

STRESSED OUT! ACCENTED DISCOURSE PARTICLES: THE CASE OF ‘DOCH’*

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1 Introduction

Unaccented German discourse particles have received detailed formal analyses in recent literature (e.g., Karagjosova, 2004, Kratzer and Matthewson, 2009, Zimmermann, 2008, 2011), but the formal semantic analysis of their accented counterparts is just starting; see e.g. Zimmermann (2011), Féry (2010), Egg (2010), Gutzmann (2010), Thurmair (1989), Abraham (1991) and Meibauer (1994) for more descriptive accounts. This article contributes to this body of work by providing a formal analysis of the distribution and interpretation of the accented contrastive discourse particle *doch* in German. By considering the relation of accented *doch* (*DOCH* for short) to its unaccented counterpart *doch* and the interaction of these particles with information structure, we argue for a unified analysis of *DOCH* and *doch*, which assigns them the same underlying semantics, and attributes the difference in accentuation to independent information-structural and prosodic factors. The present analysis thus contributes to our understanding of the interface between syntax and prosody on the one hand, and semantics and pragmatics on the other.

Section 1.1 introduces the core data and central research questions. Section 2 provides the background of the analysis and the meaning of unaccented *doch*. Section 3 expounds the analysis of accented *DOCH*. Following Gutzmann’s (2010) work on accented *JA*, the central hypothesis is that *doch* must be accented in verum focus environments. While this hypothesis accounts for the bulk of the data, we show in section 4 that accented *DOCH* can also occur in non-verum environments. This leads to a generalisation of the hypothesis stating that the particle *doch* must carry accent whenever pitch (focus) accent is blocked from being realised elsewhere in the clause.

1.1 The core data: Introducing *doch/DOCH*

As a first approximation, *doch* gives a contrastive flavour to the utterance it occurs in. Its presence indicates an incompatibility, apparent or real, of this utterance with some information in the

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context. This potentially conflicting information is often provided by an immediately preceding utterance, similar to what is found with the anaphoric additive particle *auch* ‘also’. Pointing out a conflict between different parts of information can serve various pragmatic goals, such as the refusal to accept a preceding utterance as true, the correction of a preceding utterance, the expression of amazement, or simply to facilitate the accommodation of information by explicitly acknowledging its co-occurrence with potentially incompatible information in a discourse.

(1) illustrates the simplest case of unaccented *doch* expressing a contrast between two adjacent declarative utterances. (2) shows that *doch*-utterances can also be used as reactions to non-declarative utterances. (3) illustrates the occurrence of *doch* in non-declarative sentences.

- (1) A: Max kommt mit in die Disko. B: Er ist doch krank!
 Max comes with to the disco he is doch ill
 ‘A: Max will come along to the disco. B: But he is ill!’
- (2) A: Seit wann hast du den „Faust“? B: Den hast du mir doch neulich geschenkt!
 since when have you the ‘Faust’ this have you me doch recently given
 ‘A: Since when have you owned the “Faust”? B: But you gave it to me recently!’
- (3) Verklag mich doch!
 sue me doch
 ‘Go ahead and sue me!’

The following examples illustrate the main occurrences of accented *DOCH* in German: (4) is an inter-speaker correction and in (5), a single speaker expresses a polar contrast. (6) shows that accented *DOCH* is not restricted to declarative sentences either.

- (4) A: Malte ist nicht nach Utrecht gefahren. B: Er ist DOCH nach Utrecht gefahren.
 M. is not to Utrecht gone he is DOCH to Utrecht gone
 ‘A: Malte didn’t go to Utrecht. B: He DID go to Utrecht.’
- (5) [At first Malte refused to, . . .]
 aber dann ist er DOCH nach Utrecht gefahren.
 but then is he DOCH to Utrecht gone
 ‘but then he DID go to Utrecht (after all).’
- (6) Ist Malte DOCH nach Utrecht gefahren?
 Is M. DOCH to Utrecht gone
 ‘Has Malte gone to Utrecht after all?’

