The modal particles *ja* and *doch* and their interaction with discourse structure: Corpus and experimental evidence[1]

Sophia Döring & Sophie Repp
Humboldt-Universität zu Berlin

September 2016

To appear in
S. Featherston, R. Hörnig, S. von Wietersheim & S. Winkler (eds.),
Information Structure and Semantic Processing.

1 Introduction

German modal particles have been in the centre of linguistic research for several years, the main focus lying on their semantic and pragmatic properties (e.g. Thurmair 1989; Lindner 1991; Jacobs 1991; Waltereit 2001; Karagjosova 2004; Zimmermann 2004, 2012; Gutzmann 2009; Egg 2013; Repp 2013; Rojas-Esponda 2014). Modal particles are usually thought to operate at the semantics-pragmatics interface. The meaning contributions that they have been claimed to make, roughly fall into three types. The first is a modification of the sentence type or the illocution(ary operator) of the utterance they occur in (e.g. Lindner 1991; Jacobs 1991; Waltereit 2001; Karagjosova 2004). For instance, in an assertion a particle may indicate that the speaker is uncertain about committing to the proposition that is asserted, i.e. the particle signals that the speaker modifies or cancels a felicity condition of the speech act assertion. The second is that modal particles relate the proposition they scope over to another proposition in the common ground CG (e.g. Karagjosova 2004; Egg 2013; Repp 2013). The other proposition can be a proposition that was at issue in the previous utterance, a felicity condition of the previous utterance, or it can be a proposition that was entailed or implicated by earlier discourse. The third type of meaning contribution is more generally interaction-directed: Modal particles serve as meta-pragmatic instructions (König & Recquart 1991) or as interaction-regulating instructions (Karagjosova 2004) to the hearer (also cf. Franck 1980). The purpose of such instructions is to integrate an utterance into the current discourse context (also cf. Thurmair 1989).

What these meaning types have in common is that they essentially concern common ground management (cf. Repp 2013). Modal particles indicate how a proposition relates to the common ground, and how the common ground is to be developed – by pointing to common or individual knowledge, to epistemic states and to expectations of the interlocutors. Common ground management creates and/or enhances discourse coherence and thus serves smooth communication.

For discourses to be coherent they must have a structure. Discourse structure is usually assumed to be hierarchical, and it is assumed that discourse units must be related to other discourse units by discourse relations in a meaningful way (Mann & Thompson 1988; Asher & Lascarides 2003; Hobbs 1985; Sanders, Spooren & Noordman 1992). If, and if so how, modal particles interact with, and contribute to, discourse structure is largely unknown.[2] The goal of the present paper is to explore the interaction of modal particles and discourse structure by investigating the interplay of modal particles and discourse relations, and thus to contribute to a better understanding of the role that the particles fulfil in the creation of discourse coherence.

---

[2] But see Rojas-Esponda 2014 for a question-under-discussion approach for *doch*.

To develop an initial idea of the coherence-creating function of modal particles, let us consider the particle *ja*, which occurs in assertions. Assertions come with the preparatory condition that it is not obvious to both speaker and addressee that the addressee knows the asserted proposition *p* (Searle 1969). In other words, the proposition that is asserted must be new. Now, *ja* is generally taken to indicate (roughly), that the speaker assumes that the proposition *ja* scopes over is already part of the common ground, i.e. that it is not new (see many of the references above). So by using *ja* in an assertion, the speaker signals that the relevant preparatory condition is cancelled (Waltereit 2001). One may ask why a speaker might want to cancel this preparatory condition. One answer to this question is that the speaker wants to remind the listeners of the proposition (Karagjosova 2004) so that the proposition is retrieved from memory and re-activated in the addressee's mental model of the discourse (Repp 2013). A re-activation can serve coherence purposes in discourse. Consider (1), a discourse consisting of two utterances.

(1) Ann: Peter hat ja seine Geburtstagsfeier abgesagt. Da können wir am Sonntag
         Peter has JA his birthday.party cancelled Then can we on.the Sunday

     einen Ausflug machen.
     a trip make

     'As you know, Peter has cancelled his birthday party. So we can go on a trip on Sunday.'

The first utterance contains the modal particle *ja*, which suggests that the speaker, Ann, thinks that the proposition *ja* scopes over – p_{ja} – is already in the common ground. If this is indeed the case, *ja* is obligatory in this assertion: without the particle the preparatory condition mentioned above would be violated. The addressee could complain with good cause that Ann's discourse move is redundant. A reaction like *I know that* would be quite natural. In (1), however, Ann is signalling that she chose to violate the preparatory condition and that she wishes to remind the addressee of p_{ja}. We propose that the effect of bringing up p_{ja} in (1) is that p_{ja} is placed in a particular position in the discourse structure. The speaker mentions known information in her first utterance – i.e. in the first discourse unit – so that she can attach a second discourse unit. The result is a more coherent discourse because the second unit is not presented in isolation. The two units are in a CAUSE relation: the first unit gives the reason for why it is now possible to go on a trip. We propose that the purpose of relating the two discourse units is the speaker's pre-emption of a rejection of the second assertion by the addressee. Ann probably thought that the addressee might have forgotten that Peter has cancelled his birthday party. As a consequence, the addressee would probably not agree that the proposition *that they can go on a trip on Sunday* should become part of the common ground. The *ja*-utterance facilitates the addition of that proposition to the common ground, where *facilitation* means that the addressee will accept the addition more readily than without the *ja*-utterance.

In the present paper we explore how the German modal particles *ja* and *doch* are used by speakers to create discourse coherence and 'smooth' communication (a) by indicating the status of a proposition with respect to the common ground, and (b) by highlighting a proposition's function as a discourse unit in its relation(s) with other discourse units in the current discourse structure. We present evidence from a corpus study and from a forced choice experiment showing for *ja* and *doch* (a) that these particles preferably occur in certain discourse relations while 'avoiding' others, and (b) that when given the choice between the two particles – whose meaning is closely related –, native speakers choose the particle depending on the discourse relation. We argue that these findings can be explained in a model that conceives of modal particles as common ground managing operators that serve the creation and enhancement of discourse coherence. In the next two sections we present our theoretical assumptions about common ground management (section 2.1) and about discourse structure (section 3.1) in relation to the meaning contribution of modal particles. In section 4 we present the corpus study, in section 5 we present the experiment. Section 6 offers a general discussion and concludes.

2 The meaning and use of *ja* and *doch*

2.1. Common ground and common ground management

To make our ideas about modal particles as common ground managing operators more precise we will formulate them in a model of common ground development that is an adaptation of the model proposed by Farkas & Bruce (2010). The common ground in Farkas & Bruce (2010) is that of Stalnaker (1978), i.e. the set of propositions that the interlocutors mutually assume to be true. In addition, there are sets of individual discourse commitments, which keep track of what each interlocutor has publicly committed to during a conversation (cf. Ginzburg 1995; Asher & Lascarides 2003 for similar proposals). Discourse commitments can be understood as the current mental states of the discourse participants. The common ground is the intersection of the individual discourse commitments of all interlocutors plus assumed shared background knowledge. The model furthermore contains a component called *Table*, which records what is currently under discussion. Interlocutors place syntactic objects paired with their denotations on the Table. What is on the Table is *at issue*. Moving an issue to the common ground happens via so-called *projected sets,* which contain future developments of the common ground, and which are projected according to default rules about expected moves by the interlocutors. In the case of assertions, the default move of the addressee is the acceptance of the information on the Table, so after the assertion of a proposition *p* all possible future common grounds contain *p*. For polar questions, in contrast, the future common grounds may contain *p* or $\neg p$.

Farkas & Bruce assume that conversation is driven by two motors. One is to increase the common ground, i.e. to increase shared knowledge. The other is to empty the Table and thus to reach a *stable state*. As a consequence, a discourse move that rejects an interlocutor's utterance is more marked than a move that accepts a previous move. Acceptance leads to the removal of the respective proposition from the Table and to its addition to the common ground whereas a rejection requires a retraction of a discourse commitment by one of the interlocutors. Rejections therefore are considered to create *conversational crises*, which is something that interlocutors try to avoid.

2.2. Proposal for the meaning of *ja* and *doch*

Applying this model to example (1) from the introduction, we can observe two things. The first is that the first utterance is a redundant discourse move since the addition of the proposition p_{ja} does not result in an increased common ground. We will come back to this issue further below. The second observation is that – if we enrich the model in a way to be specified instantly – we correctly predict that making the first discourse move, i.e. uttering the *ja*-utterance and reminding the addressee of p_{ja}, is well-motivated because a conversational crisis can be avoided: it is unlikely that the addressee will erroneously reject the second proposition p_2 because s/he believes that $\neg p_{ja}$, which would be inconsistent with p_2: after all s/he has just been reminded of p_{ja}.

Starting with the second observation, note that Farkas & Bruce do not intend their model to account for the development of mental discourse representations that are subject to memory restrictions – which are relevant for forgetting and remembering, and for the mental saliency or non-saliency of knowledge. As a matter of fact, Farkas & Bruce explicitly restrict the model's scope to the Heimean context change potential and exclude aspects that go beyond truth-conditional meaning. However, recall that we argued above for *ja* that in addition to imposing on the common ground the condition that it entails the proposition p_{ja}, *ja* has a reminding function. In other words, *ja* requires p_{ja} to be non-salient prior to the assertion of p_{ja}. If p_{ja} were salient, it would not necessary to remind the listener of p_{ja}. The reminder <u>makes</u> p_{ja} salient, which, as we suggested above, can have the effect of avoiding a conversational crisis. Therefore, it seems that a model of common ground management must incorporate attributes like saliency. This is what we will assume from now on (also cf. Karagjosova 2004 on the differential accessibility of propositions in the set of discourse commitments depending on the mental activation status of the propositions).

Returning to the first observation mentioned above, viz. that the *ja*-utterance in (1) is redundant because p_{ja} is taken to be already in the common ground, one might wonder whether in the model of Farkas & Bruce p_{ja} is placed on and removed from the Table like a new proposition. The answer to this question must be *yes* because an interlocutor might not agree with the speaker's assumption that the proposition

is already in the common ground, or s/he might altogether disagree with the truth of the proposition. Indeed, discourses like (2) – which is a continuation of (1) – are felicitous: the addressee in (2), Ben, rejects p_{ja}, by publically committing to $\neg p$ and placing $\neg p$ on the Table. As a consequence, the projected set is inconsistent. A conversational crisis arises. One of the speakers must retract his/her commitment.

(2)   Ann: Peter hat ja seine Geburtstagsfeier abgesagt. Da können wir am Sonntag einen Ausflug machen. (= (1))
'As you know, Peter has cancelled his birthday party. So we can go on a trip on Sunday.'

Ben: Peter hat seinen Geburtstag NICHT[3] abgesagt. Maria hat das nur behauptet,
Peter has his birthday not cancelled Maria has that only claimed

um ihn zu ärgern.
in.order him to annoy
'Peter hasn't cancelled his birthday. Maria only said that to annoy him.'

