlich
         ABGEFAHREN).
      'The train did not arrive on time, but left on time.'

   B: # DOCH.

These restrictions on the use of the RP *doch* suggest that the part of the preceding sentence that is refuted by means of *doch* is its polarity, similarly to the function the VF-sentence (2) serves in the context of (1A). In both cases, (1A) is denied by suggesting that the opposite holds. In addition, it seems that the RP *doch* in general can be seen as equivalent to a sentence with VF: The response in (4b) with accent on *pünktlich*[4] is not felicitous since the respective information is already given, as is the rest of the sentence, except for the finite verb which is the only possibility for an adequate accent placement:

(4) A: Der Zug IST nicht pünktlich angekommen.
      'The train did not come on time.'

   a. B: DOCH, er IST pünktlich angekommen.
         'No, it did come on time.'

   b. B: # DOCH, er ist PÜNKTLICH angekommen.
         'No, it came on time.'

The conclusion that can be drawn from the linguistic data is that the RP *doch* could be given a proper treatment in terms of VF. However, an alternative view on *doch* that should also be considered, since it does justice to the intuition that *doch* refutes the preceding negated sentence, is that it is a simple negation operator like the sentence negation *nicht*, i.e., that (1B) can be paraphrased as in (5):

(5) Es ist NICHT der Fall, dass Karl nicht auf deiner Party war.
    'It is not the case that Karl was not at your party.'

In this paper, these two possibilities for analysing the RP *doch*, namely as VF and negation, will be explored and discarded (Section 2) in favor of an account in terms of contrastive focus that does justice both to the general meaning and the dialogue behaviour of the particle *doch* (Section 3). Section 4 discusses related previous work, and Section 5 provides a brief summary and conclusions.

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[4] (4b) represents the neutral intonation pattern in German declarative sentences where accent is placed on the deepest embedded verbal complement or adjunct (Steube 2001).

2 The RP *doch*, verum focus and sentence negation

In this section, I will provide arguments against the two most obvious analyses of the RP *doch* mentioned above.

2.1 *Doch* and VF

I first explore the possibility of analysing the RP *doch* in terms of VF. Höhle (1992) accounts for the effect of VF by assuming that the accented verb introduces a semantic element, the truth-predicate *VERUM*. In other words, (2) is interpreted as *VERUMp*, where p is the proposition expressed by the sentence. In a VF-approach, the RP *doch* in (1B) would be interpreted as *VERUMp*, where p is the positive counterpart of the negated proposition $\neg p$ expressed by the preceding sentence (1A).[5]

There are several problems with this view on *doch*. The first is the unclear status of the predicate *VERUM*. In his paper, Höhle gives up an original treatment of *VERUM* as an illocutionary type operator in favor of a view in terms of a truth predicate whose function amounts to merely explicating the intuition of emphasising the truth of the sentence. However, he leaves this issue somewhat unsettled, giving arguments for and against the illocutionary type operator view throughout the paper.

A second problem with a VF-approach is that it does not generalise to other uses of the accented particle *doch*. Consider (6).

> (6) A: Karl war auf meiner Party. (p)
> 　　　　 'Karl was at my party.'
> 　　 B: Oh, er war also DOCH auf deiner Party. (p; expected: $\neg p$)
> 　　　　 'So he was there after all.'

On one interpretation, *doch* indicates an earlier belief $\neg p$ of the speaker that has been given up in the light of the information provided in (6A), i.e., (6B) indicates *belief revision* with respect to $\neg p$. Another possible interpretation of (6B) is it indicating that the information in (6A) confirms an earlier belief of the speaker, i.e., *doch* expresses *belief verification* with respect to p. A VF-account would only capture the second interpretation, i.e., 'So it is true that he was at your party, just like I thought'.

An additional argument against an VF-account of *doch* in (6) is that in a context that does not challenge the truth of a sentence, but on the contrary asserts it, there is no need to put special emphasis on the truth value of the sentence. This argument applies also for a less frequent but nevertheless perfectly correct use of the RP *doch*, namely when it represents a confirmation of a preceding positively formulated sentence, rather than denial of a negated one. Consider (7) where the situation is similar to (6) in that the *doch*-utterance (6B) is a confirmation of the preceding sentence (6A).

> (7) A: Das war sehr freundlich von ihm. (p)
> 　　　　 'This was very friendly of him.'
> 　　 B: DOCH, das muss man sagen. (p)
> 　　　　 'Yes, indeed.'

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[5] A similar approach is taken in Romero (2005) who accounts for the meaning of the epistemic adverb *really* by it introducing *VERUM*.

