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### ***Doch, toch and wel on the table***

**Lotte Hogeweg, Stefanie Ramachers & Verena Wottrich  
Radboud University Nijmegen**

#### **1. Introduction**

In this article we present an analysis of the German discourse particle *doch* and its Dutch translational equivalents *toch* and *wel*. In recent years, several semanticists have argued for the need of additional components in representing discourse/context structures besides or instead of the common ground (e.g. Gunlogson 2003; Lascarides & Asher 2009; Farkas & Bruce 2010). We think that these developments can shed new light on the analysis of discourse particles. In this paper we illustrate how the assumption of an extra component, *the Table* (Farkas & Bruce 2010) enables us to give a more precise analysis of the particles *doch*, *toch* and *wel*. We take *doch* as our point of departure and discuss *wel* and *toch* when they function as its translational equivalents.

#### **2. *Doch, toch and wel***

The three particles under discussion have been analyzed in several studies (e.g. Abraham 1994; Foolen 2006; Hentschel 1986; Hogeweg 2009; Karagjosova 2003, 2004, 2009a,b; Métrich & Faucher 2009; Weydt 1969; Zeevat & Karagjosova 2007). We cannot do justice to them all in this paper but we want to briefly discuss some studies on which we build our analysis.

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Karagjosova (2009a) compares *doch* as a conjunct adverb, which is always accompanied by *und* and occupies the initial field of the German sentence, to *doch* as a conjunction. Our classification of the various uses of *doch*, to a large extent, builds on her analysis. We will refer to her work when discussing our classification in Section 4.

Zeevat & Karagjosova (2007) discuss correction of the *cg* as one of the main functions of stressed *doch* and *toch*. In addition, they address the puzzle of the apparent opposite functions of unstressed *doch* and *toch* which they analyze as a modal particle for common ground status. We will address this puzzle in section 4.5.

Hogeweg (2009) analyzes Dutch *wel* as a denial of a negation. *Wel* is used to retract a negative proposition from the common ground (henceforth *cg*). This negative proposition can be asserted, implicated or it can be a weak inference based on world knowledge.

The analyses seem to explain the available data quite well. However, the studies ascribe more or less the same semantics to (stressed) *doch*, *toch* and *wel* (correction of or contrast with an element in the *cg*), while *doch* cannot always be translated with *toch*, and *wel* and *toch* are not interchangeable in Dutch. What aspect of their meaning causes these distributional differences? In the next sections we are going to address this issue. In section 3, we first discuss the discourse components we assume to be relevant for our analysis.

### 3. Discourse components

An overview of the discussion about which components are necessary to adequately model discourse is beyond the scope of this paper. We simply adopt the view proposed by Farkas and Bruce (2010) as it serves our present purpose best. In their analysis of assertions and polar questions, Farkas and Bruce (2010) argue for a representation of context that includes a discourse commitment set for each of the participants, consisting of the propositions they have publically committed to. In addition, they assume a representation of the common ground, consisting of the set of propositions all participant have agreed upon together with the propositions that represent the shared discourse knowledge of the participants. Another important aspect in their analysis is a discourse component that records the Question Under Discussion, which they call the Table. The Table represents what is currently at issue.

Following Stalnaker (1978), Farkas & Bruce state that the essential goal of an assertion is to add the propositional content of the assertion to the *common ground* (*cg*), thus turning an *individual* (or *discourse*) *commitment* (*DC*) into a joint, public commitment. However, they argue that an assertion should be seen as proposing additions to the *cg*, rather than actually changing it. An assertion puts a proposition on the Table. A move that places an item (e.g. an assertion or

question) on the Table simultaneously projects a set of possible future common grounds which are represented in a separate component. These future common grounds are supersets of the current *cg* and are called *projected set (ps)*. An assertion places a syntactic structure and its denotation, a proposition, on the Table and one resolution is projected. If the other participants accept the proposition it becomes part of the *cg*, if they do not accept it, this will lead to a conversational crisis, or alternatively, the participants may agree to disagree. Polar questions, on the other hand, propose to add either the denotation of the sentence ( $p$ ) or its complement ( $\neg p$ ) to the *cg* and therefore project two possible future outcomes.

An overview of the discourse components is presented in Context Structure (henceforth CS) 1. It includes the discourse commitment set of participant A ( $DC_A$ ), participant B ( $DC_B$ ), the Table (containing a sentence ( $S$  [...]) and its denotation ( $p$ )), the *common ground* and the *projected set*.

<b>A</b>	<b>Table</b>	<b>B</b>
$DC_A$	$\langle S \text{ [...]}; \{p\} \rangle$	$DC_B$
<b>Common ground <i>cg</i></b>		<b>Projected Set <i>ps</i></b>

CS 1

#### 4. Discourse effects of *doch*, *toch* and *wel*

In this section we discuss the uses of *doch* we distinguish and model them in the framework discussed above. Each use can be translated in Dutch by either *toch* or *wel*.

