



On the Deliberative Use of the German Modal *sollte*

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Abstract. This paper is about a particular use of the German modal *sollte* ('should') in the antecedent of conditionals as illustrated in (1)–(3). We call this use the “deliberative” use of *sollte*. We argue that on its deliberative use *sollte* doesn't behave as the weak necessity modal it is standardly assumed to be. The distributional facts suggest that the use conditions of *sollte*-antecedents are closely related to the use conditions of conditional antecedents with the complementizer *falls* ('in case'). Following a recent proposal by Hinterwimmer for *falls*, we propose that *sollte* in the antecedent of a conditional introduces a use condition that takes the truth of the antecedent proposition to be a truly open possibility against a given conversational background.

Keywords: Epistemic modals · Conditionals · Subjunctive mood

1 Introduction

The topic of this paper is the use of the German modal *sollte* in the antecedent of conditionals on a reading that we call “deliberative”. This use is illustrated in (1)–(3).^{1,2}

¹ We assume that everything we say in this paper holds in the same way for *wenn... sollte*- antecedents, as in (1) and (2), as for *sollte*-V1-antecedents, as in (3). Wherever we choose to illustrate a point with a *wenn... sollte*- antecedent, we might as well have chosen a *sollte*-V1-antecedent and the other way around. We will refer to both types of antecedents as “*sollte*-antecedents”.

² [4] report that “English *should* shows the same reading.” As for example:

- (i) If this should be proven to be correct, it would have major implications for particle physics. <http://news.mit.edu/2010/neutrinos-0812>

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- (1) Wenn dir das zu früh sein sollte, dann kannst du auch später
 If you that too early be should then can you also later
 kommen.
 come
 ‘If that’s too early for you, you can come later.’
- (2) Wenn es in Nordrhein-Westfalen zu Neuwahlen kommen sollte,
 If it in North Rhine-Westphalia to new elections come should
 dann hat die CDU gute Chancen auf einen Sieg.
 then has the CDU good chances for a victory
 ‘If there happen to be new elections in North Rhine-Westphalia (= a
 German federal state), then the CDU (= a German political party) has
 a good chance of winning.’
- (3) Wenn der Innenminister von den Zuständen an seiner
 If the secretary of the Interior of the state at his
 Behörde gewußt haben sollte, dann muss er zurücktreten.
 office known have should then must he step down
 ‘If the secretary of the Interior was informed about the state of his office,
 he has to step down.’

What is interesting about these examples is that *sollte* doesn’t seem to contribute any additional modal meaning to the antecedents – or at least it doesn’t seem to contribute its usual interpretation as a (deontic³ or epistemic) weak necessity modal. The plot of the paper is as follows: First, we introduce some background on the modal *sollte* and its interpretations as deontic and epistemic weak necessity modal. Second, we argue that the use under discussion is neither a deontic use, nor a “conventional” epistemic use. We show that the use conditions of *sollte* on the relevant reading are in most respects identical to the use conditions of conditionals with the complementizer *falls* (‘in case’) on [2]’s account: the contribution of *should* to the antecedents of a conditional is a presupposition that restricts its use to a conversational background in which the antecedent proposition is a truly open possibility. In the last two sections, we discuss occurrences of deliberative *sollte* in relative clauses and the relation of deliberative *sollte* to its epistemic use.

As in German, one also finds conditional antecedents with *should* in first position. More data from English can be found in Daan Van den Nest’s dissertation:

- (ii) Should they use what is regarded as excessive or unnecessary force, they, too, might well become the targets of aggression. Daan Van den Nest (2010)

³ We use the term “deontic modal” here in a rather wide way corresponding to what [6] calls a “priority modal”.

