

In a Mediative Mood: The Semantics of the German Reportive Subjunctive

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Abstract

This paper aims at a theoretically satisfactory semantic treatment of the German reportive subjunctive, where the present (or past) subjunctive is used as a sign that the proposition is the object of an act of assertion. This speech act can be explicit in the sentence or in the context, and it can be more or less implicit. We interpret these various uses as instances of a more or less local verification or accommodation of a uniform presupposition introduced by the subjunctive, thus accounting for a range of well-known facts and contributing to the theory of presuppositions.

1. Introduction

There is a large literature on the German Reportive Subjunctive¹; but, as far as we are aware, there have not been any proposals for a formal analysis or even any attempts at systematically relating it to formal semantic notions.² Yet this seems to promise some very interesting insights, and this is our point of departure. Let us, by way of introduction, briefly sketch what we perceive as the most salient features of the Reportive Subjunctive (henceforth also: RS), in pre-theoretic terms.

This subjunctive (see 2.1 for definitions) often occurs in (subordinate or V2) clauses embedded under some verb of saying or, more exactly, claiming; a **verbum dicendi**, as in (1).³

- (1) Er **behauptete**, dass jemand das Auto der Frau angefahren **habe**, ...
he claimed that somebody the car the_{Gen} woman ondriven have_{PresSub}
'He claimed that somebody had driven into the woman's car, ...'

¹ The German terminology varies; "Konjunktiv der Redewiedergabe / der indirekten Rede", "Konjunktiv in Indirektheitskontexten" (Zifonun 1997), "Referatkonjunktiv" (e.g. Pütz (1989)). This is the central use of the present subjunctive; cf. 2.1 for a discussion of the relation between form and function in this area.

² We should mention Kasper (1987), whose focus, however, is the counterfactual subjunctive.

³ Although we do not indicate sources, we mostly use (modified versions of) authentic examples.



Here the subjunctive alternates with the indicative without any noticeable change in meaning; it seems redundant (but see 2.2 for modifications). Now when the embedding verb is not (necessarily) a *verbum dicendi*, it can, as it were, be coerced into one, as in (2); here the subjunctive has a clear effect.

- (2) Es **bedauerte**, dass es nicht ermächtigt **sei**, ein Berufsverbot zu verhängen.
it regretted that it not empowered be_{PresSub} a professionprohibition to issue
 ‘The court regretted that it was “not empowered to issue a *Berufsverbot*”.’

Or the embedding verb, not a *verbum dicendi* in the strict sense that it expresses a positive act of assertion, may itself presuppose such an act, as in (3):

- (3) In einem Fall **bestritt** der Fahrer, dass er zu wenig aufmerksam gewesen **sei**.
in one case denied the driver that he too little mindful been be_{PresSub}
 ‘In one case, the driver denied that he had been reckless.’

However, the RS can also (and does very frequently) occur in autonomous sentences, as in (4). Then it signals that the proposition expressed by the sentence is the object of an act of assertion. Again, the mood has a definite effect, reminiscent of “modal subordination” (Roberts 1989).

- (4) Rau hatte mit Engholm gesprochen und ihm geraten, im Amt zu bleiben.
Rau had with Engholm spoken and him advised in office to stay
 ‘Rau had talked to Engholm and advised him to stay in office.’
 Doch **müsse** er selbst die Entscheidung treffen.
though must_{PresSub} he himself the decision make
 ‘But he himself would have to make the decision.’

We aim to show in the following how these facts can be made to follow from a unitary semantics for the RS.

In particular, we will assume that the RS carries a **reportive presupposition**. It presupposes that the proposition expressed in its sentence is asserted by someone. In some cases, the presupposition is verified, and the indicative can be substituted. In other cases, it must to a certain extent be accommodated, or, in the sense of Kamp (2001), **justified**. There are several cases of verification and justification to be distinguished, accompanied by various semantic effects. One salient distinction is that between what will be termed **intrasentential** and **intersentential** verification and justification. The more accommodation is needed, the greater is the difference between the subjunctive and the indicative. Finally, there are cases where accommodation is no more possible and the indicative is mandatory.

We organize the rest of the paper as follows. In Section 2, “Phenomenology”, after first delineating the RS formally and functionally, we describe the different ways in which it interacts with different contextual factors, identifying the facts that a theory of the RS must account for. In Section 3, “Theory”, we define the presupposition induced by the RS and show how the spectre of semantic effects can be accounted for in a compositional semantics where existing definitions of verification and accommodation are modified to take height for intrasentential verification and accommodation. Section 4 brings conclusions.

2. Phenomenology

The phenomena we are interested in have been described in great detail in the German linguistic literature. Though some issues remain controversial, many have been settled. In this section, we try to summarize the state of the art and to answer some open questions. In 2.1, we situate the reportive subjunctive in the broader picture of the German subjunctive, concerning function and form. We then go on to survey the array of “indirectness contexts” (Zifonun et al. 1997) where the RS is to be found, with a view to a common denominator amenable to a theoretic treatment.