##### 4.1 *Doch* as a corrective answering particle

The first use of *doch*, which we call a *corrective answering particle* is illustrated in (1).

- (1) A: Peter kommt nicht  
,Peter isn't coming'  
  
B: *Doch!*  
'yes he is!'

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Here, *doch* reacts to (denies) a negative statement or question on the Table.<sup>1</sup> Speaker B uses *doch* to prevent that the proposition proposed by A becomes part of the *cg*. This small discourse can be represented as in CS 2. We assume that in the initial context state (prior to the utterance made by A), the Table is empty and hence the projected common ground is the current common ground.

##### 0: Initial context state

$cg_1, ps_1 = cg_1$

##### 1: A asserts 'Peter kommt nicht' relative to 0

p	'Peter kommt nicht': <S [Declarative]; {p}>	
$cg_2 = cg_1$		$ps_2 = \{cg_2 + \{p\}\}$

##### 2: B asserts 'Doch!' relative to 1

p	'Peter kommt nicht': <S [Declarative]; {p}> 'Doch!': <S [Declarative]; {¬p}>	¬p
$cg_3 = cg_2$		$ps_3 = \emptyset$

CS 2

The result of the two utterances is that the projected common ground is empty which indicates a conversational crisis. One of the participants should retract her assertion or they can agree to disagree.

In Dutch this same function is fulfilled by (*ja*)*wel* (cf. Hogeweg 2009).

#### 4.2 Doch as a correction of the cg

The second use of (stressed) *doch*, which we call *correction*, indicates an inconsistency with the *cg* (cf. Zeevat & Karagjosova 2009), as is illustrated in (2).

(2) A: Er kommt nicht

<sup>1</sup> For a similar treatment of denial against the background of the framework of the Information State based approach, we refer to Karagjosova 2009b.

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- ‘he won’t come’  
B: OK  
‘OK’  
...  
A: Er rief gerade an. Er kommt *doch!*  
‘he just called, he is coming after all’

The proposition expressed by A is accepted by B and hence is part of the *cg*. Next, perhaps after some time has passed (indicated by ...) participant A retracts this proposition from the *cg* using *doch*. Note that using *doch* as part of a larger utterance (that is, not as an answering particle) is not possible when the proposition to be retracted is still on the Table, that is, when the participants disagree:

- (3) A: Er kommt nicht  
‘he isn’t coming’  
B: #Er kommt doch!  
‘he is coming’

In Dutch, *toch* fulfills the same function; it can indicate an inconsistency with the *cg*. *Wel* on the other hand indicates an inconsistency with a proposition on the Table. *Toch* cannot be used to prevent that a proposition becomes part of the *cg*, as (4) illustrates:

- (4) A: Hij komt niet  
‘he isn’t coming’  
B: #Hij komt toch!  
‘he is coming’

### 4.3 Doch marking concession

*Doch* can be used in the second part of a bipartite construction as in (5):

- (5) A: Ich war krank, und doch bin ich gegangen.  
‘although I was ill, I went nonetheless’

*Doch* in (5) marks an inconsistency with default inference, in that usually the proposition *p* leads to an inference  $\neg q$  (cf. Karagjosova 2009a)<sup>2</sup>, in this case: If a

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<sup>2</sup> Although Karagjosova primarily considers *doch* as conjunct adverb (as in 5b) when discussing the concessive function, we argue that *doch* in (5a) also marks a concessive relationship.

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person is ill, she will usually stay at home. This pattern of inference is not particular to the context but is part of the *cg*.

If we compare this to Dutch we can make an interesting observation about the difference between *toch* and *wel*. *Wel* is typically used when a second conjunct is unexpected based on the first conjunct, but only against a particular Question Under Discussion. Consider (6):

- (6) A: Jan komt niet maar Piet *wel*  
'Jan isn't coming but Piet is'

In line with Umbach's (2005) analysis of *but* we assume that *wel* (in combination with *maar* 'but') is used here as an answer to a QUD consisting of two conjuncts of which one is denied and the other one confirmed (*Are Jan and Piet coming?*). The question projects a future *cg* in which either both conjuncts are confirmed or denied. The negative answer to the first conjunct narrows the set of future *cg*'s to one where the second conjunct is also denied. *Wel* reverses this aspect of the projected *cg* (cf. Hogeweg 2009). *Toch* on the other hand, is typically used as a reaction to a default inference that is part of the *cg*, similar to *doch*:

- (7) A: Ik was ziek maar ik ben *toch* gegaan  
'I was ill but I went after all'

In other words, *wel* is dependent on a QUD (an issue on the Table) while *toch* is not (*wel* reacts to a conversational implicature, while *toch* reacts to a generalized implicature). Note that it wouldn't be 'wrong' to say *Ik was ziek, maar ik ben wel gegaan* 'I was ill but I went after all', but, as indicated above, we think that *wel* is used in a (slightly) different communicative context than *toch*. *Toch* (or *doch*) indicates that the assertion expressed by the conjunct in which they appear (*q*) is based on a default inference in the *cg* ( $p \rightarrow \neg q$ ) while *wel* is used as an answer to a bipartite question under discussion ( $p \& q?$ ). An experiment in which subjects are asked to produce one of both particles in varying contexts could provide evidence to corroborate these intuitions<sup>3</sup>.