2 Some Background on the German Modal *sollte*

sollte is an inflected form of the modal *sollen*. Its closest counterpart in English is *should*. Morphologically, the form *sollte* can either be the past tense form of *sollen* or its past subjunctive form (German: “Konjunktiv Präteritum” or “Konjunktiv II”). Usually it is assumed that the form of *sollte* in the use under discussion is its subjunctive form, see [4]. The subjunctive modal *sollte* is considered to be a weak necessity modal, see [4] for a detailed discussion and empirical tests that support this assessment. Accordingly, [4] propose the following classification of the German modal forms *muss* and *sollte* in agreement with the corresponding classification of the English modals *must* and *should*.

strong necessity	English <i>must</i>	German <i>muss</i>
weak necessity	English <i>should</i>	German <i>sollte</i>

Like other modal verbs in German (and English), *sollte* is polyfunctional, i.e., it can be used as a deontic modal, (4), or as an epistemic modal, (5).

- (4) Du solltest dir die Hände waschen.
 you should REFL the hands wash.
 ‘You should wash your hands.’ deontic reading

Context: The doorbell rings.

- (5) Das sollte die Post sein.
 this should the post be
 ‘This should be the mail.’ epistemic reading

3 The Deliberative Use is Not an Epistemic or Deontic Use

3.1 The Deliberative Use is Not a Special Case of a Deontic Use

The first question to ask is whether the deliberative use of *sollte* is a special case of an deontic use or an epistemic use of *sollte*. The first alternative of these is not very plausible to begin with. The closest we find to a deontic use of *sollte* in a conditional antecedent is a use that refers back to a given recommendation or a previous use of deontic *sollte*.

- (6) ?Wenn du besser den Bus nehmen solltest (wie es empfohlen wird),
 If you better the bus take should (as it recommended is)
 dann steck dir Kleingeld für den Fahrschein ein.
 then put REFL change for the ticket in
 ‘If you are supposed to take the bus (as it was recommended to you),
 then think of some change for the ticket’

In any case, this is not the use that we are interested in.⁴

More evidence that the deliberative use is not a special case of a deontic use comes from the fact that we find deliberative uses of *sollte* in the antecedent of conditionals with progressive aspect and forms of the German “Perfekt” that are strongly marked on a deontic interpretation for *sollte* without an additional specification of a temporal reference point.

- (7) Du solltest { am Spülen sein / gespült haben }
 you should { at washing the dishes be / washed the dishes have }
 #(wenn ich von der Arbeit zurückkomme).
 (when I from the work come back)
 You should be washing the dishes / have washed the dishes #(when I come back from work).
- (8) Wenn du { am Spülen sein / gespült haben }
 if you { at washing the dishes be / washed the dishes have }
solltest, dann will ich dich nicht weiter stören.
 should then want I you not anymore bother
 ‘If you { are washing the dishes / have washed the dishes }, then I won’t bother you anymore.’

3.2 The Deliberative Use is Not a Special Case of an Epistemic Use

In this section, we will present our reasons why we think that the deliberative use is not a special case of a use as an epistemic weak necessity modal. First, while other modals that allow for an epistemic use can be substituted for *sollte* in an underspecified context like in (9) (ignoring for the moment the subtle differences in conditions of use and meaning), these modals cannot be substituted for deliberative *sollte* as illustrated in (10) – irrespective of their modal strength in a corresponding context.⁵

⁴ As in the example in (6), the comparative adverbials *besser* (‘better’) and *lieber* (‘preferably’) can in principle always accompany a deontic use of *sollte*. It cannot accompany the relevant deliberative use.

(i) Wenn das dir (*lieber/*besser) zu früh sein sollte, dann komm einfach später. If this should (*preferably/*better) be too early for you, then just come later.

⁵ We don’t want to say that modals that in principle do have epistemic interpretations never occur in the antecedent of conditionals, see [5] for a discussion. But these uses seem to be rare. The rareness of real epistemic readings of modals in the antecedent of conditionals is confirmed by a comprehensive corpus search in the DWDS subcorpus “DWDS-Kernkorpus (1900–1999)” (<https://www.dwds.de/>; date of search: October 06, 2018).

search string	results	relevant	epistemic	deliberative
”wenn #10 @muss ’,”	22	20	0	0
”wenn #10 @müsste ’,”	1	1	0	0
”wenn #10 @dürfte ’,”	49	39	0	0
”wenn #10 @sollte ’,”	1161	97 (of first 100)	0 (of first 100)	84 (of first 100)

- (9) Das $\left\{ \begin{array}{l} \text{sollte} \\ \text{muss} \\ \text{müsste} \end{array} \right\}$ die Post sein.
 This $\left\{ \begin{array}{l} \\ \\ \text{dürfte} \end{array} \right\}$ the mail be

‘This MODAL be the mail.’