There is a question here whether the rejection is a rejection of the presupposition or of the assertion that *p*. Note that Ben might also react to Ann's first utterance by saying: *What? How I am supposed to know that Peter has cancelled his party!?*, thus rejecting the presupposition. Alternatively, his utterance might be preceded by a simple *No!*, which would indicate that he rejects the assertion. This observation can be taken as further evidence for our proposal above that attributes like saliency must be part of the common ground: the distinction between a proposition being in the common ground vs. not being in the common ground is not sufficient to describe the meaning contribution of *ja*. The utterance of p_{ja} changes the internal make-up of the common ground with respect to saliency. If, after a *ja*-utterance, the addressee confirms p_{ja} – by explicitly committing to it or by just remaining silent, s/he accepts this update of the common ground

Turning to the modal particle *doch*, consider the discourse in (3). Ann places the proposition that *Maria is coming to Peter's birthday party* (= p_1), on the Table. Then, Ben places the proposition that *Peter has cancelled his party* (= p_2) on the Table, which results in inconsistent projected sets. p_1 comes with the presupposition *q, that there is a birthday party for Peter*. Since presuppositions are placed on the Table like any other non-at-issue information (Döring 2016),[4] all projected sets contain *q* as well as p_2, which cannot both be true because p_2 entails $\neg q$. The result is a conversational crisis. One of the speakers has to retract his/her commitment.

(3)   Ann: Maria kommt auch zu Peters Geburtstagsfeier.
Maria comes also to Peter's birthday.party
'Maria is also coming to Peter's birthday party.'

Ben: Peter hat die Feier doch abgesagt.
Peter has the party DOCH cancelled
'But Peter has cancelled the party – you should know that.'

Now, Ben uses *doch* in his reply, which similarly to *ja* signals that the speaker assumes that the respective proposition, $p_2 = p_{doch}$, is already in the common ground, and in addition signals that p_{doch} is in conflict with a proposition in the discourse, i.e. that a common ground containing both propositions would be inconsistent. Thus, *doch* signals the cancellation of the same preparatory condition as *ja*. However, different from *ja*, *doch* signals that p_{doch} in (3) is marked as being in the common ground against the evidence that the speaker has just received: Ann cannot be committed to p_{doch} – she has put *q* on the Table – so p_{doch} cannot be in the common ground – according to Ann. So why does Ben use *doch*? We

<hr />

[3] Small caps indicate prosodic stress.

[4] This assumption is in conflict with Farkas & Bruce's (2010) proposal that what is on the Table is *at issue*, as presuppositions etc. are obviously not at issue. However, considering that denials can target non-at-issue content (Horn 1989, Van der Sandt 1991), and considering that the Table is the locus for negotiations about what is in or will be in the common ground, this proposal needs a qualification. We assume with Döring (2016) that non-at-issue content is placed on the Table but is marked for being not at issue.

suggest that *doch* is used in (3) to resolve a conversational crisis in a quick and efficient way, 'quick' meaning that Ann will retract her commitment to p_1 without further discussion. If Ann is reminded by Ben that she is already committed to a proposition that is inconsistent with p_1, and if Ann accepts the reminder as correct, she might be more easily inclined to retract p_1, and the Table can be cleared.[5] Note that Ben's utterance without the particle would be coherent: *doch* is not required to mark the inconsistency in the projected sets. However, without *doch,* Ben's utterance would not be a reminder. Ben would be signalling that he is conveying new information, which would have to be negotiated between the two interlocutors, like any other new information.

The examples that we have discussed up to now involve dialogues with affirming and rejecting moves, and we have sketched our ideas of how modal particles may contribute to pre-empting or resolving conversational crises, and thus making discourses (more) coherent. As modal particles can also occur in monologues, the question arises of what their function in these contexts is. We propose that the particles essentially have the same coherence-creating function as in dialogues. For instance, the conflict-marking meaning contribution of *doch* may be used to make explicit the kind of discourse relation the speaker intends the (quiet) addressee to extract from the monologue, which will enable the addressee to construct a coherent discourse structure and pre-empt or quickly resolve a(n implicit) conversational crisis and/or incomprehension. In the next section we will discuss in what way modal particles may interact with discourse structure and discourse relations.

3 Predictions for discourse structure

3.1. Discourse structure and discourse relations

A general assumption in theories of discourse structure and discourse coherence (e.g. Hobbs 1985; Grosz & Sidner 1986; Mann & Thompson 1988; Sanders & Spooren & Noordman 1992; Carlson & Marcu 2001; Kehler 2002; Asher & Lascarides 2003) is that discourses consist of discourse units which are connected to each other by meaning relations. Elementary discourse units, *EDUs*, basically correspond to clauses. They combine to larger units such that units and relations form a hierarchical structure. A basic assumption shared by all discourse theories is that most relations are asymmetric in the sense that one unit is more central to the overall topic of the discourse than the other, so that deleting the less central unit would alter the discourse in a less substantial way than deleting the more central unit. In Rhetorical Structure Theory (RST) (Mann & Thompson 1988; Mann & Taboada 2005-2015) – the theory which serves as the theoretical background for the corpus study to be presented further below – the more central unit is called the *nucleus*. The less central unit is called the *satellite*. The satellite has a specific function relative to the nucleus, which depends on the particular discourse relation. For instance, in a BACKGROUND relation[6] the satellite provides background information which is supposed to facilitate the comprehension of the information given in the nucleus. The order of nucleus and satellite is flexible in most relations. In addition to asymmetric relations, there are symmetric relations, which consist of two or more nuclei and hence are called *multinuclear* relations (as opposed to the asymmetric *mononuclear* relations). In multinuclear relations, two or more units of the same importance are related.

The discourses in (4) and (5) illustrate the hierarchical organization of discourses, the relation between nuclei and their satellites, and the variable directionality of the relation between nucleus and satellite. Both discourses consist of three sentences, which correspond to three EDUs, but they differ both in the relations they involve and in the structure they have. In (4), EDU [3] elaborates on the information provided in EDU [2], so the two are in an ELABORATION relation. [2] and [3] form a larger unit which is related to EDU [1] by an EVIDENCE relation, cf. Figure 1. The vertical lines in Figure 1 mark the EDUs that are nuclei. The numbers indicate the sequence of units that make up the discourse relation

---

[5] Note that *doch* cannot be replaced with *ja* in (3). Since the stricter discourse conditions of *doch* (i.e. that the common ground entails, presupposes or implicates $\neg p_{doch}$) are met in this discourse, *doch* has to be used.

[6] See the Appendix for definitions and examples of the RST discourse relations discussed in this paper.

containing the nucleus, e.g. [2] in Figure 1**Fehler! Verweisquelle konnte nicht gefunden werden.** is the nucleus of the relation holding between [2] and [3].

(4)   [1] Die Arbeitslosenzahlen   sind angestiegen. [2] Das zeigen die neuen Studien
       the unemployment.figures are risen   that show the new   studies

ganz klar.   [3] Die Studien wurden von der Regierung in Auftrag gegeben.
very clearly   The studies were   by the government in order   given

'[1] The unemployment rate has risen. [2] The new studies show this very cleary. [3] These studies have been commissioned by the government.'
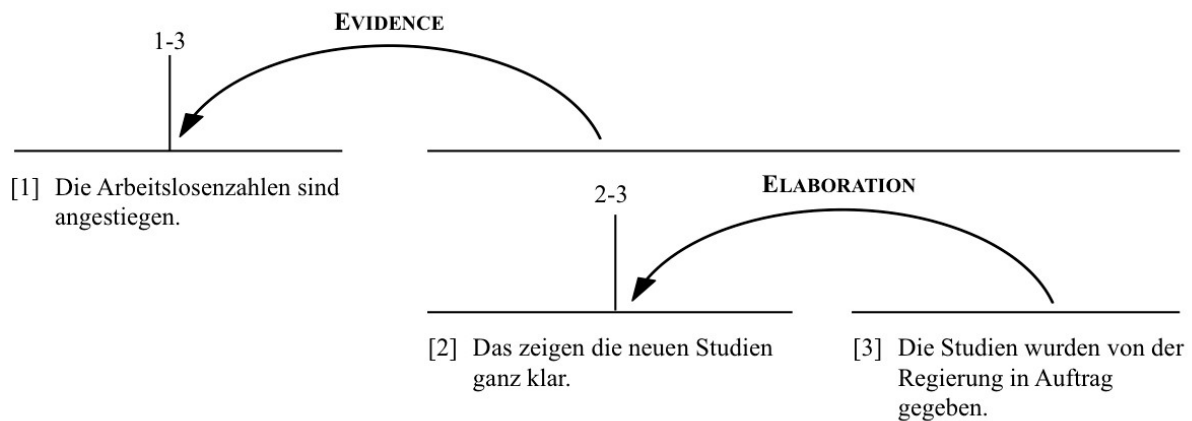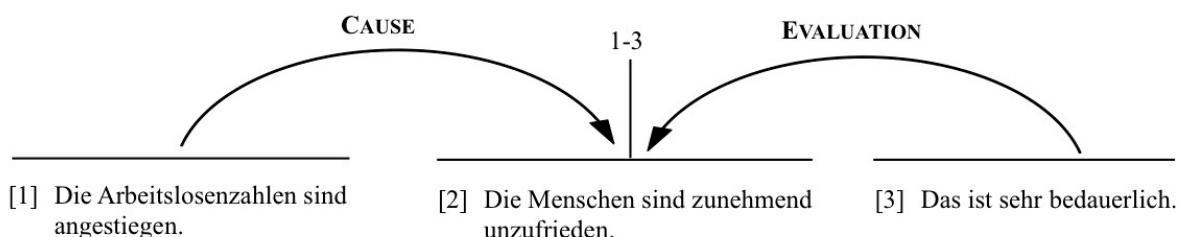

Figure 1. Discourse structure for example (4)

In (5), EDU [1] provides the CAUSE for what is described in EDU [2]. EDU [3] is attached to EDU [2] by an EVALUATION relation. Thus, EDU [2] serves as the nucleus for two relations, cf. Figure 2. The satellite of the CAUSE relation precedes the nucleus, and the satellite of the EVALUATION relation follows the nucleus.

(5)   [1] Die Arbeitslosenzahlen   sind angestiegen. [2] Die Menschen sind zunehmend
       the unemployment.figures are risen   the people   are increasingly

unzufrieden. [3] Das ist sehr bedauerlich.
unhappy   this is very deplorable

'[1] The unemployment rate has risen. [2] People are more and more unhappy. [3] This is deplorable.'

Figure 2. Discourse structure for example (5)

The number and characteristics of the relations proposed in existing discourse theories differ considerably. Grosz & Sidner (1986) propose a basic distinction of two relations, Mann & Thompson (1988) introduce a set of 23 relations, and Carlson & Marcu (2001) define over 70 relations. The number of relations assumed in these theories is largely a result of the different research questions pursued and the ensuing methodology that is employed for classification, e.g. a bottom-up strategy starting from a classification of connectives or a top-down strategy starting from very basic cognitive categories. The set of relations in Mann & Thompson's (1988) RST (including later modifications; Mann & Taboada 2005-2015), is a medium-sized set of relations that has been developed on the basis of corpus work, see section 4 for details.