The parallel existence of unaccented and accented *doch* raises the following research questions, which will be addressed in the subsequent sections of this paper: (i.) What is the underlying meaning of unaccented *doch* and how can this meaning account for its distribution and uses? (ii.) Do accented and unaccented *doch* share the same underlying meaning? (iii.) How do discourse particles interact with information structure and its prosodic correlates?¹

¹There is another instance of accented *DOCH*, which can occur on its own in the prefield-position of declarative German clauses (before the finite verb/auxiliary in the second position) with the meaning and function of the concessive main clause conjunction *trotzdem* ‘in spite of, still’ (see Lerner, 1987):

2 The semantics of unaccented *doch* and CG-management

In line with much of the recent literature, we assume that discourse particles refer to the *common ground* (CG) in their semantics (König, 1997, Zeevat, 2004, Karagjosova, 2004, Zimmermann, 2011). Their central semantic function thus is CG management (Krifka, 2008). The CG consists of the set of publicly shared mutual beliefs about the world (Stalnaker, 2002), where belief is formalised as the set of propositions true in all possible worlds compatible with the believers' beliefs. Reasoning on the contents of the CG often employs default *inference patterns*, which are likewise part of the CG. These patterns are modelled by *defeasible deduction* (Asher and Lascarides, 2003) in the form $p > q$ (including defeasible Modus Ponens).

The utterance *doch* p as a reaction to a proposition q against the common ground CG indicates that, according to the CG, p constitutes a potential impediment for q , because the default entailment $p > \neg q$ is part of the CG. I.e., in the light of p , q is unexpected due to this potential conflict between p and q , which explains the use of *doch*-utterances to express amazement or doubt at q .

Furthermore, the host proposition of *doch* itself receives a special status in that it is characterised as information that the speaker considers to be special in that it should be taken for granted by the speaker (the 'privileged information' of Grosz, 2010, drawing on analyses of Kratzer and Matthewson, 2009). It cannot be completely new (and, hence, debatable) information, which can be illustrated by the inacceptability of B's response in (7), a variant of (1), in which Max's illness is presented as new information:²

- (7) A: Max kommt mit in die Disko. B: *Er ist doch krank, das wußte bislang aber keiner.
 Max comes with to the disco he is doch ill this knew up.to.now but no.one
 'A: Max will come along to the disco. B: But he is ill, but up to now no one knew.'

The lexical entry for *doch* in (8) captures the privileged status of its host utterance and the basic semantic nature of *doch* as a contrastive element:

- (8) $[[\text{doch}]](p)(q)$ iff $p > \neg q$ is part of the CG and p cannot be debated by the hearer

The semantic representation in (8) takes up ideas in Abraham (1991), Lindner (1991), and Grosz (2010), who argue that *doch* introduces a presupposition, leading to the activation or accomodation of a contrast-inducing defeasible entailment in the common ground. We assume that this entailment links the *doch*-utterance to a suitable antecedent in the context of the utterance. This inherently contrastive and anaphoric nature of *doch* also accounts for its sensitivity to focus

- (i) Es hat seit Monaten nicht geregnet und DOCH sind die Bäume ganz grün.
 it has since months not rained and DOCH are the trees completely green
 'It has not rained for months and yet the trees are completely green.'

As this conjunction *DOCH* has different syntactic and contextual licensing conditions, e.g., it cannot be used in reaction to non-declarative utterances (compare for instance (2) to (ii)), we set it aside in the present discussion.

- (ii) A: Seit wann hast du den „Faust“? B: *DOCH hast du mir den neulich geschenkt!
 since when have you the 'Faust' DOCH have you me this recently given
 'A: Since when have you owned the "Faust"? B: But you gave it to me recently!'

²Such examples suggest that the host utterance is not presupposed material. Otherwise, one would have to explain why it cannot be simply accommodated in case it is not yet part of the common ground.

alternatives as diagnosed in Grosz (2010). The position of focus helps to identify the two potentially conflicting propositions p and q .