2.2 *Doch* and sentence negation

The second possibility mentioned above is to analyse *doch* as a special case of negation reserved for a purpose the RP *nein* and the sentence negation *nicht* do not serve, namely denying negated sentences. Note that a *nein* or a sentence with the negation *nicht* as a response to a negated statement amounts to agreeing that the respective state of affairs does not hold (cf. also Merin 1994: 249):[6]

(8) A: Karl war nicht auf deiner Party. ($\neg p$)
     'Karl was not at your party.'

   B: Nein, er war nicht da. ($\neg p$)
     'No, he was not there.'

Analysing *doch* in terms of negation would not account for the fact that in (9a), both the negation particle *nein* and the sentence negation *nicht* signal that A_2 *disagrees* with B_1 with respect to the truth value of the sentence. Treating *doch* as negation of a negated sentence would lead to interpreting the response *nein* in (9bA_2) as expressing *agreement* with respect to the truth value of the sentence:

(9) A_1: Karl war nicht auf deiner Party. ($\neg p$)
     'Karl was not at your party.'

   a. B_1: DOCH. = Karl war auf meiner Party. (p)
        'Yes [= Karl was at my party].'
      A_2: Nein. = Es ist nicht der Fall, dass Karl auf deiner Party war. ($\neg p$)
        'No [= It is not the case that Karl was at your party].'

   b. B_1: DOCH. = Es ist nicht der Fall, dass Karl nicht auf deiner Party war. ($\neg\neg p$)
        'No [= It is not the case that Karl was not at your party].'
      A_2: Nein. = Es ist nicht der Fall, dass Karl nicht auf deiner Party war. ($\neg\neg p$)
        'No [= It is not the case that Karl was not at your party].'

A second argument against the view of the RP *doch* as a simple negation provides its confirmation use in (7) where the *doch*-utterance asserts p rather than $\neg p$.

The linguistic data suggest that the RP *doch* is the polar opposite of the sentence negation *nicht* and the negative RP *nein* rather than synonymous with them: Regardless of the polarity of the context, the RP *doch* asserts a positive proposition p,[7] contrary to *nein* and *nicht* which assert a negative proposition $\neg p$ also regardless of the polarity of the preceding sentence.

The conclusion of this section is that neither of the two possibilities of analysing the RP *doch* we originally considered proves adequate. What these accounts fail to capture is both the dialogue behaviour of the particle and its general meaning. In the next section, I propose a different view on the RP *doch*, namely as a bearer of contrastive focus.

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[6] A *nein/nicht*-response also confirms the negative bias of a negated question. In other words, natural language negation differs from logical negation: whereas the former also sends true to false, it cannot be generally seen as an operator sending false to true. Sadock & Zwicky (1986) interpret the emergence of particles like German *doch* and French *si* as forced by an ambiguity of the simple positive answer *yes* to negated biased questions like *Isn't it raining?* Such an answer, it is argued, is ambigouos between *Yes, it is not raining* and *Yes, you are right; it is raining.* However, this argument is somewhat weak since one would rather use a *No*-answer to express agreement that some state of affairs does not hold.

[7] Note, however, that other uses of *doch* may also assert a negative proposition.

3 *Doch* and contrastive focus

The examples discussed in the previous section show that in order to be able to correctly account for both the general meaning and the dialogue behaviour of the RP *doch*, it should be interpreted as asserting just a positive proposition p. On the other hand, an adequate analysis should be able to capture this behaviour as well, i.e., it should be able to account for both the case where *doch* denies a preceding negated sentence as well as where it confirms a preceding positive sentence. I suggest that conceiving of the RP *doch* as a bearer of contrastive focus is a view that complies with these requirements.

3.1 Contrastive focus

It is a commonly accepted view that accented or focussed expressions evoke alternative expressions that the speaker might have said but has chosen not to (cf., e.g., Zeevat 2004). One of the most influential semantic frameworks dealing with focus is Rooth's **alternative semantics** (cf., e.g., Rooth 1992). In alternative semantics, a focussed expression is accounted for by assuming that it provides an additional semantic value $[\![\cdot]\!]^f$ next to the ordinary semantic value $[\![\cdot]\!]^o$ of the sentence. The focus semantic value represents a set of alternatives — a set of propositions consisting of the ordinary semantic value of the focussed expression and the propositions it contrasts with. The set of alternatives is furthermore salient but not necessarily explicitly mentioned and contains only alternatives which are of the same semantic type as the focussed expression.