3.2. Predictions for *ja* and *doch*

Turning to the interplay of the modal particles *ja* and *doch* with discourse relations and discourse structure, we first consider the meaning component that the two particles share, namely that of marking the proposition they scope over as already being in the common ground. From this meaning component we predict that *ja* and *doch* often occur in discourse relations where one of the discourse units is likely to contain known information. For instance, as already mentioned, the satellite in the BACKGROUND relation provides information that helps the addressee to understand the information given in the nucleus. We may assume that if the satellite presents information that is already known this will be useful in understanding the nucleus. If, in addition, the information presented in the satellite is *marked* as known by *ja/doch* this might further contribute to the acceptance of the nucleus. Note, however, that BACKGROUND relations have also been attributed a wider meaning in the sense that the satellite may give a definition of a concept or information to 'set the stage' for an event or another argument (cf. Asher, Prévot & Vieu 2007). In principle the satellite can thus offer known or new information.

There are also discourse relations where the satellite by definition contains new or non-factive information, so we predict that *ja* and *doch* do not occur in the satellite of such relations. The ELABORATION and CONDITION relations are a case in point. (6) illustrates the infelicitous use of *ja* in the satellite of an ELABORATION relation. ELABORATION is defined in a very general way in RST, viz. as presenting additional information. Mann & Thompson (1988) propose that adding information can take many forms so that nucleus and satellite constitute pairings like *generalization – specific*, *process – step*, *object – attribute*, among others. We may assume that speakers provide additional information because it is new.

(6)　　[1] Maria fährt dieses Jahr nach Österreich. [2] Sie geht (#ja) in Kitzbühel wandern.
　　　　Maria goes this　year to　Austria　　she goes JA　in Kitzbühel hike
　　　　'Maria is going to Austria this year. She is going hiking in Kitzbühel – as you should know'

Next recall that *doch* has the additional meaning component of indicating that a proposition in the context is inconsistent with the proposition that *doch* scopes over, i.e. that of indicating a conflict. Because of this meaning component we expect *doch* to occur in discourse relations that involve conflict or contrast. Prima facie these are CONTRAST, CONCESSION and ANTITHESIS. CONTRAST is a multinuclear relation where there are similarities and differences between the two nuclei. A connector typically occurring in CONTRAST relations is *but*. (7)B shows that *doch* can occur in a CONTRAST relation (EDUs [1]-[2]). Note, however, that the contrast expressed by the relation does not correspond to the contrast/conflict that *doch* hints at: *doch* indicates that EDU [2] is in contrast with something speaker A insinuated before, namely that both of Peter's parents are tall – which B expected A to know. Without the context, B's second utterance (EDUs [1]-[2]) would be an infelicitous discourse.

(7)　　A: Peter ist sehr　groß. Das ist kein Wunder bei　seinen Eltern.
　　　　　Peter is very　tall.　that is no　wonder with his　　parents
　　　　　'Peter is very tall. This is not really surprising, looking at his parents.

　　　　B: Warum? [1] Peters Vater ist groß, [2] aber seine Mutter ist doch　klein.
　　　　　why　　　　Peter's father is tall　　but　his　mother is DOCH short
　　　　　'Why? His father is tall but is mother is short.'

We tentatively suggest that the failure of *doch* to point to the same contrast as the CONTRAST relation is due to the CONTRAST relation being a multinuclear, i.e. symmetric discourse relation. There is no satellite whose function – such as that of enabling the addressee to better understand the nucleus in the BACKGROUND relation – can be enhanced / highlighted by the modal particle. We will see presently that this problem does not arise in the other, mononuclear contrastive discourse relations. With respect to the occurrence of *doch* in CONTRAST we suggest that the particle does not actually occur in CONTRAST more often than in other, non-contrastive relations, due to the symmetry of the relation.

In a CONCESSION relation, which is a mononuclear contrastive relation that often is signalled by connectors like *although* or *even though*, the speaker acknowledges that there is a potential or apparent incompatibility between nucleus and satellite but expresses that this incompatibility is not genuine: s/he endorses the nucleus and expresses that the satellite is no real obstacle for accepting the nucleus (cf. Mann & Thompson 1992). The discourse in 0 contains a CONCESSION relation, the second clause is the satellite.

(8) Alle Kandidaten hatten Schwierigkeiten. Dabei   ist die Aufgabe (doch) nicht schwer.
all candidates had difficulties   although is the task   DOCH not hard.
'All candidates had difficulties – even though the task is not hard.'

We suggest that one effect of adding *doch* to the satellite in this example is to increase the degree of the apparent incompatibility between nucleus and satellite, i.e. the contrastiveness between the discourse units is increased. The speaker seems to express his/her wonderment at the fact that all candidates had difficulties with a certain task in view of the known fact that the task was not difficult. So, *doch* here seems to highlight that adding the nucleus to the common ground is not a matter of course: the speaker signals that the acceptance of the nucleus might be difficult. Still s/he expects the hearer to accept the nucleus. We propose that the particle helps the listener to recognize the discourse relation as one involving a conflict, which might prompt the listener to discuss a possible conflict resolution in the subsequent discourse but will not lead to a rejection of the proposition(s) at issue.

We will see later in the discussion of the corpus results that 0 is actually an untypical example for the occurrence of *doch* in a CONCESSION relation: in CONCESSIONs, *doch* typically occurs in the nucleus rather than in the satellite. We will come back to this issue further below.

In an ANTITHESIS relation, there is a 'genuine' incompatibility between nucleus and satellite. We will concentrate here on ANTITHESES whose satellite contains a negation, see (9).[7] In the discussion section we provide a detailed analysis also of an example with a non-negative satellite. In example (9), the 'genuine' incompatibility between nucleus and satellite is an incompatibility between the proposition denoted by the nucleus and the non-negated proposition in the satellite. In the satellite, the speaker rejects the idea that Peter could take the place of Andrew. We assume that like in the CONCESSION relation in 0, *doch* helps the listener to recognize the discourse relation as one involving conflict. As in the previous example, nucleus and satellite (which – including the meaning contribution of the negation – conveys given, und thus uncontroversial information), are expected to be accepted by the listener more easily if the speaker draws particular attention to the conflict (and thus pre-empts protest)).

(9) Wir sollten Andrew nehmen. Peter kommt (doch) nicht in Frage.
we should Andrew take   Peter comes DOCH not in question
'We should take Andrew. Peter is out of the question.'

In the next section we will see that there are other discourse relations where *ja* and *doch* occur frequently although in view of the meaning contribution that has been suggested for the two particles these relations at first sight are no prime candidates for hosting the particles. Still, we will see that, overall, particles serve to increase the acceptance of propositions into the common ground.

---

[7] This example also is felicitous with stressed *doch*, which has a different meaning from unstressed *doch* (Egg & Zimmermann 2012). We are only interested in the variant with unstressed *doch* here.

4 Corpus study: Modal particles in political speeches

The corpus study served to verify our ideas about the occurrence of the modal particles *ja* and *doch* in particular discourse relations and their function for the establishment of discourse coherence in our model of common ground management by a quantitative analysis of naturally occurring discourses. The corpus chosen for the study was a corpus of the official transcripts[8] of 28 speeches (126.112 word tokens) by Helmut Kohl, who was the chancellor of Germany from 1982 to 1998. The speeches were given in the German parliament (*Bundestag*) in the period from 1996 to 1999[9]. This corpus was chosen for three reasons. First, it contained sufficiently long contributions to individual topics such that the discourse structure could be determined with suitable consistency during annotation. Second, it was a corpus of spoken language, which in the case of modal particles – which occur more frequently in spoken than in written language – ensured the occurrence of a sufficient number of modal particles. Finally, speeches are directed at a concrete audience, so that they are closer to dialogues than are other monologic text types (such as novels, newspaper texts etc.).

4.1. Data annotation

The corpus is annotated for *part of speech*, automatically analysed by *TreeTagger* (Schmidt 1994) using the *Stuttgart Tübingen Tagset* (STTS; Schiller et al. 1999). Within STTS, modal particles are assigned the label ADV, that is they are not distinguished from adverbs and from other particles. Since *ja* and *doch* have homographs that are answer particles or conjunctions, they were distinguished manually from these homographs and were annotated as 'MP'. There were 364 occurrences of *doch* and 112 occurrences of *ja*.[10]

For the annotation of the discourse relations which the EDUs containing a modal particle (= EDU_{MP}) had with other discourse units, the 23 discourse relations of RST (Mann & Thompson 1988; Mann & Taboada 2005-2015) were used as a tag set.[11] As there is no one-to-one correspondence between linguistic cues and discourse relations (except for certain conjunctions, e.g. *because* signals CAUSE relations) a close inspection of the surrounding context was required to assign the appropriate relation. To identify the discourse relation that an EDU_{MP} had with other discourse units a step-wise procedure was applied. First, the relation that the EDU_{MP} had with its adjacent EDUs was determined provided there was such a relation. If there was none, for instance in cases where the EDU_{MP} occurred at the end of a speech so that there was no right context and the EDU_{MP} did not attach to the EDU on its immediate left, further context was taken into consideration. The nearest (in terms of hierarchical closeness) elementary or non-elementary discourse unit with which the EDU_{MP} had a discourse relation was the one that was annotated. Typically, such a unit was identified in the left context. Furthermore, each EDU_{MP} was annotated for its role as nucleus vs. satellite of the respective discourse relation. Although EDUs can be involved in more than one discourse relation (see above), only one discourse relation was counted for each EDU_{MP} for the statistical analysis of the data that we report below. In most cases, this was the relation in which the EDU_{MP} was the satellite. The reasoning behind this decision was that our goal was to find out what function the particle in EDU_{MP}, and by extension what function the EDU_{MP} itself has in

---

[8] Slips of the tongue, interjections, truncations are removed by the official transcribers. An exemplary comparison of an audio file and the respective manuscript shows that some of the originally contained modal particles are removed, too.

[9] Parliament speeches in general are available via the German *Bundestag*, the corpus used here is a subcorpus of a large corpus of parliament speeches from various speakers (> 36 million tokens), which has already been annotated for part of speech by the Department for German Linguistics at Humboldt-University and is freely available via a corpus search interface (https://www.linguistik.hu-berlin.de/en/institut-en/professuren-en/korpuslinguistik/korpora/cqp).

[10] Particles occurring in interjections by the audience are ignored in the analysis.

[11] We did not distinguish between volitionality and non-volitionality in CAUSE and RESULT. CAUSE and RESULT are in fact 'flip versions' of each other: the nucleus in CAUSE would be the satellite in RESULT and vice versa. It is the task of the annotator to decide which EDU is more central to the overall discourse topic, and thus which EDU is the nucleus and which EDU is the satellite.

relation to the nucleus of the relation. In this sense it is more 'informative' to consider the satellite in a discourse relation.

4.2.   Data analysis

Since not all discourse relations occur with the same frequency, a baseline was needed to assess the frequency of occurrence of the modal particles relative to the overall distribution of the discourse relations. As the annotation of discourse relations is extremely time-consuming, a sub-corpus of the corpus was used to create this baseline: three of the Parliament speeches (27.000 tokens)[12] were annotated in their entirety for discourse relations, i.e. for all discourse units irrespective of the presence or absence of a modal particle. We refer to this sub-corpus as the *reference corpus*. The distribution of relations in the reference corpus is given in Figure 3. Figure 3 shows that the frequency of occurrence of the individual relations is quite variable. The relation ELABORATION occurs extremely frequently. We assume that this is not necessarily due to the text type of the present corpus, parliament speeches, but rather that it is a consequence of the fact that ELABORATION is defined in a very general way in RST (cf. section 3.1). SEQUENCE, in contrast, is a relation hardly used in the corpus. We assume that this is text type specific. A SEQUENCE describes a temporal order of events (*first X happened, then Y*), and is more likely to occur in narratives than in argumentative parliament speeches.