- (10) Wenn das die Post sein $\left\{ \begin{array}{l} \text{sollte} \\ \# \text{muss} \\ \# \text{müsste} \\ \# \text{dürfte} \end{array} \right\}$, dann gib denen bitte
 If that the postman be then give them please

das Paket.
 the parcel

‘If this MODAL be the mail, then please give them the parcel.’

Second, there clearly is no local interpretation of *sollte* in the sense of ‘there is a weak epistemic necessity that *p*’ as in the unembedded case.⁶

- (11) Das sollte die Post sein.
 ‘This should be the mail.’
 \rightsquigarrow There is a weak epistemic necessity that this is the mail.
- (12) Wenn das die Post sein sollte, dann gib denen bitte das Paket mit.
 ‘If this should be the mail, then please give them the parcel.’
 $\not\rightsquigarrow$ If there is a weak epistemic necessity that this is the mail, then please give them the parcel.

That we don’t find local epistemic interpretations for *sollte* doesn’t already decisively show that *sollte* couldn’t be interpreted epistemically. As [7] shows for the reportative use of the indicative form *soll*, we sometimes find global interpretations of the relevant modal element. Global uses can be paraphrased as parentheticals. The corresponding paraphrases would be as follows:

- (13) Wenn er schuldig gesprochen werden sollte, dann muss er zurücktreten.
 ‘If he should be found guilty, he has to step down.’
 \rightsquigarrow If he is found guilty – as it should be the case –, he has to step down.
- (14) Wenn der Innenminister von den Zuständen an seiner
 If the secretary of the Interior of the state at his
 Behörde gewußt haben sollte, dann muss er zurücktreten.
 office known have should then must he step down
 \rightsquigarrow If the secretary of the Interior was informed about the state of his
 office – as it should be the case –, he has to step down.

⁶ The assumed paraphrase is of course a simplification. For concrete proposals of the meaning of English *should* as a weak epistemic necessity modal/normality modal: see [1] and [8]. The same point could be made if we were to assume a similar contribution for the German modal *sollte* on its epistemic use as [1] and [8] assume for *should*.

At first sight, this looks like a reasonable interpretation. But we also find examples of the following kind:

- (15) Der Richterspruch in der Sache wird für Mittwoch erwartet.
 ‘The verdict in this matter is expected for Wednesday.’
- a. Sollte er schuldig gesprochen werden, dann muss er zurücktreten.
 ‘Should he be found guilty, then he has to step down.’
 - b. Sollte er nicht schuldig gesprochen werden, dann kann er im Amt bleiben.
 ‘Should it be the case that he is not found guilty, then he can stay in office.’

A paraphrase that assumes a global parenthetical interpretation results in a clash in the second conjunct as can be seen by the following paraphrase:

- (16) If he knew about it – *as it should be the case* –, he has to step down and if he didn’t know about it, – *#as it should be the case* –, he can stay.

The given context indicates that the matter of whether the person under discussion is found guilty or not is not settled yet and therefore cannot be known. But still the interpretation of *should* is deliberative in the relevant sense. We take these examples to show that we do not have any commitment at all to the (global) truth of the proposition on a deliberative reading – not even a weak one.

Other examples that can help to make the same point are examples with explicit parentheticals that deny any commitment, as in (17), uses with the focus sensitive particle *selbst* (‘even’) that indicates that the antecedent proposition is the least likely of the relevant propositions in the alternative set, as in (18), and the modal particle *doch* that indicates that the antecedent proposition is not in agreement with what was previously assumed or expected, as in (19).