According to 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 signalling 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, i.e., the focussed expression is anaphorically linked to some antecedent in the preceding context.

In order to give an account in terms of contrastive focus, we first need to determine what focus sets of alternatives the RP *doch* evokes. We already established that the ordinary semantic value of the RP *doch* is some proposition p asserted or negated by the sentence immediately preceding the RP, i.e., $[\![_S\mathrm{doch}]\!]^o = p$. This means that the alternatives *doch* evokes should be of the same, propositional type. In order to determine what propositions the RP *doch* contrasts with, we need to examine again the contexts in which the RP occurs. The occurence of the RP *doch* in negative environments is restricted to contexts in which the focus of the preceding sentence is its (negative) polarity, as we saw in Section 1, as well as to sentences with overt (10), top-level (non-embedded) (11) and wide-scope (12) negation:

(10) A: Ich bedauere nicht/hoffe nicht/habe nicht geträumt, dass Karl (nicht) gelogen hat.
       'I do not regret/hope/did not dream that Karl has (not) lied.'

     B: DOCH (, das hast du).
       'Yes you have.'

(11) A: Ich bedauere/hoffe/habe geträumt, dass Karl nicht gelogen hat.
       'I regret/hope/dreamt that Karl has not lied.'

     B: # DOCH.

(12) A: Nicht Peter kommt, sondern Paul.
'Not Peter will come but Paul.'

B: # Doch.

These contextual restrictions suggest that *doch* contrasts the proposition it asserts with its negated counterpart expressed by the preceding utterance. In other words, the focus semantic value of *doch* is the set containing its ordinary semantic value $[\![_S\text{doch}]\!]^o = p$ and the alternative that contrasts with it, namely $\neg p$:

(13) $[\![_S[\text{doch}]_F]\!]^f = \{p, \neg p\}$, where p is a proposition negated or asserted in the immediately preceding sentence.

For comparison, and in support of the claim made in Section 2.2 that accented *doch* is the polar opposite of *nicht*, the focus set of alternatives evoked by the accented sentence negation *nicht* is $[\![_S[\text{nicht}]_F S]\!]^f = \{\neg p, p\}$, where p is the proposition expressed by the sentence S and $[\![_S\text{nicht}\,S]\!]^o = \neg p$.[8]

Now, the fact that the preceding context contains an element of the focus semantic value of *doch* with which *doch* contrasts, strongly suggests a treatment in terms of contrastive focus. In addition, focus on the RP *doch* cannot be seen as being exhaustive: although *doch* answers the question $\neg p$? in (14), the context does not license a set of alternatives from which one could be chosen and presented as the only true one.[9]

(14) A: War Karl nicht auf deiner Party? ($\neg p$?)
'Wasn't Karl at your party?'

B: Doch. (p)

Following Rooth (1992), a phrase α is contrasting with a phrase β, if $[\![\beta]\!]^o \in [\![\alpha]\!]^f$ and $[\![\beta]\!]^o \neq [\![\alpha]\!]^o$. An analysis 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*:

(15) A: Karl war nicht auf deiner Party. $[\![_S S]\!]^o = \neg p$
'Karl was not at your party.'

B: Doch. $[\![_S[\text{doch}]_F]\!]^f = \{p, \neg p\}$ ($\neg p \in \{p, \neg p\}$)

The analysis of the RP *doch* as a case of contrastive focus accounts for both its general meaning and its function in dialogue. On this account, the RP *doch* asserts a positive proposition p. It denies a preceding negated sentence by asserting the positive counterpart of the proposition expressed by the preceding sentence. The impression that *doch* introduces negation can be seen as a side effect of information structural contrast involving the evocation of focus alternatives that the speaker could have uttered but has chosen not to, because they are considered not true in the particular situation (Umbach 2001; Zeevat 2004). Similarly, the RP *doch* evokes an alternative proposition $\neg p$ and at the same time discards it by asserting its positive counterpart p.

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[8] VF appears not only in opposite polarity contexts but also in cases where the "contextually given thought" is modalised such that it is presented as possibly true or false. In the latter context, the contrast is between the state of affairs being *possibly* true/false and *actually* true/false.

[9] What is more, an answer *doch* to a polar question like *Willst du Zucker in den Kaffee? (Do you want sugar in your coffee?)* ($p \vee \neg p$), leads to reinterpreting it as a biased question ($\neg p$?).