With respect to the distribution of modal particles relative to the distribution of discourse relations, the null hypothesis is that modal particles occur equally often in all relations. The *expected frequency n_{exp}* of occurrence of a particle in a discourse relation is thus the number of occurrences of the discourse relation in the corpus relative to the overall number of discourse relations in the corpus multiplied by the number of occurrences of the respective particle in the corpus (e.g. $n_{ja} = 112$), e.g.

(10)   Expected frequency of occurrence n_{exp} for *ja* in the BACKGROUND relation

$$n_{exp.(ja/B)} = n_B/n_{total} \times n_{ja} = 89/1801 \times 112 = 5.53$$
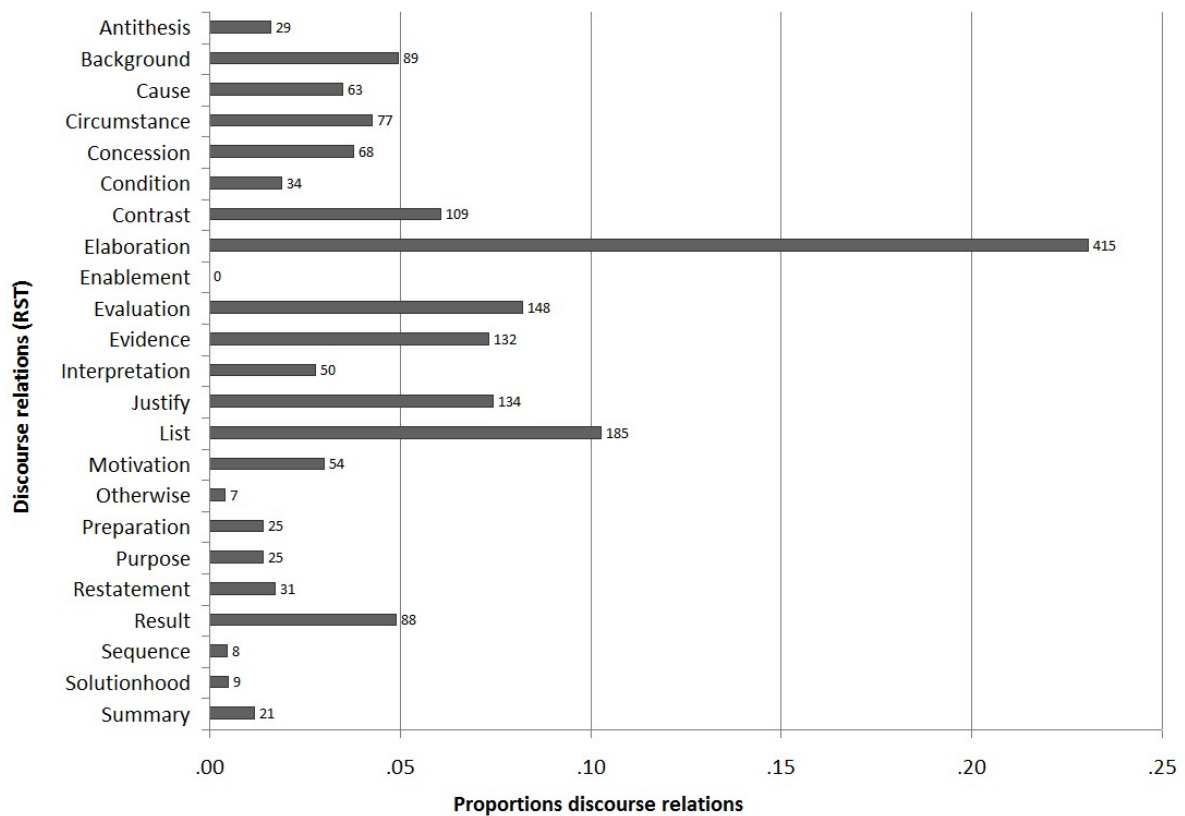
Figure 3. General distribution of RST relations based on the analysis of three speeches, reference corpus (1801 discourse relations). The numbers at the end of each bar are the raw frequencies

4.3. Results

Table 1 shows the expected and observed frequencies for the occurrence of *ja* and *doch* for the discourse relations in which the discourse unit containing the modal particle, EDU_{MP}, occurred. It also indicates for each mononuclear discourse relation how often the EDU_{MP} was the satellite in the respective discourse relation (counts and proportions). Figure 4 illustrates the distribution of *ja* in the discourse relations that are most relevant for our discussion further below, Figure 5 does the same for *doch*.

The statistical analysis of the observed frequency of occurrence of the two modal particles in the different discourse relations revealed that they are not equally distributed. We present the results first for *ja*, and then for *doch*. For *ja*, an exact multinomial goodness of fitness test[13] (R package EMT; Menzel 2013) showed that the observed frequencies differ significantly from the expected frequencies ($p < .0001$). Subsequent exact binomial goodness of fit tests conducted for each discourse relation (with Holm-Bonferroni corrected α-levels for multiple comparisons) revealed significantly higher observed frequencies than expected for the relations BACKGROUND ($p < .001$) and EVIDENCE ($p < .05$), and significantly lower observed frequencies than expected for the relations ELABORATION ($p < .001$) and LIST ($p < .001$). In all mononuclear relations, the modal particle occurred exclusively or almost exclusively in the satellite.

---

[13] Due to the high number of categories and the concomitant memory limitations for the computation the multinomial tests reported above were run with a Monte Carlo simulation with 10^6 withdrawals.
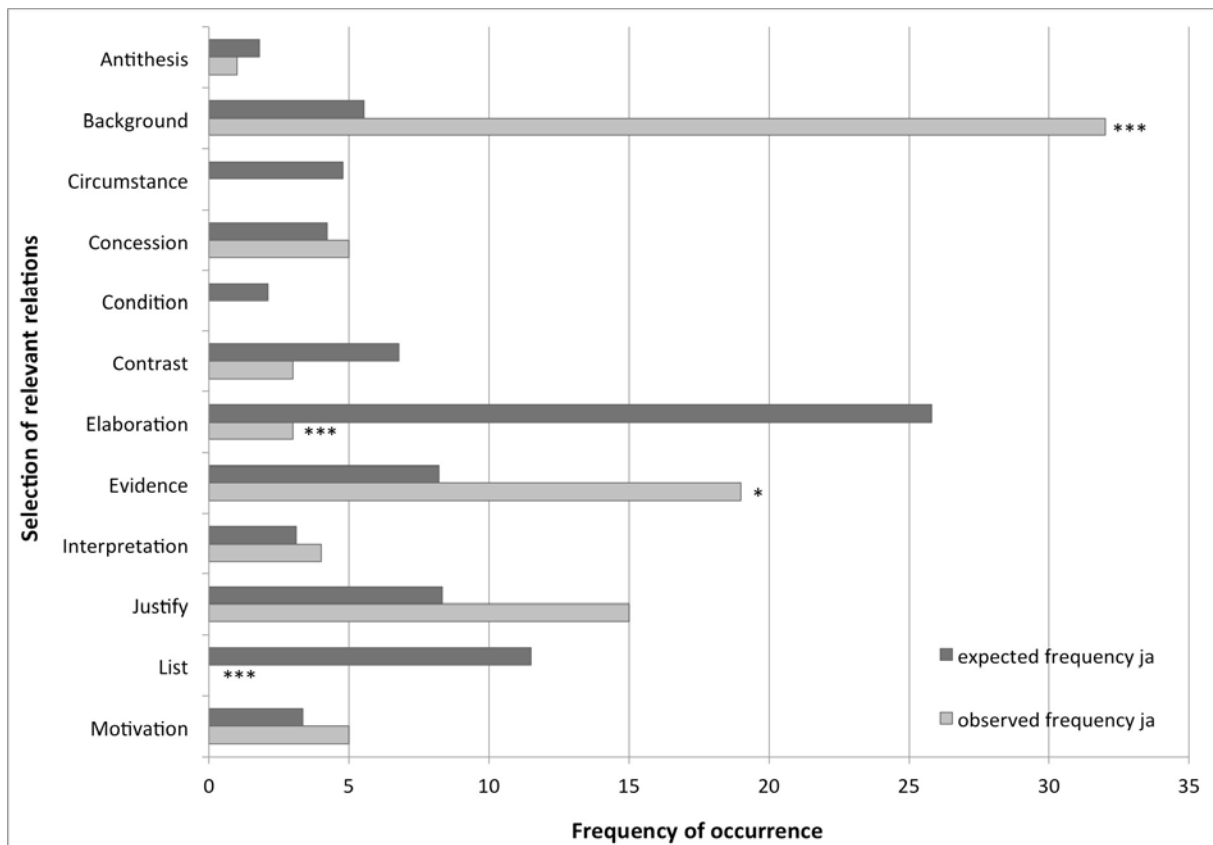
Table 1. Expected and observed frequencies of *ja* and *doch* in the corpus

| Discourse Relation	Discourse relation in reference corpus		*ja* in corpus			*doch* in corpus		
	Frequency n	Proportion	n_{exp}	n_{obs}	n_{obs} ($prop_{obs}$) in satellite	n_{exp}	n_{obs}	n_{obs} ($prop_{obs}$) in satellite
ANTITHESIS	29	.02	1.8	1	0	5.9	14	4 (.29)
BACKGROUND	89	.05	5.5	32	32 (1.0)	18.0	22	21 (.95)
CAUSE	63	.03	3.9	10	10 (1.0)	12.7	13	11 (.85)
CIRCUMSTANCE	77	.04	4.8	0	-	15.6	0	-
CONCESSION	68	.04	4.2	5	4 (.8)	13.7	26	4 (.15)
CONDITION	34	.02	2.1	0	-	6.9	0	-
CONTRAST	109	.06	6.8	3	n.a.	22.0	7	n.a.
ELABORATION	415	.23	25.8	3	3 (1.0)	83.9	16	16 (1.0)
ENABLEMENT	0	.00	0.0	2	2 (1.0)	0.0	2	2 (1.0)
EVALUATION	148	.08	9.2	10	10 (1.0)	29.9	23	23 (1.0)
EVIDENCE	132	.07	8.2	19	19 (1.0)	26.7	47	47 (1.0)
INTERPRETATION	50	.03	3.1	4	4 (1.0)	10.1	23	23 (1.0)
JUSTIFY	134	.07	8.3	15	15 (1.0)	27.1	86	86 (1.0)
LIST	185	.10	11.5	0	n.a.	37.4	0	n.a.
MOTIVATION	54	.03	3.4	5	4 (.8)	10.9	59	13 (.28)
OTHERWISE	7	.00	0.4	1	1 (1.0)	1.4	0	-
PREPARATION	25	.01	1.6	0	-	5.1	0	-
PURPOSE	25	.01	1.6	0	-	5.1	1	1 (1.0)
RESTATEMENT	31	.02	1.9	0	-	6.3	4	3 (.75)
RESULT	88	.05	5.5	1	1 (1.0)	17.8	20	20 (1.0)
SEQUENCE	8	.00	0.5	0	n.a.	1.6	0	n.a.
SOLUTIONHOOD	9	.00	0.6	0	-	1.8	2	2 (1.0)
SUMMARY	21	.01	1.3	1	1 (1.0)	4.2	1	1

For *doch*, an exact multinomial goodness of fitness test showed that the observed frequencies differ significantly from the expected frequencies ($p < .0001$). Subsequent exact binomial goodness of fit tests conducted for each discourse relation (with Holm-Bonferroni corrected α-levels for multiple comparisons) revealed significantly higher observed frequencies than expected for the relations ANTITHESIS ($p < .05$), CONCESSION ($p < .05$), EVIDENCE ($p < .01$), INTERPRETATION ($p < .01$), JUSTIFY ($p < .001$) and MOTIVATION ($p < .001$), and significantly lower observed frequencies than expected for the relations CIRCUMSTANCE ($p < .001$), CONDITION ($p < .05$), CONTRAST ($p < .01$), ELABORATION ($p < .001$) and LIST ($p < .001$). In the relations ANTITHESIS, CAUSE, CONCESSION and MOTIVATION, *doch* occurred more often in the nucleus than in the satellite.