- (17) And even if he should have done this (which seems to be impossible) he would be not as powerful as the living Shadow. internet source
- (18) Selbst wenn er hier gewesen sein sollte, macht das keinen
 even if he here been be should makes this no
 Unterschied.
 difference
 ‘Even if he should have been here, it doesn’t make a difference.’
- (19) Sollte er doch hier gewesen sein, dann nehme ich alles
 Should he PART here been be then take I everything
 zurück.
 back
 ‘Should he have been here afterall, I take everything back.’

It seems that the deliberative use in these examples marks that it an open question whether the antecedent proposition holds. We take this to show that the deliberative use is not a global epistemic use.⁷

4 The Use of Deliberative *sollte* is Not Simply a Way to Express Subjunctive Mood

If *sollte* on its deliberative use doesn't have its usual interpretation as a weak necessity modal, what does it contribute? [4] suggest that the use of *sollte* is maybe a way to express subjunctive mood (Konjunktiv). This would be in accordance with its characterization as "hypothetical" in reference grammars of German.

"[German] reference grammars discuss a special use of *sollte* that often occurs in conditionals [...]:

- (20) Wenn es regnen sollte, kommen wir sofort zurück.
 If it rain SOLLTE come we immediately back
 'If it should rain, we will come back right away.'

The meaning contribution as hypothetical (Zifonun, Hoffmann and Strecker 1997b: 1893) might suggest that the Konjunktiv II is semantically interpreted here, while the stem of the modal is not semantically interpreted."

Here are some reasons why we think that the assumption that *sollte* is just a way to express subjunctive mood doesn't get the distributional facts right. First of all, substituting Konjunktiv for *sollte* doesn't always lead to an adequate paraphrase.

- (21) ??Wenn es regnen würde, kommen wir sofort zurück.
 (lit.:) 'If it WOULD rain, we will come back immediately.'

Second, usually we find matching mood between the antecedent and the consequent of conditionals.

⁷ In a later paragraph, we will argue that certain occurrences of *sollte* in relative clauses are also deliberative uses of *sollte*. With these examples, it can be clearly seen that the deliberative use of *sollte* is not an epistemic use since we also find clear cases of epistemic uses in (appositive) relative clauses.

- (i) Diejenigen, denen das zu früh sein sollte, können auch später kommen.
 The ones who this too early be should can also later come
 'If this should be too early for you, you can also come later.'
- (ii) Anna, der das zu früh sein sollte, kann auch später kommen.
 Anna who this too early be should can also later come
 'Anna for who this should be too early can also come later.'

In contrast to (i), the relative clause in (ii) clearly has an epistemic interpretation.

- (22) a. Wenn es regnen würde, dann würden wir sofort
 if it rain will.SUBJ then will.SUBJ we immediately
 zurückkommen.
 back-come
- b. Wenn es regnet, dann kommen wir sofort zurück.
 if it rain.IND then come.IND we immediately back

In the DWDS corpus search, we found for the first 84 occurrences of deliberative *sollte* in the antecedent of a conditional 51 occurrences of indicative mood in the consequent (including 12 cases of reportative present subjunctive mood that are not interpreted as conditional subjunctive mood), and 26 occurrences of conditional subjunctive mood (including 7 occurrences of modal verbs in subjunctive mood); the rest being infinitival and imperative forms. So the combination of deliberative *sollte* in the antecedent with indicative mood in the consequent doesn't seem to be an exception from the rule.

Third – and this is the most important aspect – the use conditions of *sollte*-antecedents are more restricted than the use conditions of plain subjunctive antecedents. In fact, the use conditions of *sollte*-antecedents match the use conditions of conditional antecedents with the complementizer *falls* ('in case') in German.⁸

5 *sollte*-antecedents and Degrees of Commitment

In this part of the paper, we are going to show that the use conditions of *sollte*-antecedents are more narrow than the use conditions of subjunctive conditionals. We will show this by testing whether the use of deliberative *sollte* is acceptable against the background of a particular degree of commitment by the speaker to the truth of the antecedent proposition. We consider the following range of possible (modal) commitments of the speaker to the truth of the antecedent proposition.