Second, the semantic analysis differs from the one of Grosz (2010), which assumes the reverse entailment $q > \neg p$. However, this (non-equivalent³) entailment would state something completely different, viz., that the *doch*-utterance (not the utterance it reacts to) is unexpected in the light of q , since, given q , one would expect $\neg p$. This entailment does play an important role in CG management, but is introduced not by *doch* but by the discourse particle *schon* (Egg, 2012).

From a discourse-semantic perspective, the defeasible entailment of *doch*-utterances blocks an automatic updating of the CG in terms of q . By pointing to a potential incompatibility, they trigger a re-checking of the previously forwarded information, which may come in form of an assertion, like in (1), of a felicity condition of a preceding utterance or of the *doch*-utterance itself, as in (2) and (3), respectively, or of a presupposition, as in (9):

- (9) [The king of France died yesterday].
 Warte mal, Frankreich ist doch keine Monarchie!
 wait just France is doch no monarchy
 ‘Wait a minute, but France is no monarchy.’

This flexibility is due to the fact that the semantic arguments of *doch* are *anaphoric* and must be identified with suitable propositions from the context. The literal interpretation of the host utterance and an utterance it reacts to are potential antecedents, but not the only feasible ones.

Third, following Egg (2010) we assume that discourse particles cannot only refer to the propositional content, but also to the *felicity conditions* (Searle, 1969) of a preceding utterance or of themselves. This flexibility in finding appropriate values for p and q explains the presence of *doch* in reaction to non-declarative utterances: In (2), the *doch*-utterance relates to the first preparatory condition of the preceding question, i.e., $q = \text{hearer does not know since when the speaker has owned the ‘Faust’}$, $p = \text{hearer has given the ‘Faust’ to the speaker}$ and the defeasible CG-entailment $p > \neg q$ (an instantiation of the general pattern $X \text{ has given } Z \text{ to } Y > X \text{ knows since when } Y \text{ has owned } Z$).

In (3), *doch* refers to the first preparatory condition of the request, that the speaker believes that the hearer is in a position to sue the speaker. In other words, using *doch* suggests to the hearer that the speaker does not believe that he is actually capable of suing the speaker, which explains the very provocative effect of *doch* in (3). Discourse particles relate to speech acts thus in a different way than assumed in earlier work, viz., as speech act modifiers, (Jacobs, 1991, Zeevat, 2004), or as operators on felicity conditions of speech acts, (Karagjosova, 2004).

Finally, our analysis generalises the standard assumption that the propositional content of the *doch*-utterance is *grounded* in the CG (e.g., Thurmair 1989 or König and Requardt 1991). While the special status of the host utterance can be due to its being part of the CG, as illustrated e.g. by (1) and (2), this utterance need not be part of the CG, because otherwise one could not use *doch* in utterances like (4). Such utterances directly contradict a preceding utterance, therefore, they cannot be part of the CG of the interlocutors of this discourse when they are produced.

This analysis is also corroborated by (10), in which *doch* is licensed by the explicit presence of (mutually incompatible) alternatives. Crucially, there are also matrix occurrences of *doch* that

³Following Asher and Lascarides (2003), we define defeasible entailment $\alpha > \beta$ as material implication $\alpha \wedge \gamma \rightarrow \beta$, where γ describes conditions of being normal *with respect to* α . Equivalence between $\alpha > \neg\beta$ and $\beta > \neg\alpha$ would only hold if normality was defined independently of α , as e.g. in the ‘otherwise’ conditions of Hobbs et al. (1993).

do not require grounding, as illustrated by (11), in which *doch* occurs in a narrative report of new information and is licensed by the presence of focus alternatives:

- (10) [Also, I am sure that the members of the Swedish academy, in their search for worthy candidates, have carefully considered the issue of ...]
 ob nicht der Rhesusaffe oder der Hund, wenn nicht die Maus, dann doch das
 whether not the rhesus.monkey or the dog if not the mouse then doch the
 Meerschweinchen geehrt werden müßte. (Günter Grass, *Die Rätin*)
 guinea.pig honoured be needed
 'whether not the rhesus monkey or the dog should be honoured, if not the mouse, then at least the guinea pig'
- (11) „Sei still, du dummer Räuber!“, schrie der Räuberhauptmann. Aber ein kleines bisschen
 be quiet you stupid robber cried the robber.captain but a little bit
 erleichtert sah doch auch er aus. (Kirsten Boie, *Der kleine Ritter Trenk*)
 relieved looked doch also he
 ““Be quiet, you stupid robber,” the robber captain cried. But he looked a little relieved, too.’

Since *doch* does not always ground its host utterance, as this effect typically only shows up with matrix-*doch* in inter-speaker exchanges, we conclude that it is not part of its lexical meaning.

It is the default case of special status of the host utterance, however. We assume that this interpretive effect arises pragmatically, because it is the most cooperative way of interpreting the utterance: By assigning as much information of the utterance as possible to presupposition, the assertion is minimised, which allows the hearer to make sense of the utterance in a wider range of contexts (the ‘principle of benevolence’ of van Eijck and Pinkal 1996). I.e., if information can be regarded as part of the CG, one should do this. But this implicature can be blocked in the case of examples like (10) and (11), in which the *doch*-utterance clearly introduces new information.

This strategy would also be followed if interpretation is regarded as *abduction* as in Hobbs et al. (1993): Here the hearer tries to identify as much of the content of an utterance as possible with material from his previous knowledge. But in a context in which he does this to information the speaker presented as not debatable, this amounts to identifying this content with knowledge shared by himself and the speaker, i.e., knowledge from the common ground.

Alternatively, one could put down this default interpretation to *politeness* reasoning: Presenting information as non-debatable is an imposition onto the hearer (a face-threatening act in the sense of Brown and Levinson, 1987), because it threatens to restrict his liberty to assess this information first and then decide whether he wants to accept it. However, if this information is non-debatable because it has CG status, there is no such threat, because then the hearer has already accepted it voluntarily. If now the hearer assumes that the speaker is as polite as possible, he will favour the non-threatening CG status interpretation unless this is clearly ruled out by the context.

But regardless of how this CG status of *doch*-utterances arises, analysing it in terms of such pragmatic reasoning predicts that it cannot show up in the case of accented *DOCH*, because these introduce *actual* (not only potential) contrasts between the *doch*-utterance and previous utterances. This difference can be explained in terms of our analysis of *DOCH*, to which we turn now.

3 Extending the analysis to *DOCH*

In this section, we extend the analysis of unaccented *doch* to its accented counterpart illustrated in (4)-(6) above, and once more in an example with VP-ellipsis:

- (12) Context: [At first Malte didn't want to go to Utrecht, ...]
 aber dann hat er es *DOCH* gemacht.
 but then has he it *DOCH* done
 '(At first, Malte didn't want to go to Utrecht,) but then he *DID* (after all).'

A unified analysis is motivated by the fact that the two instances of the particle share two crucial properties: They express the notion of contrast, and they are discourse-anaphoric to a contextually salient proposition.

Based on this, and elaborating on earlier work by Gutzmann (2010) on accented *JA*, our first hypothesis summarised in (13) will be (i.) that unaccented *doch* and accented *DOCH* have the same semantic interpretation as described in (8), and (ii.) that accent on *DOCH* is due to the fact that it occurs in a verum focus environment, in which the *p*-proposition is given and backgrounded, for which reason the remainder of the clausal material must be de-accented.

- (13) *DOCH* = *doch* + verum focus

This initial hypothesis (to be generalised in section 4) accounts for the bulk of the data with accented *DOCH*, and for the similarities and differences between unaccented and accented *DOCH*. Section 3.1 introduces verum focus, 3.2 shows how the verum focus hypothesis explains the central properties of *DOCH*, and 3.3 points out several correct predictions of the proposal.