3.2 Correction and acceptance

The view on the RP *doch* as a case of contrastive focus also accounts for its behaviour in discourse and dialogue. In a context like (1B) in which the preceding utterance contains an element of the focus set of alternatives *doch* evokes, the RP refutes the preceding negated sentence, thus performing the function of **correcting**. Correction is usually viewed as a discourse relation which also manifests 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 common ground and the latter removed from it. Steube (2001) proposes a similar treatment of correction realised by means of contrastively focussed expressions.[10]

The analysis of the RP *doch* in terms of contrastive focus generalises also to its acceptance uses. As we saw, in the cases where the preceding utterance does not contain an element of the focus set of alternatives of *doch*, the use of *doch* is not infelicitous but the utterance is interpreted as a confirmation. According to Rooth (1992), a focus set of alternative need not be explicitly mentioned but can be accommodated, similarly to other kinds of presupposed material. Thus, the acceptance cases of the RP *doch* can be accounted for by assuming that the alternative which *doch* evokes is accommodated. This is supported by the intuition that in cases where the RP *doch* indicates acceptance, the use of *doch* is justified only if it is understood as the result of reinterpreting the preceding positive utterance as expressing a negative bias towards the truth of the sentence (cf., e.g., Helbig 1988 from whom also the following example is taken):

(16) A: Das war sehr freundlich von ihm. (→ War das nicht sehr freundlich von ihm?)
          'This was very friendly of him. (Wasn't this very friendly of him?)'

      B: Doch, das muss man sagen.
          'Yes, indeed.'

The accomodation account captures this intuition nicely, since accommodation involves exactly the kind of reinterpretation or context repair that is intuitively required in the acceptance cases of *doch*: accommodating ¬*p* amounts to adding it to the context.

4 Related work

Previous work fails to adequately capture the dialogue behaviour of the RP *doch*. Helbig (1988) describes non-formally the meaning of RP *doch* as negating the negation in the preceding utterance and asserting its positive counterpart. The cases where *doch* functions as confirmation are simply mentioned as exceptions. Abraham (1991) treats the RP *doch*

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[10] A formalisation of correction (or denial as it is called there) is proposed in van der Sandt & Maier (2003) in the framework of (layered) DRT in terms of a non-monotonic correction operation on discourse context, implemented as a *directed reversed anaphora* mechanism to locate, remove and negate the material that is being objected to. However, the plain removal of the downdated material from the DRS does not allow for keeping track of what has been said (or otherwise conveyed) in a dialogue. Merin's (Merin 1994) elementary social act of denial seems more adequate since it allows keeping the discourse context separate from the joint commitments of the dialogue participants. In this way, one can allow the discourse context to record the process of negotiating the denied material, while the joint commitments will record the result of this process.

as asserting a positive proposition negated in the preceding utterance, without considering the confirmation cases. A similar deficiency is found in Graefen (2000) and Merin (1994).

König et al. (1990) suggest a slightly different view according to which the meaning of the RP *doch* consists in contradicting an *assumption* of the interlocutor. This view is also promoted by Karagjosova (2001) who, after recognising the inadequacy of treating the RP *doch* as negation, proposes an account in terms of denial of expectation that generalises both over its uses as correction and acceptance. On this account, the RP *doch* signals denial of an expectation of the previous speaker, where the expectation arises as an implicature from what is said. For instance, (1B) can be seen as expressing 'Although you seem to believe that Karl is not coming, he is coming'. This view, however, is critisised in Zeevat & Karagjosova (in prep.) for its inability to adequately relate to the unaccented use of the particle *doch* under a focus semantic perspective. A general problem with this view is also that it fails to account for the felicitous use of *doch* as a response to negated confirmation questions implicating a positive speaker bias such as (17A):

(17)   A: War das nicht TOLL? (≫ Das war toll.)
           'Wasn't this great? (This was great.)'
       B: DOCH.

The expectation 'It was great' is not denied but confirmed with *doch*, which leads to a nonsensical paraphrase like *Although you seem to believe that it was great, it was great.*

Finally, Zeevat (2005) treats the RP *doch* in terms of correction marking the content as being denied in the common ground. This, however, does not apply to the case of acceptances like (16).

5   Summary and conclusions

It was argued that the German RP *doch* is best viewed as a bearer of contrastive focus. The analysis proposed was shown to account for the general meaning of the particle as well as its dialogue behaviour, and it also generalises over other accented *doch*-uses (cf. Karagjosova 2006). However, it is not immediately clear how this approach can account for the inadequacy of using the RP *doch* after sentences with embedded or narrow-scope negation. It also remains to be seen how the unstressed variants of *doch* can be incorporated into this information structural analysis.

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