	<hr style="border: 0.5px solid black;"/> <p style="margin: 0;"><i>p</i> ∈ <i>Common Ground</i> (factual)</p> <hr style="border: 0.5px solid black;"/>
range of possible (modal) commitments of the speaker to the truth of the antecedent proposition	{ <ul style="list-style-type: none"> <i>p</i> is a strong necessity <i>p</i> is a weak necessity <i>p</i> is a good possibility <i>p</i> is a better possibility than ¬<i>p</i> <i>p</i> is as good a possibility as ¬<i>p</i> <i>p</i> is a slight possibility
	<hr style="border: 0.5px solid black;"/> <p style="margin: 0;">¬<i>p</i> ∈ <i>Common Ground</i> (counterfactual)</p> <hr style="border: 0.5px solid black;"/>

This discussion follows a similar discussion in [2] for the German conditional complementizer *falls*.

⁸ For a detailed discussion of the use conditions of conditional antecedents with the complementizer *falls* see [2].

5.1 Factual Conditionals

Conditionals with *sollte*-antecedents cannot be used as factual conditionals ('given (the fact) that'/'assuming that') – even if the consequent clause is in indicative mood. This is similar to *falls* according to [2].

- (23) According to the schedule, the train leaves at 8:00.
- a. Wenn der Zug um 8 Uhr abfährt, dann müssen wir spätestens
 if the train at 8:00 leaves then must we latest
 um 7.50 Uhr am Bahnhof sein.
 at 7:50 at the station be
 'If the train leaves at 8:00, we have to be at the station at 7:50.'
 - b. ??Sollte der Zug um 8 Uhr abfahren, dann müssen wir spätestens
 should the train at 8:00 leave then must we latest
 um 7.50 Uhr am Bahnhof sein.
 at 7:50 at the station be
 'Should the train leave at 8:00, we have to be at the station at 7:50.'

$\times \neg p \in \textit{Common Ground}$ (factual)
<i>p</i> is a strong necessity
<i>p</i> is a weak necessity
<i>p</i> is a good possibility
<i>p</i> is a better possibility than $\neg p$
<i>p</i> is as good a possibility as $\neg p$
<i>p</i> is a slight possibility
$\neg p \in \textit{Common Ground}$ (counterfactual)

5.2 Strong Epistemic Necessity

Conditionals with *sollte*-antecedents cannot be used if the antecedent proposition is considered to be an epistemic necessity. We illustrate this point with epistemic *muss* ('must') in (24).

- (24) Anna muss da sein. Ihr Auto steht draußen.
 'Anna must be here. Her car is outside.'
- a. Wenn sie da ist, dann bestimmt um ihre Jacke abzuholen,
 if she there be then certainly to of her jacket pick up
 die sie gestern hier vergessen hat.
 that she yesterday here forgotten has
 'If she is here, then most likely she picks up her jacket that she forgot here yesterday.'
 - b. ??Sollte sie da sein, dann bestimmt um ihre Jacke abzuholen,
 should she there be then certainly to of her jacket pick up
 die sie gestern hier vergessen hat.
 that she yesterday here forgotten has

‘Should she be here, then most likely she picks up her jacket that she forgot here yesterday.’

5.3 Circumstantial Necessity

Conditionals with *sollte*-antecedents cannot be used if the antecedent proposition is considered to be a circumstantial necessity – as for example with promises:

- (25) Ich verspreche dir: Ich komme auf jeden Fall.
 ‘I promise you: I will definitely come.’
- a. Aber wenn ich komme, dann kommt Peter nicht.
 But if I come then comes Peter not
 ‘But if I will come, then Peter won’t.’
- b. ??Aber *sollte* ich kommen, dann kommt Peter nicht.
 But *should* I come then comes Peter not
 ‘But should I come, then Peter won’t.’

We assume that, given the promise, p is a circumstantial necessity, i.e., for all future situations compatible with the (relevant) circumstances now (including the promise) that are most normal: it is the case that p . Circumstantial necessity associated with promises is in conflict with the use conditions of *sollte*.