3.1 Verum focus

The information-structural category of *focus* induces an the bi-partition of the content of a clause into *focus* and *background* (see e.g. Krifka, 2008), which can be conceived of as the two components of a structured proposition:

- (14) <background, focus>

According to Höhle (1992), sentences with verum focus do not focus on the propositional content *p* of the clause, which is given and backgrounded in the sense that it has been introduced as a conceivable state of affairs in the preceding context, but not established as a true fact in the utterance world *w*. The element in focus is a zero truth value operator *verum*, i.e. *true* as opposed to *false*, which in German is located in the complementiser head *C*. As a result, verum focus is marked by focus accent on a complementiser or the finite verb in *C*:

- (15) A: I wonder whether *Malte went to Utrecht*.
 B: Malte *IST* nach Utrecht gefahren.
 Malte is to Utrecht gone
 'Malte *DID* go to Utrecht.'

Hole and Zimmermann (2007) advocate a more passive role for the semantics in accent placement. On this alternative view, there is no verum operator in the syntactic representation.

The verum focus effect with a focus on the truth value of the clause is simply the result of backgrounding the given proposition p , which is presupposed in the sense above. Accent placement on C is then simply the result of deaccenting the presupposed propositional content of the clause.⁴ Formally, the two views on verum focus yield the same focus-background structure in (15):

(16) $\langle \lambda Q_{(st,st)} \cdot Q(\lambda w. \text{Malte went to Utrecht in } w), \lambda p_{(s,t)} \cdot p \rangle$

There are several typical verum-focus inducing contexts in which a proposition p is given or entailed by the preceding discourse. Forward-looking (new information) verum focus shows up in answers to indirect *yes/no*-questions, as in (17), or the confirmation of a supposed or expected path of events, like (18):

(17) A: I wonder if/whether Peter will come. B: He WILL come (for sure)!

(18) He promised to write the paper and he DID write the paper.

Backward-looking (contrastive) verum focus appears in explicit contradictions, e.g., in (19) or the denial of a negative expectation as in (20). Contrastive verum focus is also found in conditional clauses, here it highlights the conditional possibility of p against a negative expectation, as in (21):

(19) A: Peter didn't finish his term paper. B: (Of course), he DID finish it!

(20) A: I don't think he finished the paper. B: (But), he DID finish it.

(21) I doubt that he'll do it, but IF Peter finishes the paper, the teacher will be surprised.

Let us now consider what happens when the particle *doch* occurs in a verum focus environment.

3.2 Analyzing *DOCH p*

Repeating the central hypothesis, *DOCH* is an instance of *doch* with the basic meaning in (8) in a verum focus context. The unified analysis directly explains why the two instances of *doch* have the same contrastive meaning and anaphoric nature. Prosodically, the nuclear pitch accent must be realised on *doch* because the remainder of the clause, which expresses the core proposition, is given in verum focus contexts and hence must be deaccented. Since the nuclear pitch accent must be realised somewhere in the clause, and *doch* is the only new lexical element in the clause, the accent must be realised on *DOCH* because it cannot be realised elsewhere.

Moreover, the analysis derives all the specific properties of accented *DOCH* from the prosodic and contextual properties of verum focus: First, unlike *doch*, *DOCH* can occur with VP-ellipsis, as illustrated by (12), and even as the sole expression of the utterance under sentential ellipsis, as in (22), because it carries accent and because p is given and can be elided under verum focus:

(22) A: Peter ist nicht krank B: DOCH.

Peter is not ill DOCH

'A: Peter is not ill. B: He IS ill.'

Second, the contextual licensing requirements are stricter for *DOCH* than for *doch*: Whereas *doch* only requires *some* contrasting discourse antecedent as its second argument, verum focus requires this antecedent to be identical to $\neg p$. As expected, an utterance of *DOCH p* is infelicitous in (23), in which $\neg p$ is not found expressed in the preceding context.