4.4. Discussion

The corpus analysis showed that the frequency of occurrence of the modal particles *ja* and *doch* varies with the discourse relation in which the EDU$_{MP}$ occurs. For *ja*, we found that the particle occurs more often than expected in BACKGROUND and in EVIDENCE relations, and less often than expected in ELABORATION and LIST relations. For *doch*, we found that it occurs more often than expected in ANTITHESIS, CONCESSION, EVIDENCE, INTERPRETATION and MOTIVATION relations, and less often than expected in ELABORATION, CONDITION, CONTRAST, CIRCUMSTANCE and LIST relations. Some of these findings confirm our predictions. No finding is at odds with our predictions but we had not made predictions for all the discourse relations that the analysis revealed to preferably host or not host *ja* and *doch* respectively.

Figure 4. Expected and observed frequencies of *ja* in selected DRs (* = α-level <.05, corrected; *** = α-level <.001, corrected)
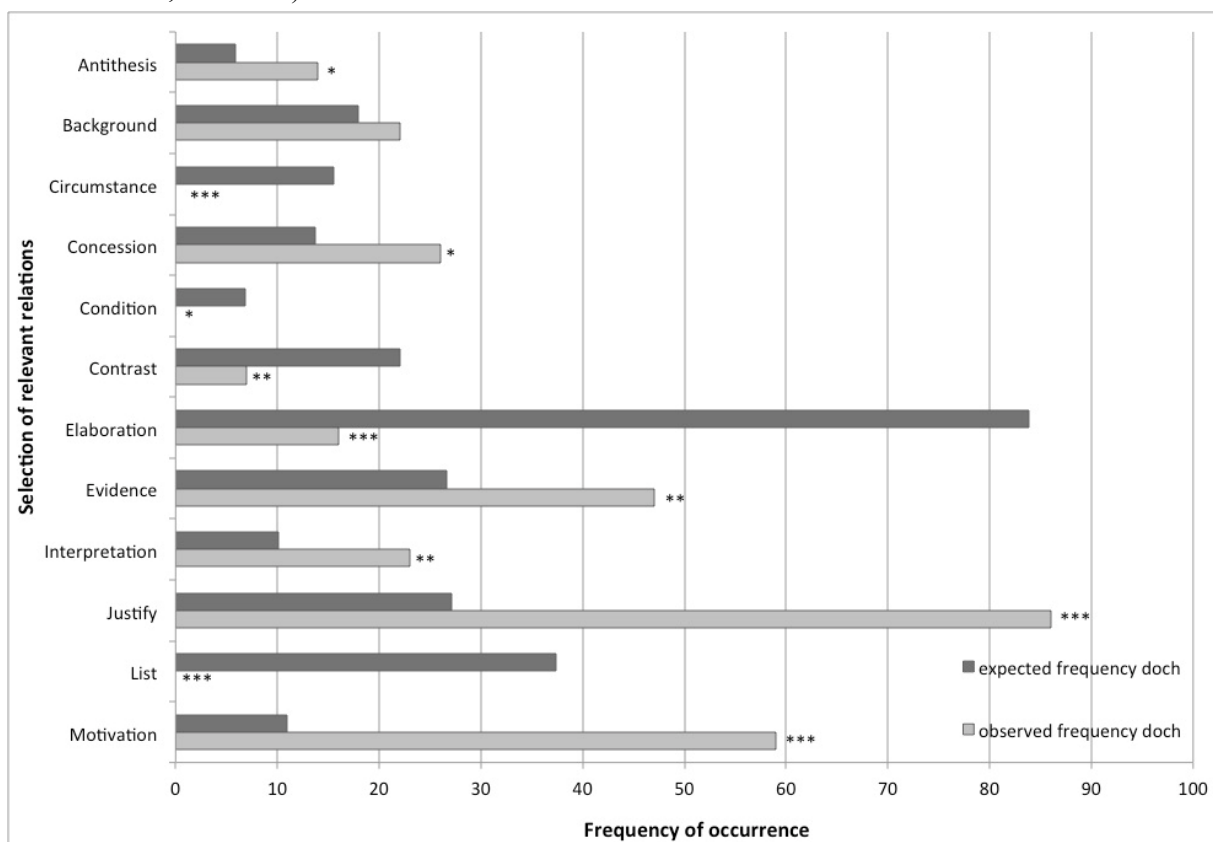
Figure 5. Expected and observed frequencies of *doch* in selected DRs (* = α-level <.05, corrected; *** = α-level <.001, corrected)

For both *ja* and *doch* we predicted that due to their function to indicate that the proposition they scope over is already in the common ground, they should occur particularly often in the satellite of the BACKGROUND relation. This prediction was confirmed for *ja* but not for *doch*. There might be two reasons for why *doch* does not occur frequently in the BACKGROUND relation. The first is that *ja* is preferred over *doch* because *ja* only has the reminding/retrieval function whereas *doch* is more complex and involves an additional meaning component so that if the intention of the speaker is merely to remind the addressee, *ja* is 'enough' to express this intention. The second reason is the nature of the additional meaning component of *doch*: it is plausible that the conflict-indicating function of *doch* is not actually that smoothly compatible with a BACKGROUND relation, where the satellite merely serves the easier comprehension of the nucleus. Rather, the conflict that is indicated by *doch* might always also be reflected in the type of discourse relation involved, e.g. the presence of *doch* might lead to the interpretation of a discourse relation as involving a conflict or apparent conflict like ANTITHESIS or CONCESSION (also cf. the findings of the experiment reported in section 5).

We furthermore predicted that due their reminding/retrieval function *ja* and *doch* should be incompatible with discourse relations that by definition provide new information or present non-factive content, i.e. information that is not in the common ground and for which reminding therefore is not possible. The corpus analysis revealed that, as predicted, the two particles occur less frequently than expected in the ELABORATION relation. We also found that *doch* occurs less often than expected in the CONDITION relation. For *ja* we did not obtain this latter result. However, note that the expected number of occurrences for *ja* in the CONDITION relation was four, and the observed number of occurrences was zero. Thus, we may assume that the statistical null effect is a consequence of a lack of statistical power. The raw number goes in the right direction and it represents the lowest number possible.

Staying with *ja*, which only has the reminding/retrieval function, the corpus analysis also revealed that the particle occurs frequently in the EVIDENCE relation, which is a result that we had not predicted. The EVIDENCE relation differs from the BACKGROUND relation in that the satellite is not used to increase the addressee's ability to understand the information conveyed in the nucleus, but to increase the addressee's belief in the information conveyed in the nucleus: the speaker provides a piece of evidence that may serve as proof for what is said in the nucleus. We may plausibly assume that if a piece of evidence is, or is signalled to be, already in the common ground its effect as proof might be more efficient. Thus, we propose that the speaker exploits the meaning of *ja* to strengthen his/her argument: the proposition *ja* scopes over is signalled to be already in the common ground and thus uncontroversial and unassailable. Therefore, it can serve as a very good argument for whatever the speaker wishes to say in the nucleus. So the EVIDENCE relation like the BACKGROUND relation involves a satellite that enhances the chance that the addressee accepts the proposition denoted by the nucleus into common ground.

Another non-predicted finding for *ja* was the low number of occurrences of the particle in the LIST relation. We suggest that in this multinuclear relation, an EDU$_{MP}$ with *ja* cannot (or cannot easily) fulfil its role of enhancing the acceptance of another proposition because the two EDUs that are involved are of equal importance, i.e. are symmetric, whereas the common ground managing function of *ja* seems to rely on an asymmetric discourse relation. A similar observation can be made for *doch* which neither occurs in the LIST relation. We assume that the symmetry of the LIST relation is not compatible with the common ground managing function of *ja* and *doch*. This proposal essentially is the same as the one that we made for the CONTRAST relation in section 3.1. CONTRAST also is symmetrical and does not seem to be easily compatible with *doch*. We will see instantly that the corpus results corroborate this assumption for *doch*.

Turning to the other findings for *doch*, we observe that the two contrastive discourse relations that we predicted *doch* to occur in, CONCESSION and ANTITHESIS, indeed frequently contained *doch*. And just as we suspected, the symmetric CONTRAST relation does not often contain an *EDU$_{MP}$* with *doch*. As a matter of fact, *doch* occurs very infrequently in the CONTRAST relation. We interpret this finding as support for our hypothesis, that *ja* and *doch* preferably occur in asymmetric relations. We will elaborate on this issue in the discussion session.

With respect to CONCESSION and ANTITHESIS, it is quite surprising that contrary to what we hypothesized in section 3.1, *doch* did not occur particularly often in the satellite of CONCESSION and ANTITHESIS

relations but in the <u>nucleus</u>. For instance, in (11) EDU [1] is the satellite of the CONCESSION relation with EDU [2], the nucleus, which contains *doch*.

(11) [1] Wenn ich es auch bejahe, dass wir es im   Augenblick tun, [2] so kann es
         if   I   it also approve that we it at.the moment   do   so can   it

    aber langfristig doch nicht so bleiben.
    but long-run   DOCH not   so stay

'[1] Although I approve of our current practice, [2] things cannot stay like this in the long run.'
(Speech #22, 109358)

Recall that in a CONCESSION the speaker acknowledges that there is a potential or apparent incompatibility between nucleus and satellite but considers the satellite no real obstacle for accepting the nucleus. We argued earlier that placing *doch* in the satellite of a CONCESSION helps the listener to recognize the conflict that is expressed in this discourse relation, with the effect that both speaker and listener agree that accepting the nucleus might be difficult but should nevertheless be done. The corpus findings suggest that placing the particle in the nucleus is more effective. We propose that *doch* still marks the conflict, but by indicating that the proposition denoted by the nucleus (rather than the one denoted by the satellite) is already in the common ground, the particle helps dismissing the 'difficulty' presented in the satellite. Thus, it is not generally the case that *ja* and *doch* always "do their work" in the satellite of a discourse relation. Rather, this seems to depend on the precise discourse semantics of the relation and the concomitant intentions of the speaker.