The concessive use of *toch* and *doch* can be represented by the following CS (3):

### 0: Initial context state:

The default inference 'If *p*, then *q*' ( $p \rightarrow q$ ) is part of the *cg*,  $ps1 = cg1$  and the Table is empty

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<sup>3</sup> In fact, such an experiment is currently being prepared by the authors but no data are available yet.

**1: A asserts ‘*Ich war krank*, ‘(p) relative to 0**

p	‘ <i>Ich war krank</i> ’ <S [Declarative]; {p}>	
cg2 = cg1 (p → ¬q)		ps2 = {cg 2 + {p}}

**2: A asserts ‘*und doch bin ich gegangen*’ (q) relative to 1**

q	‘ <i>und ich bin doch gegangen</i> ’ <S [Declarative]; {q}>	
cg3 = cg2 + p		ps3 = {cg2 + {q}}

CS 3

**3: The discourse participants have accepted p and q**

cg4 = cg3 + q + ¬(p → ¬q)		ps4 = {cg4}
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In the initial context state the pattern of inference  $p \rightarrow \neg q$  is part of the *cg*. The first utterance places *p* on the Table. Consequently, *p* is included in the *ps*. The next utterance places *q* on the Table. Once the discourse participants accept *p* and *q*, the default inference  $p \rightarrow \neg q$  can no longer hold in this particular context and is hence denied. In line with Umbach and Stede (1999) and Umbach (2005), the relation between *p* and *q* can also be seen as a causal relation. Umbach and Stede (1999) and Umbach (2005) (both of which base their analysis on König (1992)) argue that the relation between *p* and *q* in *p but q* with a concessive interpretation is a causal relation, in this case: ‘the fact that I was ill caused me not to go to school’. *But* or *doch* negates this causal relation: ‘it is not the case that my illness caused me to not go to school’<sup>4</sup>.

4.4. *Doch* indicating concessive opposition

We borrow the term ‘concessive opposition’ from Karagjosova (2009a). In line with her explanation of this use, we propose that *doch* marks an inconsistency between *p* and *q*, but only against the background of a (previously uttered) QUD (in that  $p \rightarrow r$  and  $q \rightarrow \neg r$ ), cf. example (8) (adopted from Karagjosova 2009).

- (8) Der Ausblick ist toll, *doch* der Preis ist zu hoch  
 ‘the view is magnificent, but it is very expensive, though’

<sup>4</sup> A crucial difference between our analysis and the analysis by Umbach and Stede (1999), however, is that the latter argue that the causal relation between *p* and *q* is not a prerequisite but a consequence of the utterance.

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This can be visualized as in CS 4.

**0: Initial context state: QUD (S [Interrogative])**

	<i>'Peter nimmt ein Zimmer'</i> <S [Interrogative]; {r, ¬r}>	
cg1		ps1 = {cg1 + {r}}, {cg1 + {¬r}}

**1: A asserts 'Der Ausblick ist toll' relative to 0 (against the background of the QUD)**

	<i>'Peter nimmt ein Zimmer'</i> <S [Interrogative]; {r, ¬r}>	
p	<i>'Der Ausblick ist toll'</i> <S [Declarative]; {p}>	
cg2 = cg1		ps2 = {cg2 + {p} + {r <sub>imp</sub> }}

**2: A asserts 'doch der Preis ist zu hoch' relative to 1**

	<i>'Peter nimmt ein Zimmer'</i> <S [Interrogative]; {r, ¬r}>	
q	<i>'doch der Preis ist zu hoch'</i> <S [Declarative]; {q}>	
cg3 = cg2 + p		ps3 = {cg3 + {q} + {¬r <sub>imp</sub> }}

CS 4



The issue on the Table projects two possible future *cg*'s, one including *r* and one including  $\neg r$ . Because *p* is uttered against the background of the QUD, it gives rise to the implicature that Peter will not take the room. We assume that implicatures, like asserted propositions, can be part of the *ps* and, if the discourse participant (implicitly) indicate their agreement, can become part of the *cg*. Since the hearer interprets the utterance as being relevant with respect to the question whether Peter will take the room, she will interpret it as an answer to the question, as a result of which the implicature  $r_{imp}$  is projected in the *ps* and the *ps* containing  $\neg r$  is no longer projected. This idea of labeling pieces of information to indicate their conversational status is borrowed from Layered Discourse Representation Theory (Geurts & Maier 2003). When the second conjunct is uttered, the proposition *q* gives rise to the contrary implicature  $\neg r_{imp}$ , which replaces  $r_{imp}$  in the *ps*.