⁴See also Romero and Han's (2004) analysis of verum and the counterarguments in Gutzmann and Miró (2011).

- (23) A: I can't stand St.Pauli. How about you?
 B1: # Das ist DOCH eine gute Mannschaft.
 that is DOCH a good team
 B2: Das ist doch eine gute MANNschaft!
 that is doch a good team
 'But they are a good team.'

In other words, *DOCH* introduces an *actual* (not only potential) contrast. Consequently, *DOCH*-utterances (as opposed to *doch*-utterances) are never part of the CG.

Third, the identity requirement on the antecedent proposition imposed by verum focus and the contrastive lexical meaning of *doch* conspire to restrict *DOCH* to *negative contexts* that express or entail the negative antecedent $\neg p$. This holds for *DOCH*-utterances as reactions to questions, too:

- (24) A: Hast du keinen Hunger? B: DOCH.
 have you no hunger DOCH
 'A: Aren't you hungry? B: Well, in fact, I am.'
- (25) A: Hast du Hunger? B: #DOCH.
 have you hunger DOCH
 'A: Are you hungry? B: Well, in fact, I am.'

Fourth, as verum focus is freely embeddable, and since unaccented *doch* is licit in embedded contexts in principle (see (10) and (11) above), the analysis correctly predicts that accented *DOCH* is frequently found in embedded sentences as well.

- (26) Es kamen nur wenige Gäste,
 it came only few guests
 'Only few guests showed up...,
 aber die wenigen, die DOCH gekommen sind, bereuten es nicht
 but the few that DOCH come are regretted it not
 '...but the few that DID come did not regret it.'
- (27) Ich glaube nicht, dass Pauli gegen Bayern gewinnt...,
 I believe not that Pauli against Bayern wins
 'I don't expect St. Pauli to win against FC Bayern'
 aber wenn sie DOCH gewinnen, sind sie gerettet
 but if they DOCH win are they safe
 '...but IF they win, they'll be safe (from relegation).'
- (28) St. Pauli hat nicht gewonnen, ...
 St. Pauli has not won
 'St. Pauli didn't win'
 aber Peter glaubt immer noch, dass sie DOCH gewonnen haben.
 but Peter believes always still that they DOCH won have
 '...but Peter still believes that they DID win after all.'

These data show that the presence of *DOCH* signals mere contrast between different parts of the discourse and is *not* contingent on an independent illocutionary force of the embedded clause (pace Coniglio, 2011).

Finally, and perhaps most importantly, we must explain why the general inference patterns from the non-linguistic context/ world knowledge (e.g. *if somebody is ill he won't go the disco*) that play such a prominent role in the semantics of unaccented *doch* are no longer relevant with accented *DOCH*. E.g., in (29), B merely refutes A's preceding assertion to the effect that Peter is not ill by stating that he is in fact ill:

- (29) A: Peter ist nicht krank. B: DOCH./ Er ist DOCH krank.
 Peter is not ill DOCH he is DOCH ill
 'A: Peter is not ill. B: Yes, he IS.'

In our analysis, this observation falls out directly and compositionally: The inference pattern is still in place, but gets trivialised so that it becomes irrelevant and its effect is no longer visible. This irrelevance arises through the interaction of verum focus with the lexical meaning of the particle. In particular, the defeasible entailment from p to $\neg q$ is trivially satisfied in verum focus environments given that the *DOCH*-proposition p and its negated antecedent q are each other's negation.

For (29), p = 'Peter is ill' (the *doch*-proposition) and q = 'Peter is not ill' (the antecedent proposition), so the defeasible entailment scheme $p > \neg q$ returns the following:

- (30) $p > \neg q \Leftrightarrow$ Peter is ill $> \neg(\neg$ Peter is ill $) \Leftrightarrow$ Peter is ill $>$ Peter is ill

In verum-focus environments that license *DOCH* p , the defeasible entailment condition of *doch* is thus always trivially satisfied in terms of $p > p$, which triggers the intuition that it is no longer there, when in fact it is only trivialised.