Turning to ANTITHESES, first consider (12). EDU$_{MP}$ [2] with *doch* is the nucleus for two satellites (complex [1], and [3]), both relations being ANTITHESES. We assume that, as in the CONCESSION example above, *doch* marks the proposition denoted by the nucleus as uncontroversial, thus highlighting the incompatibility with the conflicting satellite(s). Note that the satellite in the ANTITHESIS [2]-[3] contains a negation whereas the satellite in [1]-[2] does not. The conflict in [2]-[3] is a conflict with the non-negated proposition denoted by [3] (*Someone else overthrew Helmut Schmidt*). The conflict in [1]-[2] is a conflict with the listener's claim in 1982 (*that the Free Democrats were involved in the overthrow of Helmut Schmidt*). So in neither ANTITHESIS the conflict targets the proposition denoted by the entire satellite. Rather the conflict targets propositions that may be inferred from the satellite ([1]), or that are just implied to be present in the context ([2]).[14] In either case, the speaker assumes that both the nucleus and the satellite are true and should become part of the common ground – despite the 'indirect' conflict that exists. As before, we assume that highlighting the conflict, and marking the nucleus as uncontroversial increases the hearer's acceptance of the nucleus, that is the EDU denoting the proposition that is central to the speaker's line of argument.

(12) [1] Ich habe noch in Erinnerung, wie es 1982 war, als   Sie   vom   Verrat   der
         I   have still in memory   how it 1982 was when you from.the betrayal the

    Freien Demokraten sprachen. [2] In Wirklichkeit haben doch Sie selbst Helmut
    Free   Democrats   spoke   in reality   have DOCH you self   Helmut

    Schmidt   gestürzt   [3] und niemand sonst.
    Schmidt   overthrown   and no-one else

'[1] I still remember how it was in 1982 when you were talking of the betrayal by the Free Democrats. [2] In reality, it was you who overthrew Helmut Schmidt [3] and no one else.' (Speech #14, 63475)

Although *doch* occurs most frequently in the nucleus of the two mononuclear discourse relations at issue, there are a number of examples in the corpus where *doch* occurs in the satellite. Consider (13), an ANTITHESIS relation. Like in example (9) in section 3.1 and like in all corpus examples with *doch* in the

---

[14] This issue needs closer scrutiny in future research because the assumption that there must be a 'genuine' conflict in an ANTITHESIS relation (Mann & Thompson 1988) is not very restrictive if the conflict can be 'just anywhere'. It is unclear at the moment if this is a problem or not.

satellite, [2] in (13) contains a negation. We propose that in these cases, *doch* is used to indicate that it is known and therefore uncontroversial that what the satellite rejects should indeed be rejected, and it highlights the contrast between the two discourse units.

(13) [1] Wir sind doch   nicht in der Abteilung Wahrsagerei,   [2] sondern im
          We   are   DOCH   not   in the section   fortune.telling   but   in.the

      Deutschen   Bundestag.
      German   parliament.

      '[1] We are not in the department of fortune-telling [2] but in the German parliament.' (Speech #16, 75067)

Overall we suggest that no matter whether *doch* occurs in the nucleus or in the satellite of the mononu-clear contrastive discourse relations it fulfils the function of marking the respective EDU$_{MP}$ as already being in the common ground and thus as uncontroversial, and the function of highlighting an indirect conflict. The latter plausibly has the effect of pre-empting potential counterarguments against the nu-cleus. The former should lead to a quicker acceptance of the respective EDU$_{MP}$.

Let us next turn to the discourse relations for which we had not formulated predictions with respect to *doch* but which the corpus analysis revealed to be relevant for the distribution of the particle. Of these, EVIDENCE, INTERPRETATION, JUSTIFY and MOTIVATION occurred more frequently than expected. For the EVIDENCE relation we propose that *doch* here essentially has the same function as *ja*, i.e. that of marking the evidence that is presented in the satellite as uncontroversial, thereby enhancing the chance that the proposition denoted by the nucleus is more easily accepted. Furthermore, *doch* – by indicating that there is a conflict – indicates that another, inconsistent proposition in the context must be removed from the discourse commitments of the addressee, which should also have the effect of increasing the addressee's inclination to accept the nucleus.

INTERPRETATION is a relation where the satellite offers a judgement on the situation expressed in the nucleus. The judgement can be an explanation, a comparison or some other kind of subjective perspec-tive on or understanding of the state of affairs presented in the nucleus. Consider (14), where the speaker interprets the interest of his Japanese colleague as a sign of appreciation of the success of the reforms. By the use of *doch* the speaker in (14) marks the interpretation of the nucleus given in the satellite as uncontroversial, which we assume is intended to increase the chance that this interpretation gets ac-cepted. The meaning component of conflict that *doch* expresses is directed at a proposition outside the INTERPRETATION relation.

(14) [1]   Mein japanischer Kollege Hashimoto hat mich gebeten, Experten aus unserem Land nach
             Japan zu schicken [...], um dort zu erläutern, wie die Deutschen vorgegangen sind.

      [2] Das ist doch ein Zeichen dafür,   dass diese Reform großartig   gelungen   ist.
          this is DOCH a   sign   for.this that this   reform excellently succeeded is

      '[1] My Japanese colleague Hashimoto has asked me to send experts from our country to Japan to explain how the Germans proceeded. [2] This shows clearly that this reform is a great success.' (Speech #14, 69498)

JUSTIFY is a causal relation on the pragmatic level. In the satellite the speaker justifies the utterance of the nucleus, i.e. explains why s/he uttered the nucleus. For instance, in (15) the speaker says that s/he wishes to be honest. JUSTIFY often involves meta-discursive utterances. We propose that in (15) *doch* serves to contrast the speaker's decision to put the proposition(s) denoted by the nucleus on the Table with the decision of the audience to remain silent. The reminder/retrieval function of *doch* here does not serve its literal function but is applied in what we may call a *manipulative way*. For examples like (15) it is implausible to assume that the proposition *that the speaker should make a statement that s/he just made*, is already in the common ground. The addressee would have to be quite clairvoyant to already have been committed to this proposition. Still, the speaker in (15) uses *doch*. We assume that he does so in order to mark the discourse move that is justified in (15[2]), i.e. (15[1], as undebatable and self-evident. We will come back to the manipulative uses of modal particles in the general discussion.

16

(15) [1] Da ist es nicht nur eine Frage des Geldes, sondern auch des guten Willens oder andernfalls des totalen Versagens.

[2] Das muss man doch einmal klar und deutlich sagen.
That must one DOCH PART clearly and distinctly say

'[1] It is not only a question of money but also of good will or else of complete failure. [2] We should say this very clearly.' (Speech #16, 76760)

The last relation where *doch* occurred more frequently than expected is the MOTIVATION relation. The nucleus in a MOTIVATION is a request by the speaker, and the satellite provides information which is supposed to increase the addressee's wish to perform the requested action. As with the mononuclear contrastive relations discussed above, *doch* occurs in the MOTIVATION relation more often in the nucleus than in the satellite. Eighty percent of these nuclei are imperatives. (16) is a typical example.

(16) [1] Hören Sie doch überhaupt mal zu!
listen you DOCH at.all PART VERB.PART

[2] Es hat keinen Sinn, dass Sie hier im Saal sitzen und sich einfach nach dem Muster verhalten: Weil der das sagt, ist es falsch.

'[1] You should actually listen to me! [2] It does not make sense if you sit in this room and simply behave like: it is him that says these things, so they have to be wrong.' (Speech #5, 22919)

When a speaker orders or advises an addressee to do something s/he usually does this in situations when the addressee was not going to perform the action anyway. It has been argued that this latter condition on the use of imperatives is a presupposition (cf. Kaufmann 2012). We may assume that similarly to the JUSTIFY case *doch* occurs as marking the contrast between performing an action and not performing an action. Due to the nature of the structure of the discourse relation, this contrast concerns the nucleus of the relation. The occurrences of *doch* in the satellite of MOTIVATION (not illustrated), again can be explained as a manipulative use by the speaker who marks information that is supposed to motivate the hearer to do something, as undebatable.

Let us finally turn to the CIRCUMSTANCE relation, where *doch* – just as in ELABORATION, CONDITION and LIST, which were already discussed above – occurred less frequently than expected. In the CIRCUMSTANCE relation the satellite delivers the 'framework' for the interpretation of the nucleus, for instance it may mention the time and place of an event that is reported in the nucleus. From a discourse point of view, it is not evident why *doch* (or *ja*) should not occur in CIRCUMSTANCE. We propose that the reason is a formal one. In the reference corpus, 90 percent of the satellites in the CIRCUMSTANCE relation are embedded temporal clauses (e.g. introduced by *wenn, als* etc. ('when')). These cannot occur with modal particles (cf. Coniglio 2011 for a discussion of modal particles in embedded clauses).

This concludes our discussion of the occurrence of *ja* and *doch* in individual discourse relations in a corpus of political speeches. In the next section we present our experimental study.

5 Experiment: The choice of modal particles in BACKGROUND and JUSTIFY

In the experiment we tested if speakers, when faced with an explicit choice between particles for a target utterance, show sensitivity to the discourse relation that the target utterance has with the previous discourse unit. Thus, we expand our investigation of the interplay of modal particles and discourse relations from one speaker (Helmut Kohl) to many speakers, and we test – for a small subset of discourse relations – whether the findings of the corpus analysis can be corroborated by evidence gathered with a quantitative method where naive speakers have to make conscious decisions.

The two discourse relations that we tested in the experiment were BACKGROUND and JUSTIFY. There were two reasons for this choice. First, the corpus study revealed these two relations to be among the discourse relations that are most highly correlated with the use of *ja* and *doch*, respectively. Thus, we expect speakers to choose *ja* in discourses with a BACKGROUND relation, and *doch* in discourses with a JUSTIFY relation. The second reason is a methodological one. For BACKGROUND and JUSTIFY it is relatively easy to construct a large number of minimal pairs that can be used as conditions in an experiment

such that naive listeners can identify the intended discourse relation in a fairly consistent way. We comment more on this methodological issue further below.

5.1. Method

Participants. Forty-eight German native speakers (mean age: 29.7 years, range: 19-54 years, 16 male) living in the Berlin/Brandenburg region in Germany participated in this experiment after giving informed consent. They were paid 7 Euros.

Stimuli and design. The design of the experiment was a one-factorial design where the factor DISCOURSE RELATION (DR) had the two levels BACKGROUND and JUSTIFY. The experimental material consisted of 32 three-sentence discourses each of which presented a view on an aspect of one of two issues that are very likely to be considered controversial in a German context: the many ways of providing adequate schooling for children (e.g. all-day schools, home schooling etc.) and the pro and cons of wind farms. In the first sentence of each discourse, a claim was made for which the second sentence either provided background information or a justification, and in the third sentence another claim was made, see (17) for a set of sample items. The factor DR was manipulated by inserting different sentences as the second sentence in the discourses so that the relation between the first and the second sentence varied between BACKGROUND and JUSTIFY. The BACKGROUND relation was implemented by the second sentence conveying obvious and uncontroversial information that is generally known. The JUSTIFY relation was implemented by using meta-discursive utterances where the speaker defends his/her previous speech act. In (17) sentence [2B] states that the generators in wind turbines are very big and therefore very noisy, which is something most people would take to be uncontroversial and non-new. So [2B] provides background information for the claim made in sentence [1]. Sentence [2J] conveys that the speaker considers the claim made in the previous sentence as important because it concerns an aspect that cannot be ignored. So [2J] defends and justifies the previous speech act.

The second sentence always contained a gap, which is indicated by the underscore in (17) [2B] and [2J]. The position of the gap is the position where a modal particle occurs if there is one. In the experiment, participants filled the gap with one out of three modal particles they were offered in a forced lexical choice task: *ja, doch, SCHON* ('admittedly'). The choice of particle was the dependent variable.