× $p \in \textit{Common Ground}$ (factual)
× p is a strong necessity
p is a weak necessity
p is a good possibility
p is a better possibility than $\neg p$
p is as good a possibility as $\neg p$
p is a slight possibility
$\neg p \in \textit{Common Ground}$ (counterfactual)

5.4 Weak Epistemic Necessity

If the antecedent proposition is given in the discourse context as a weak epistemic necessity, introduced by the use of the weak epistemic necessity modal *müsste* in the example in (26), then the use of *sollte* in the antecedent of the conditional is possible.

- (26) Anna ist dienstags eigentlich immer da. Sie müsste da sein.
 ‘Anna is usually there on Tuesdays. She should be there.’
- a. Wenn sie da ist, dann frag sie doch nach deinem Buch.
 if she there be then ask her PRT for your book
 ‘If she is there, you should ask her for your book.’

- b. Sollte sie da sein, dann frag sie doch nach deinem Buch.
 should she there be then ask her PRT for your book
 ‘If she should be there, you should ask her for your book.’

×	$p \in \text{Common Ground}$ (factual)
×	p is a strong necessity
✓	p is a weak necessity
	p is a good possibility
	p is a better possibility than $\neg p$
	p is as good a possibility as $\neg p$
	p is a slight possibility
	$\neg p \in \text{Common Ground}$ (counterfactual)

5.5 Varying Degrees of Possibility

The use of *sollte* as in (28) is fine against the background of discourse contexts in which the antecedent proposition is given as a possibility with varying degrees of commitment.

- (27) a. Es ist gut möglich, dass Anna da ist.
 ‘There is a good possibility that Anna is here.’
 b. Es ist eher möglich, dass Anna da ist, als, dass sie nicht da ist.
 ‘It is a better possibility that Anna is here than that she isn’t.’
 c. Es ist genauso gut möglich, dass Anna da ist, wie, dass sie nicht da ist.
 ‘It is as good a possibility that Anna is here than that she isn’t.’
 d. Es besteht eine geringe Möglichkeit, dass Anna da ist.
 ‘There is a slight possibility that Anna is here.’
- (28) Sollte sie da sein, *sollten* wir bei ihr vorbeischauchen.
 should she there be *should* we at her visit
 ‘If she should be at home, we should drop by.’

×	$p \in \text{Common Ground}$ (factual)
×	p is a strong necessity
✓	p is a weak necessity
✓	p is a good possibility
✓	p is a better possibility than $\neg p$
✓	p is as good a possibility as $\neg p$
✓	p is a slight possibility
	$\neg p \in \text{Common Ground}$ (counterfactual)

5.6 Counterfactual Conditionals

sollte-antecedents cannot be used in counterfactual contexts for the antecedent-proposition.⁹

- (29) Damals kam es zu keiner Abstimmung.
 ‘At that time there was no vote’
- a. Aber wenn es zu einer Abstimmung gekommen wäre,
 but if it to a vote come be.SUBJ
 hätte er sich ohnehin nicht beteiligt.
 have.SUBJ he REFL anyway not participated
 ‘But if there had been a vote, he wouldn’t have participated in it’
- b. #Aber sollte es zu einer Abstimmung gekommen sein,
 but should it to a vote come be.INF
 hätte er sich ohnehin nicht beteiligt.
 have.SUBJ he REFL anyway not participated
 ‘But should there have been a vote, he wouldn’t have participated in it’

×	$p \in \text{Common Ground}$ (factual)
×	p is a strong necessity
✓	p is a weak necessity
✓	p is a good possibility
✓	p is a better possibility than $\neg p$
✓	p is as good a possibility as $\neg p$
✓	p is a slight possibility
×	$\neg p \in \text{Common Ground}$ (counterfactual)

In summary: Our discussion of the data supports a similar conclusion as [2] reaches for *falls*-antecedents: Deliberative *sollte* seems to require that the

⁹ Here is the only difference we found to the use conditions of *falls*-antecedents: Since *falls*-antecedents can in principle be marked with additional subjunctive mood, we find a difference in certain counterfactual contexts. Against the same background as (29), the *falls*-antecedent is fine:

- (i) Aber falls es zu einer Abstimmung gekommen wäre, hätte er
 but in case it to a vote come be.SUBJ have.SUBJ he
 sich ohnehin nicht beteiligt.
 REFL anyway not participated
 ‘But if there had been a vote, he wouldn’t have participated in it’