By contrast, the same defeasible entailment condition of *doch* is responsible for blocking the occurrence of *DOCH* p in non-contrastive contexts. Consider e.g. the infelicitous example (31) in which the *DOCH*-proposition is identical to the antecedent proposition *St. Pauli won*, the default entailment leads to a contradiction of the type $p > \neg p$:

- (31) A: St. Pauli hat gewonnen. (= q) B: #DOCH, sie haben gewonnen. (= p)
 St. Pauli has won DOCH they have won
 'A: St. Pauli won. # But they DID win.'
 (32) $p > \neg q \Leftrightarrow$ St. Pauli won $> \neg$ (St. Pauli won)

3.3 Further Predictions

Our analysis of *DOCH* as *doch* + verum makes further correct predictions: First, if all instances of *DOCH* p involve verum focus, the deletion of *DOCH* should result in a shift of the focus accent to the complementiser or finite verb in C. What is more, all instances of accented *DOCH* should be replacable with plain verum focus, but not vice versa. This prediction is so far borne out (but see section 4 for further discussion). As an illustration, consider (33) and (34), the *DOCH*-less counterparts of (4) and (26), respectively. Such counterparts can be formed for the other examples (5)-(6) and (27)-(28) in an analogous fashion.

- (33) A: Malte ist nicht nach Utrecht gefahren. B: Er IST nach Utrecht gefahren.
 M. is not to Utrecht gone he is to Utrecht gone
 'A: Malte didn't go to Utrecht. B: He DID go to Utrecht.'

- (34) Es kamen nur wenige Gäste,
 it came only few guests
 ‘Only few guests showed up...,’
 aber die wenigen, DIE gekommen sind, bereuten es nicht
 but the few that come are regretted it not
 ‘...but the few that DID come did not regret it.’

Next, *DOCH*-utterances should only be found with some *verum foci*, viz., with contrastive or corrective instances of *verum focus* in negative-biased contexts (whose preceding context suggests that $\neg p$). This prediction is borne out. The following examples show that *DOCH*-utterances are licit with preceding negative verbs like *verbieten* ‘to forbid’, *verweigern/ sich weigern* ‘to refuse’, etc., but not with affirmative verbs, such as *versprechen* ‘to promise’ or *erlauben* ‘to allow’.

- (35) Ich habe es Peter verboten, aber er HAT/ hat DOCH geraucht.
 I have it Peter forbidden but he has has DOCH smoked
 ‘I told Peter not to, but he DID smoke (after all).’
- (36) Ich habe es Peter erlaubt, und er HAT/ *hat DOCH geraucht.
 I have it Peter forbidden and he has has DOCH smoked
 ‘I allowed Peter to do it, and he DID smoke.’

Next, *DOCH*-utterances are correctly predicted to be illicit in contrastive corrections of affirmative antecedents, for in this case the accent is located on the negation *nicht* :

- (37) A: Peter went away.
 B1: Er ist doch NICHT weggegangen.
 he is DOCH not gone.away
 ‘But he did NOT.’
 B2: #Er ist DOCH nicht weggegangen.
 he is DOCH not gone.away
 ‘But he did NOT.’

Finally, the analysis predicts that *DOCH*-utterances are licit in correcting responses to statements containing negative disjunctions:

- (38) Neither Peter nor Mary nor John went away.
 B: Maria ist DOCH weggegangen.
 Mary is DOCH gone.away
 ‘But Mary DID go away!’

In sum, all these correct predictions corroborate our basic analysis of *DOCH*, which restrict it to contexts in which *verum focus* is licensed by a negative antecedent. In the last section, we will discuss cases without such a tight connection between *DOCH* and *verum focus* and their implications for the proposed analysis.