(17) [1] Für Anwohner im näheren Umkreis von Windkraftanlagen könnte auch der
           Geräuschpegel ein Problem werden.
           'For people living near wind farms the noise could also become a problem.'

    [2B] BACKGROUND

Die	Motoren	in	den	Anlagen	sind	_	riesig
the	generators	in	the	turbines	are	_	enormous

und	verursachen	entsprechend	Lärm
and	cause	respective	noise

'The generators in the turbines are enormous and produce the commensurate noise.'

    [2J] JUSTIFY

Das	können	wir	_	nicht	einfach	als	lächerlich	abtun.
that	can	we	_	not	simply	as	ridiculous	dismiss

'We can't just dismiss this as absurd.'

    [3] Die Häuser müssen also eventuell mit Lärmschutzfenstern ausgerüstet werden.
           'So possibly soundproof windows must be fitted in the homes.'

Note that the gap was always in the sentence that changed with the experimental conditions. This methodological choice, i.e. manipulating the sentence containing the gap and keeping the context constant, rather than manipulating the context and keeping the sentence with the gap constant, was motivated by the intention to have a clear criterion for distinguishing the discourse relations that we tested. Using a meta-discursive move as an implementation for the JUSTIFY relation left little room for a misinterpretation of the discourse relation by the participants in the JUSTIFY condition. Furthermore, the meta-discursive moves that we used cannot be interpreted as expressing a BACKGROUND relation so that the chance

that participants interpreted the two discourses as containing different discourse relations was very high. Of course, this choice of implementation also limits the scope of the findings to the particular instantiation of the JUSTIFY relation but given that discourse relations other than the easy-to-identify CAUSE and SEQUENCE relations have not been tested extensively in experimental research, even findings with limited scope for BACKGROUND and for JUSTIFY are welcome.

The particles of interest in the experiment were *ja* and *doch*. The stressed modal particle *SCHON* ('admittedly') was added to the range of choices to serve as a distractor.[15] *SCHON* was chosen because the corpus analysis in Döring (2016) showed that it occurred in different relations than *ja* and *doch*.

The 32 experimental items were distributed over two lists in a Latin square design so that each participant would see each discourse in only one version. In addition to the experimental items there were 40 filler discourses, which contained discourse relations like EVALUATION, where according to the corpus analysis in Döring (2016) *SCHON* often occurs, and ELABORATION. The order in each list was pseudo-randomized.

Procedure. Participants were seated in front of a computer screen in a quiet room. They saw one discourse at a time, presented with MS Excel. The second sentence of each discourse contained a drop-down menu at the gap site. Participants were told to choose the MP which they thought would fit the discourse most naturally. They were informed that *SCHON* would occur in capitalized form to indicate that it was stressed. There was no time limit.

5.2. Results

The data of all participants were included in the analysis. Table 2 gives the mean proportions averaged over participants for the choice among the three particles in the two discourse relations. The box-and-whiskers plot in Figure 6 illustrates the overall distribution of the choice between all three particles over the two discourse relations – the data for *SCHON* are added for illustrative purposes.

Table 2. Mean proportion of particle choice for each discourse relation and for the entire set of discourses. Averaged over participants, standard deviation in brackets.

Particle	BACKGROUND	JUSTIFY	All discourse relations
ja	.652 (0.165)	.296 (0.150)	.474 (0.238)
doch	.233 (0.157)	.457 (0.160)	.345 (0.193)
SCHON	.115 (0.085)	.247 (0.125	.181 (0.125)

---

[15] *Schon* also exists in an unstressed variant as a modal particle, but this variant is homophonous with the temporal adverb *schon* ('already'). We wished to avoid this ambiguity. The temporal adverb can only be stressed in (metalinguistic) corrections, which are not licensed by the contexts in the experimental items.
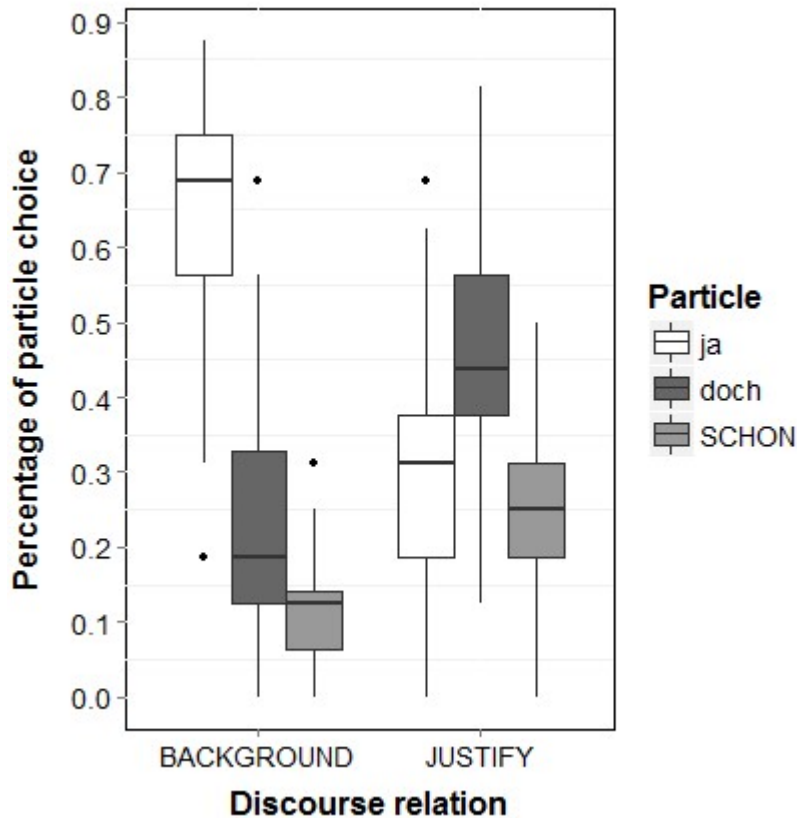
Figure 6. Proportion of particle choice per discourse relation (averaged over participants)

For the statistical analysis only the data for *ja* and *doch*, the two critical items, were considered. We applied general linear mixed effect models with a binomial logit function (R package `lme4`, Version 1.0-4, Bates, Bolker, Maechler & Walker 2013), and tested the use of *ja* and *doch* dependent on the fixed factor DR. Participant and item were random factors. The simplest best model – determined via model comparisons – included intercepts for participants and items, and random slopes for items for DR. The model parameters are given in Table 3. The analysis revealed that the factor DR had a highly significant effect on the choice of *ja* and *doch*: *ja* was chosen more often in the BACKGROUND relation than in the JUSTIFY relation, *doch* was chosen more often in the JUSTIFY relation than in the BACK-GROUND relation.

Table 3. Parameter estimates and standard errors for fixed effects

	estimate	se	*z*-value
Intercept	1.3086	0.2202	5.944
Discourse relation (BACKGROUND-JUSTIFY)	-1.8202	0.2697	-6.750

5.3. Discussion

The experiment showed that when given a choice of modal particles, naive speakers choose the particle depending on the discourse relation that EDU_{MP} has with another EDU. The predictions that we had developed on the basis of the corpus analysis were confirmed: *ja* is preferred in the satellite of the BACKGROUND relation, and *doch* is preferred in the satellite of the JUSTIFY relation.

6 General discussion and conclusion

Both the corpus study and the experimental investigation that we presented showed that the occurrence of the modal particles *ja* and *doch* systematically varies with the type of discourse relation that the EDU_{MP} entertains with other discourse units. These findings can be explained by our assumptions developed in sections 2 and 3, namely that the systematic variation is a consequence of the modal particles' common ground managing function: modal particles create or enhance coherence in discourses and help the speaker achieve his/her communicative goal to increase the common ground without getting entangled in conversational crises. The meaning of *ja* and *doch* is well-suited for the avoidance and resolution of conversational crises. By pointing out that a proposition is already in the common ground (*ja, doch*), and by pointing out that there is a conflict in the set of beliefs of the addressee (*doch*), the speaker will reduce the chance of an objection of his/her discourse move by the addressee and/or enhance the chance that the addressee readily retracts a discourse commitment which the speaker considers to be inconsistent with the common ground.

For the reminder/retrieval function of *ja* and *doch*, we proposed that a proposition *p* which is already in the common ground, is placed on the Table even though it is not new. The speaker marks it as not new by the use of *ja* or *doch*. Although the presentation of a non-new proposition *p* does not actually increase shared knowledge, it has an effect on the discourse structure. The corresponding discourse unit is placed in a position in the discourse structure where it enters a discourse relation with another discourse unit, often as the satellite of that relation. Since *p* is (signalled to be) already in the common ground it is uncontroversial. This status makes *p* particularly suitable for enhancing the effect the satellite has on the nucleus in the given discourse relation. We argued that this is exactly what *ja* does in the satellite of the BACKGROUND relation, where the satellite helps the addressee to understand what is conveyed in the nucleus. The uncontroversial satellite increases the chance that the addressee understands and thus accepts more easily what is conveyed in the nucleus. So the desired effect of the use of *ja* is the pre-emption of a conversational crisis, i.e. an objection.

For *doch*, the corpus investigation showed that the particle does not often occur in the satellite of a BACKGROUND relation even though it shares one of its meaning components with *ja*. This finding could be corroborated in the experimental investigation: Speakers prefer *ja* over *doch* and *schon* in BACKGROUND relations. This suggests that BACKGROUND is not easily compatible with the contrastive meaning component of *doch*. Arguably, if there is contrast the discourse relation changes. Interestingly, in the EVIDENCE relation, both *ja* and *doch* are used. We may assume that the reminding/retrieval function of the particles is used by the speaker to mark the evidence that the satellite presents as uncontroversial, which plausibly strengthens the argument made in the nucleus. The contrastive meaning component of *doch* plausibly is used in discourses where arguments are used to dismiss counterarguments and respective evidence: *doch* points at such conflicts.

We also suggested that speakers may use especially the particle *doch* in discourse situations where it is quite clear that the conditions on its use are not met. Recall the frequent use of *doch* in the satellite of the JUSTIFY relation, where the addressee certainly cannot have known that the speaker was going to make a certain utterance, which *doch* seems to indicate. We called these uses *manipulative uses*. The speaker *pretends* that something is undebatable and tries to 'win the argument' that way. It is important to highlight here that *ja* unlike *doch* did not occur often in JUSTIFY in the corpus, and that the experimental results clearly show that *doch* is preferred over *ja* in discourses with a JUSTIFY relation. So in the JUSTIFY relation, the contrastive meaning component of *doch* seems to be crucial. We propose that the goal of a speaker placing *doch* in the satellite of a JUSTIFY relation is to avoid a protest of the addressee about the previous speech act by dismissing (potentially) conflicting assumptions.

Of course, there might also be situations where the speaker does not actually *know* what the addressee's knowledge about the status of the common ground is. Still, s/he might just try his/her luck, as it were, by pretending that the proposition is uncontroversial. The addressee will perform an accommodation, as in other cases of presupposition accommodation. Note that the addressee him/herself might not be sure whether or not the respective proposition was in the common ground. The speaker's intention in such trial-and-error scenarios is the same as in the default non-manipulative case: to improve discourse coherence, e.g. by pre-empting a conversational crisis. It is clear that our ideas about such uses of modal particles at the moment are hypotheses that need to be tested in future research: we cannot verify the

intentions of a speaker or his/her assumptions about the common ground in a corpus study. Similarly, for the experiment we do not know whether the participants, when they chose *ja* for the satellite in the BACKGROUND relations, accommodated the common ground status of the proposition denoted by the satellite. Still, we think that what we sketched here is a plausible way of conceiving of speaker-hearer interactions with respect to common ground management.