The Dutch translation for this use is less straightforward. The translation with *wel* in (8) seems to be the most appropriate.

- (8) Het uitzicht is prachtig, *wel* is de prijs erg hoog  
 'the view is magnificent, but it is very expensive'

#### 4.5 Unstressed uses of *toch* and *doch*

Zeevat and Karagjosova (2009) discuss the remarkable difference between stressed and unstressed uses of *doch* and *toch*. While stressed *doch* and *toch* indicate that something is in contrast with the *cg*, unstressed *doch* and *toch* do not indicate that a proposition is in contradiction with the *cg* but in fact function as a reminder of the *cg*. As an answer to this almost paradoxical question they suggest a grammaticalization process involving semantic bleaching. Karagjosova (2004) also analyzes the unstressed uses of *doch* as a reminder of the *cg*. Karagjosova argues that *doch* in the non-accented cases, like in the accented uses of *doch*, indicates a denial of an earlier expectation, namely the speaker's expectation about what the hearer believes. In this section, we would like to propose an alternative solution to this puzzle, also involving a process of semantic change.

In sections 4.1 to 4.4 we discussed the uses of *doch*, *wel* and *toch*. Interestingly, *wel* seems to be used in situations where a speaker wants to prevent that a proposition becomes part of *cg*, while *toch* is used to retract information that is already part of the *cg*. German *doch* can do both. Having defined *toch* as a marker specialized for the *cg*, we argue that unstressed *toch* also marks an inconsistency with the common ground. However, it does not mark an inconsistency with the content of the utterance and the current *cg* but it marks that the fact that the speech act is made is incompatible with the *cg*. Stalnaker

(1979) argues that making an assertion is only felicitous when the proposition it expresses is not already part of the *cg*. If the *cg* contains a proposition *p*, asserting *p* is incompatible with this *cg*. *Doch* marks the incompatibility of performing the speech act by asserting *p* and a *cg* that already contains *p*. This shift of marking the content to marking the speech act has been attested for other particles as well, e.g. for Dutch *eigenlijk* ‘actually’ (van Bergen et al., submitted). Unstressed *doch* can be used in practically the same contexts as unstressed *toch*, as illustrated in (9-11). The ability of marking incompatibility with the *cg* (in contrast with the Table or the *ps*) seems to be the relevant aspect of *doch* which enabled it to develop as a reminder of the *cg*. Example (9) illustrates the use of *doch* as a reminder of the *cg*.

(9) Context: Susan tells her friends about her holiday in Berlin. She mentions that she had dinner in a beautiful restaurant near the Rhine. Her friend answers:

- a Berlin liegt *doch* nicht am Rhein!
- b Berlijn ligt *toch* niet aan de Rijn!  
‘but Berlin isn’t situated on the Rhine’

A similar effect can be identified when *doch* is used in imperatives as in (10) (the desire of the speaker for the hearer to stop was already in the *cg*: the speaker shouldn’t have had to say it again) and in interrogatives, as in (11) (the answer of the question was already in the *cg*, the question shouldn’t have had to be asked).

(10) Context: Carolyn constantly begs for chocolate. Her mother is at the phone and shouts:

- a Hör *doch* auf!
- b Hou *toch* op!  
‘stop it!’

(11) Context: Kelly talking to her mother about an old classmate that she saw last week. However, she cannot think of his name at the moment and says:

- a Wie hieß er *doch*?
- b Hoe heette hij *toch* (ook alweer)?  
‘what was his name again?’

Note that in examples (9) and (10), the utterances are directed towards the hearer; the speaker assumes that the hearer has (temporarily) forgotten an element in the *cg*, which is supposed to be common knowledge. However, in

example (11) the proposition is directed at the speaker herself, in order to remember herself of the *cg*.

### **5. Conclusion**

Assuming additional components in representing discourse structure besides the common ground enabled us to analyze the discourse functions of *doch*, *toch* and *wel* more precisely. As a result we were able to describe the difference between *doch*, *toch* and *wel*, which were usually considered to mark inconsistency or contrast with the *cg*. The difference between Dutch *toch* and *wel* seems to be that *wel* is specialized for marking incompatibility with elements on the Table or the projected set of *cg*'s, while *toch* seems to be specialized for marking inconsistencies with the *cg*. *Doch* can do both. An interesting question for future research is how this cross-linguistic difference – Dutch having separate linguistic elements to encode two different functions, whereas German has one element to encode both – influences the acquisition of particles by Dutch learners of German and German learners of Dutch.

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