4 Modification of the analysis

So far we have argued for the strong claim that any instance of accented *DOCH* requires *verum focus* and that the co-occurrence of *verum focus* and *doch* automatically triggers accenting of the

- (43) Sie wollte erst Paul und Max einladen, aber dann hat sie doch wohl/ wie du
 she wanted at.first Paul and Max invite but then has she DOCH presumably as you
 weißt NUR Max eingeladen.
 know only Max invited
 ‘At first, she wanted to invite Paul and Max, but eventually she presumably/as you know
 only invited Max.’

We conclude that independent prosodic constraints on accent placement may have a confounding effect on the distribution of accented *DOCH*, which provides evidence for the interaction of independent grammatical modules (prosody, semantics), but no evidence for postulating different lexical meanings for *doch* and *DOCH*.

4.2 Accented *DOCH* utterances with a topic-focus hat-contour

The second type of *DOCH* occurrences outside verum focus environments involves a topic-focus hat contour as in (44) (the example is due to A. Haida, p.c.):

- (44) Eigentlich wollte ich mir ein faules Wochenende machen, aber /DANN habe ich mir DOCH\
 at.first would I me a lazy weekend make but then have I me DOCH
 (wieder) Akten mit nach Hause genommen.
 again files with to home taken
 ‘At first, I wanted to spend a lazy weekend, but then I took some files home after all.’

In (44), *DOCH* is accented even though the two propositions are not identical and the corresponding sentence without *doch* has no verum focus accent on the finite verb in C:

- (45) *Eigentlich wollte ich mir ein faules Wochenende machen, aber dann HABE ich mir
 at.first would I me a lazy weekend make but then have I me
 (wieder) Akten mit nach Hause genommen.
 again files with to home taken
 ‘At first, I wanted to spend a lazy weekend, but then I took some files home after all.’

The accenting of *DOCH* in (44) cannot be put down to de-accenting under givenness of *p*, following the pattern of the verum focus examples in section 3. We assume that it is due to optional de-accenting under *predictability*. E.g., Bolinger (1972) gives the example (46), in which the expected focus-induced accenting on both the subject and the verb is not realised, because the verb is predictable:

- (46) Q: What happened? A: ROBBers have stolen from me!

In the case of (44), the expectation that the speaker did take files home is supported by various elements in the linguistic context: the contrast between *eigentlich* ‘at first’ and *dann* ‘then’, the contrastive conjunction *aber* ‘but’, and the repetitive adverb *wieder* ‘again’, which indicates that the event in question is stereotypical, or known from previous occurrences.

I.e., once again *DOCH* is accented because the rest of the clause is deaccented, but, this time, because of the predictability of the rest. Since this deaccentuation is optional, we predict that ordinary sentence accent (and, hence, unaccented *doch*) is possible in (44) without a significant change in the meaning of particle, which is borne out:

- (47) Eigentlich wollte ich mir ein faules Wochenende machen, aber dann habe ich mir doch
 at.first would I me a lazy weekend make but then have I me doch
 wieder Personalakten mitgenommen.
 again personal.files with carried
 'At first, I wanted to spend a lazy weekend, but then I took some personal files after all.'

5 Conclusion

To sum up, we have presented an analysis of accented *DOCH* that explains its distribution as the result of general prosodic or information-structural reasons. We showed that our initial analysis, in which the behaviour of *DOCH* was explained in terms of the occurrence of the unaccented particle in verum focus contexts, could be generalised to the more abstract insight that nuclear pitch accent is realised on *DOCH* when it cannot be realised elsewhere in the clause.

Assuming a looser connection between verum focus and accenting of *DOCH* is supported by the fact that *doch* can also remain unaccented in verum focus contexts, with a significant change in the discourse semantics. We postpone the analysis of these cases to another occasion, however:

- (48) Peter hat DOCH gewonnen.
 Peter has DOCH won
 'Peter has won after all, contrary to all expectations.'
- (49) Peter HAT doch gewonnen.
 Peter has doch won
 'Peter did win, contrary to what you are saying.'

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