An important finding of the corpus study is that even though there seem to be manipulative uses of the particles we certainly cannot place particles *ad libitum* in any position in the discourse. The manipulative use must be meaningful in the context of the particular discourse relation, i.e. it must support the effect that the speaker intends the satellite to have on the nucleus of the relation. Indeed, in discourse relations where the satellite ideally conveys new information (ELABORATION), or must be non-factive content (CONDITION), *ja* and *doch* occur infrequently (ELABORATION) or not at all (CONDITION).

Although we argued that *ja* and *doch* have a particular function in the satellite of a discourse relation – namely that of enhancing the satellite's effect on the nucleus, we also found that in some relations *doch* preferably is placed in the nucleus of the relation. This was the case in the mononuclear contrastive relations CONCESSION and ANTITHESIS, and in the MOTIVATION relation. For the former we proposed that the effect of placing *doch* in the nucleus on the one hand enhances the contrastivity of the relation and on the other hand highlights the uncontroversiality of the nucleus. Both of these effects are likely to increase the chance that the nucleus gets accepted and that the satellite gets dismissed. In a MOTIVATION, *doch* in the nucleus highlights the contrast with the non-performance of the action requested in the nucleus.

A final interesting outcome of the corpus study is the observation that neither *doch* nor *ja* frequently occur in multinuclear, i.e. symmetric, relations, e.g. in LIST or CONTRAST. We proposed that using the particles tends to make a relation asymmetric. We suspect that the reminding function of the two particles is responsible for this effect. This function renders the EDU_{MP} different from the other EDU in the discourse relation: the proposition denoted by EDU_{MP} is assumed to be known, the one denoted by the other EDU is not. Supporting evidence for this assumption comes from a close comparison of *doch* with the conjunction *aber* ('but'), see Repp (2013) for details. The two elements have the same contrast-indicating function and differ only in the reminding function of *doch*. The conjunction *but* is a hallmark of the CONTRAST relation in all discourse theories (see section 3), whereas *doch* – as we saw – hardly ever occurs in CONTRAST. The precise mechanisms of this effect need to be explored in future research.

Overall our investigation of the interplay of *ja* and *doch* with discourse structure has shown that the particles systematically interact with discourse structure in that they either enhance the function of a satellite in relation to that satellite's nucleus, or mark the nucleus, which is the more important unit in a discourse relation, as uncontroversial. Both functions serve the creation of coherence of the discourse in the sense that conversational crises can be avoided or quickly resolved. We have provided a detailed discussion of how the particles fulfil their function in individual discourse relations and have illustrated how they perform their common ground managing function.

7 References

Asher, N. & Lascarides, A. 2003. *Logics of conversation.* Cambridge. Cambridge University Press.

Asher, N., Prévot, L. & Vieu, L. 2007. Setting the background in discourse. *Discours* 1, 1-29.

Bates, D., Bolker, M., Maechler, B. & Walker, S. 2013 Linear mixed-effects models using Eigen and S4. `lme4`, version 1.0-4. *CRAN repository.* https://cran.r-project.org/

Carlson, L. & Marcu, D. 2001. *Discourse Tagging Reference Manual.* Ms.

Coniglio, M. 2011. *Die Syntax der deutschen Modalpartikeln: Ihre Distribution und Lizenzierung in Haupt- und Nebensätzen.* Berlin: Akademie-Verlag.

Döring, S. 2016. *Modal Particles, Discourse Structure and Common Ground Management. Theoretical and Empirical Aspects.* Dissertation. Humboldt-Universität zu Berlin.

Egg, M. 2013. Discourse particles, common ground, and felicity conditions. In: Gutzmann, D. & Gärtner, H.-M. (eds.) *Beyond Expressives - Explorations in Use-conditional Meaning.* Leiden: Brill. 125-149.

Egg, M. & Zimmermann, M. 2012. Stressed out! Accented discourse particles - the case of DOCH. In: Aguilar, A., Chernilovskaya, A. & Nouwen,R. (eds.), *Proceedings of Sinn und Bedeutung 16: Volume 1*, MIT Working Papers in Linguistics, 225–238.

Farkas, D. & Bruce, K. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27, 81-118.

Franck, D. 1980. *Grammatik und Konversation*. Königstein/Ts.: Scriptor.

Ginzburg, J. 1995. Resolving questions, I & II. *Linguistics and Philosophy,* 18, 459–527, 567–609.

Grosz, B. & Sidner, C. 1986. *Attention, intentions, and the structure of discourse. Journal of Computational Linguistics* 12(3, 175-204.

Gutzmann, D. 2009. Hybrid semantics for modal particles. *Sprache und Datenverarbeitung 33,* 45-59.

Hobbs, J. R. 1985. On the coherence and structure of discourse. *Technical Report CSLI-85-*37.

Horn, L. R. 1989. *A Natural History of Negation.* Chicago: The University of Chicago Press.

Jacobs, J. 1991. On the semantics of modal particles. In: Abraham, W. (ed.) *Discourse Particles. Descriptive and Theoretical Investigations on the Logical, Syntactic and Pragmatic Properties of Discourse Particles in German and English*. 141-162.

Karagjosova, E. 2004. *The Meaning and Function of German Modal Particles*. Deutsches Forschungszentrum für Künstliche Intelligenz, DKFI; Saarland University, Dept. of Computational Linguistics and Phonetics.

Kaufmann, M. 2012. *Interpreting Imperatives.* Dordrecht. Springer.

Kehler, A. 2002. *Coherence, Reference, and the Theory of Grammar.* Stanford. CSLI Publications.

König. E. & S. Recquart 1991. A relevance-theoretic approach to the analysis of modal particles in German. *Multilingua 10-1/2,* 63-77.

Lindner, K. 1991. 'Wir sind ja doch alte Bekannte'. The use of German ja and doch as modal particles. In: Werner, A. (ed). *Discourse Particles. Descriptive and Theoretical Investigations on the Logical, Syntactic and Pragmatic Properties of Discourse Particles in German and English*. 163-201.

Mann, W. & Taboada, M. 2005-2015. *RST website*. http://www.sfu.ca/rst/

Mann, W. & Thompson, S. 1988. Rhetorical Structure Theory: A theory of text organization. *Text* 8(3, 243-281.

Mann, W. & Thompson, S. 1992. Relational discourse structure: A comparison of approaches to structuring text by 'contrast'. In: Hwang, S.J.J. & Merrifield, W.R. (eds.), *Language in Context: Essays for Robert E. Longacre.* The Summer Institute of Linguistics and the University of Texas at Arlington. 19-45.

Menzel, U. 2013. Exact Multinomial Test: Goodness-of-Fit Test for Discrete Multivariate data. EMT, version 1.1. CRAN repository. https://cran.r-project.org/

Repp, S. 2013. Common ground management: Modal particles, illocutionary negation and VERUM. In: Gutzmann, D. & Gärtner, H.-M. (eds.) *Beyond Expressives - Explorations in Use-conditional Meaning.* Leiden: Brill. 231-274.

Rojas-Esponda, T. 2014. A QUD account of German *doch*. In U. Etxeberria, A. Fălăuş, A. Irurtzun, B. Leferman (eds.), *Proceedings of Sinn und Bedeutung 18*. 359-376.

Sanders, T., Spooren, W. & Noordman, L. 1992. Towards a taxonomy of coherence relations. *Discourse Processes* 15, 1-35.

Schiller, A., Teufel, S., Stöckert, C. & Thielen, C. 1999: Guidelines für das Tagging deutscher Textcorpora mit STTS. *Technical Report,* Institut für maschinelle Sprachverarbeitung, Stuttgart.

Schmid, H. 1994. Probabilistic part-of-speech tagging using decision trees. In: *Proceedings of the Conference on New Methods in Language Processing*. Manchester, UK

Searle, J. R. 1969. *Speech Acts: An Essay in the Philosophy of Language*. Cambridge. Cambridge University Press.

Stalnaker, R.C. 1978. Assertion. In: Cole, P. (ed.), *Pragmatics.* pp. 315-332.

Thurmair, M. 1989. *Modalpartikeln und ihre Kombinationen*. Tübingen: Niemeyer.

van der Sandt, R. 1991. Denial. *Papers from CLS, 272. The parasession on negation.* 331–344.

Waltereit, R. 2001. Modal particles and their functional equivalents: A speech-act-theoretic approach. *Journal of Pragmatics* 33, 1391-1417.

Zimmermann, M. 2004. Zum wohl: Diskurspartikeln als Satztypmodifikatoren. *Linguistische Berichte* 199, 253–286.

Zimmermann, M. 2012. Discourse particles. In: Portner, P., Maienborn, C. & von Heusinger, K. (eds.), *Semantics. An international handbook of natural language meaning; Volume 3*. (HSK 33.3, Berlin, New York: Mouton de Gruyter. pp. 2011-2038.

8 Appendix: List of RST discourse relations annotated in the corpus

Relation Name	Nucleus	Satellite
Mononuclear Relations		
ANTITHESIS	ideas favoured by the author	ideas disfavoured by the author
	The salaries have to be raised.	*You only want to increase the taxes.*
BACKGROUND	text whose understanding is being facilitated	text for facilitating understanding
	We have to discuss the reform of the health insurance system.	*The reform was proposed by the government last month.*
CAUSE	a situation	another situation which causes that one
	The unemployment rate increases	*because companies have to cut jobs.*
CIRCUMSTANCE	text expressing the events or ideas occurring in the interpretive context	an interpretive context of situation or time
	We discussed this topic at length	*when the President of the United States was here last week.*
CONCESSION	situation affirmed by author	situation which is apparently inconsistent but also affirmed by author
	The voters let you down	*although you overwhelm them with promises.*
CONDITION	action or situation whose occurrence results from the occurrence of the conditioning situation	conditioning situation
	We will agree to the draft	*if it includes the clause for minimal wages.*
ELABORATION	basic information	additional information
	The election will be in two months.	*In two states, there are also regional elections.*
EVIDENCE	a claim	information intended to increase the reader's belief in the claim
	The government's campaigns failed.	*The unemployment rates increased further.*
INTERPRETATION	a situation	an interpretation of the situation
	You want to address families now.	*This is a new tactic.*
JUSTIFY	text	information supporting the writer's right to express the text
	The government failed to solve the problem.	*We have to be clear about that.*
MOTIVATION	an action	information intended to increase the reader's desire to perform the action
	Please explain your position on this point!	*It will help us to find a solution.*

RESULT	a situation	another situation which is caused by that one
	Economy remains weak	*therefore, the number of unemployed increases.*

Multinuclear Relations

CONTRAST	one alternate	the other alternate
	One group wants to reform the law on minimal wages,	*the other group wants to abolish it.*
LIST	an item	a next item
	We want to raise the pensions,	*we will invest in the education of young people.*
SEQUENCE	an item	a next item
	We will decide on this proposal.	*Afterwards we will discuss the realization.*