This example shows that Hinterwimmer’s generalization that *falls*-antecedents cannot be used in counterfactual contexts for the antecedent proposition has to be modified. At the same time, it seems to be the right generalization for *sollte*-antecedents.

antecedent proposition is a “truly open possibility” against a given epistemic (or circumstantial) conversational background.¹⁰

6 The Proposal

We propose the following semantics for *sollte* in its deliberative use (here illustrated for the use in the antecedent of a conditional).¹¹

- (30) $\llbracket(\text{if } (\text{should}_{\text{DELIB}} \varphi)), (\text{then necessarily } \psi)\rrbracket^{w,f,g,\dots} = 1$ iff
 $\llbracket(\text{if } \varphi), (\text{then necessarily } \psi)\rrbracket^{w,f,g,\dots}$, defined only if
- a. $\llbracket\varphi\rrbracket$ is a *simple possibility* in w with respect to f ,
 - b. $\llbracket\varphi\rrbracket$ is not a *human possibility* in w with respect to f and g .

f and g can – but don’t have to – be the relevant conversational backgrounds for the interpretation of the conditional. g is a stereotypical ordering source¹² and f is either an epistemic conversational background or a circumstantial conversational background.

The meaning contribution of deliberative *sollte* is purely presuppositional. It presupposes that the antecedent proposition is a simple possibility with respect to the conversational background f in the world of the world of evaluation w and at the same time it must not be a human necessity – in the terminology of [3] – with respect to the modal base f and the ordering source g in the world of evaluation.¹³

7 Deliberative *sollte* in Relative Clauses

There is another context where we typically find deliberative readings for *sollte*: free relative clauses.

¹⁰ [2]: “*falls* seems to require that the speaker considers the antecedent proposition to be a truly open possibility.”

¹¹ This is very close in spirit to the proposal in [2] for *falls*.

¹² Hinterwimmer also assumes a stereotypical ordering source in the context of his proposal for *falls*.

¹³ We use a syncategorematic meaning rule in (30-b) since this is the direct way to spell out our proposal. Here is the non-syncategorematic rule:

- (i) $\llbracket\text{should}_{\text{DELIB}}\rrbracket^{c,f,g}(p)(w) = 1$ iff $p(w)$, defined only if
- a. p is a *simple possibility* in c_w with respect to f ,
 - b. p is not a *human necessity* in c_w with respect to f and g ,
 - c. $w \neq c_w$;

where c is the context of the local root clause/attitude.

This semantic rule gives us an interesting additional insight since it forces us to distinguish between the local world of evaluation and the local context world (for which we write “ c_w ”). This might have to be reconsidered in the light of the considerations at the end of this paper.

- (31) Wem das zu früh sein sollte, der kann auch später kommen.
 who this too early be should the one can also later come
 (lit.:) ‘If this should be too early for you, you can also come later.’

As already seen with conditional antecedents in (10), other modals that in principle allow for epistemic interpretations cannot be substituted for *sollte*.

- (32) Wem das zu früh sein $\left\{ \begin{array}{l} \text{sollte} \\ \# \text{muss} \\ \# \text{müsste} \\ \# \text{dürfte} \end{array} \right\}$, der kann auch später kommen.
 (lit.:) ‘If this MODAL be too early for you, you can also come later.’

We also find deliberative readings for *sollte* in restrictive relative clauses to universal quantifiers, (33), “generic” indefinites, (34) and plural definites, (35).

- (33) Aber wir waren entschlossen, jeden zu befragen, der gewählt
 but we were determined everyone to ask who voted
 haben sollte.
 have should
 (lit.:) ‘We were determined to ask anyone who should have voted.’
 Die Zeit, 27.08.1976, Nr. 36
- (34) Einem Teilnehmer, dem das zu früh sein sollte, der kann auch
 a participant who this too early be should the one can also
 später kommen.
 later come
- (35) Diejenigen, denen das zu früh sein sollte, können auch später
 those (of you) who this too early be should can also later
 kommen.
 come

Interestingly, all these sentences seem to have a modalized or generic interpretation. This is supported by the observation that with none of these sentences there even has to be a single individual of which the main predication of the relative clause is true. The meaning of (32) can be paraphrased by the conditional in (36).

- (36) Wenn das { jemandem / einem } zu früh sein sollte, dann kann
 if that { someone / one } too late be should then can
 der auch später kommen.
 the one also later come
 ‘If this should be too early for you, you can also come later.’

If (32) had the truth-conditions of (36), the fact that the main predication of the relative clause doesn’t have to be true of any individual would readily be explained since the conditional in (36) gives wide scope to *sollte* with respect to the existential quantifier *jemanden* (‘someone’)/the generic pronoun *einem*.

At this point, we don't have more to say about the use of deliberative *sollte* in relative clauses.

8 Conclusion

In this paper, we have discussed a particular use of the German modal *sollte* in the antecedent of conditionals that we called “deliberative”. We presented arguments that the deliberative use of *sollte* is not a special case of a deontic use or an epistemic use of the modal *sollte*. By going through a range of contexts with varying degrees of (modal) commitment of the speaker to the truth of the antecedent proposition, we could show that the use of *sollte* marks the antecedent proposition as a truly open possibility against a given conversational background. The results are summarized again in the left table on the next page. We proposed that *sollte* on its deliberative use introduces a presupposition that restricts the use of the conditional to conversational backgrounds in which the proposition is given at least as a simple possibility and at most as a weak necessity.

In this final section, we want to take a step back and end with a few comments. As for the content of the presupposition: We are aware that the proposal is tailored to fit the observations and doesn't give us any deeper explanation. The main point of the proposal is to precisely illustrate the contrast between the deliberative use of *sollte* and its epistemic use. Secondly, we are aware that the status of the condition of use as a presupposition hasn't sufficiently been argued for. Since the use conditions of *sollte*-antecedents seemed to us to be similar to the use conditions of mood marking in conditionals and since mood marking is usually associated with a presupposition, we assumed that *sollte* contributes a presupposition, too. More interesting than the details of our proposal is a pattern that emerges from our generalizations and that might even shed new light on *sollte* (and English *should*) on its epistemic use: While the epistemic weak necessity reading of *sollte* is considered to be part of the asserted content and seems to be (mostly) restricted to syntactic root contexts, deliberative readings appear to be presuppositional and are restricted to non-root context.¹⁴ The table summarizes this pattern.

	epistemic <i>sollte</i>	deliberative <i>sollte</i>
syntactic context	+root clause	-root clause
semantic level	contributes to the assertion	contributes a presupposition

This pattern lets one wonder whether one should look out for a single *sollte* after all that flips its interpretation depending on its context of use.

¹⁴ Deliberative *sollte* could be characterized as an anti-root-phenomenon. This is the reason why we introduced the condition that the local world of evaluation must be different from the world of the local root context in our definition, compare condition (i-c) of footnote 13 .

To end on a speculative note: If we were to assume that the common core to deliberative and epistemic *sollte* is the contribution *it is not the case that p is a strong necessity*, it would be intriguing to think of the assertion of *sollte* in a root context as coming with an exhaustification of the scale of graded modalities resulting in a reading as a weak necessity modal as suggested in the right table below. Since it is not at all clear how such an exhaustification should come about and what should account for its obligatoriness in root clauses, this is mere speculation at this point.

Deliberative *sollte*

×	$p \in \text{Common Ground}$ (factual)
×	p is a strong necessity
✓	p is a weak necessity
✓	p is a good possibility
✓	p is a better possibility than $\neg p$
✓	p is as good a possibility as $\neg p$
✓	p is a slight possibility
×	$\neg p \in \text{Common Ground}$ (counterfactual)

Epistemic *sollte*

×	$p \in \text{Common Ground}$ (factual)
×	p is a strong necessity
✓	p is a weak necessity
↑	p is a good possibility
↑	p is a better possibility than $\neg p$
↑	p is as good a possibility as $\neg p$
↑	p is a slight possibility
×	$\neg p \in \text{Common Ground}$ (counterfactual)

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