2.1. DEFINITIONS: FUNCTION VS. FORM

Before we can begin to discuss the features of the reportive subjunctive, we have to delineate it, drawing some salient distinctions. For one thing, it cannot be defined on formal grounds only; for several reasons, we need a basically functional definition. Furthermore, at this functional level, there are some delimitations to be made.

2.1.1. *Mood and Tense: Morphology*

German mood (indicative vs. subjunctive) is an inflectional category of the finite verb, on a par with finite tense (present vs. past), number, and person. Thus present and past subjunctives are distinguished on formal grounds, according to whether the subjunctive form of the finite verb is morphologically based on the unmarked (infinitival) verb stem found in the present tense or exhibits past tense morphology. Leaving the (compound) future tense aside, then, the tense-mood paradigm for the 3. p. sg. of e.g. the verb *kommen* ‘come’ can be illustrated as follows:

Present		Past	
Indicative	Subjunctive	Indicative	Subjunctive
<i>kommt</i>	<i>komme</i>	<i>kam</i>	<i>käme</i>
<i>ist gekommen</i>	<i>sei gekommen</i>	<i>war gekommen</i>	<i>wäre gekommen</i>
be _{PresInd}	be _{PresSub}	be _{PastInd}	be _{PastSub}
come _{PastPart}	come _{PastPart}	come _{PastPart}	come _{PastPart}

In German grammar tradition, the two sets of subjunctives are termed “Konjunktiv I” (present tense morphology) and “Konjunktiv II” (past tense morphology). But since the opposition between simple and compound tenses is not at issue here, we shall use the more transparent terms present subjunctive and past subjunctive, in glosses abbreviated as PresSub and PastSub, respectively.

The example given above shows a clear formal distinction between indicative and subjunctive in both finite tenses. This, however, is an exception rather than the rule in modern German. In particular, the past forms of regular ‘weak’ verbs like *leben* ‘live’ – 1./3. p. sg. *lebte* – are indeterminate with respect to mood, encoding past time reference or past subjunctive semantics, depending on the context.

So as to compensate for the inherent temporal-modal ambiguity of regular past tense forms, modern standard German has developed a compound past subjunctive *würde(-)* + infinitive (1./3. p. sg. *würde leben*), morphologically the past subjunctive form of the compound future tense (1./3. p. sg. ind. *wird leben*). In colloquial spoken German, in particular, this construction tends to be used instead of regular past tense forms like *lebte* in past subjunctive readings and uncolloquial ‘synthetic’ past subjunctives of certain strong verbs.

In the present tense, on the other hand, subjunctive mood is not clearly marked outside the 3. p. sg. (indicative -t vs. subjunctive -e), except for auxiliaries and some strong verbs exhibiting a vowel alternation in the indicative (singular) which is absent in the subjunctive. It should be noted, in particular, that *sein* ‘be’ (auxiliary or main verb) is the only verb differentiating between indicative and subjunctive in the 1./3. p. pl. (present indicative *sind*: subjunctive *seien*); all others have a single present tense form in the 1./3. p. pl. identical to the infinitive.

2.1.2. Present Subjunctive: Function

In modern standard German, the present subjunctive primarily has the reportive function illustrated in Section 1. Sometimes, as in (5), independent subjunctive sentences seem to report thoughts rather than

utterances. But this is evidently a stylistic device restricted to literary prose and strongly dependent on the context; in neutral contexts like (6), the autonomous present subjunctive will be understood in the prototypical reportive sense.⁴

- (5) Er sei schon ein kurioser Mensch, wenn man ihn so anschau_e, dach_te
he be_{PresSub} truly a curious man when one him so watch_{PresSub} thought
 Elsbeth während der Fahrt. Jetzt kenne sie ihn schon viele Jahre, aber
Elsbeth during the ride now know_{PresSub} she him for many years but
 im Grunde wisse sie nichts von ihm. Ob er heimlich ein Mädchen habe?
in ground know_{PresSub} she nothing of him. if he secretly a girl have_{PresSub}?
 ‘He sure is a strange man when you look at him, Elsbeth thought during the ride.
 Now she had known him for many years, but in fact she knew nothing about him.
 Did he have a girlfriend without her knowing?’
- (6) Wedells Verteidiger Mario Ortiz war optimistisch. Der angebliche Beweis
Wedell’s defender Mario Ortiz was optimistic. the alleged proof
 gegen seinen Mandanten reiche zu seiner Verurteilung bestimmt nicht aus.
against his client reach_{PresSub} to his sentencing certainly not out
 Die Argumente des Staatsanwalts könne man doch einfach nicht ernst nehmen.
the arguments the_{Gen} attorney can_{PresSub} one though simply not seriously take
 ‘Wedell’s counsel Mario Ortiz was optimistic. In his opinion, the alleged
 proof against his client was definitely insufficient for a sentence,
 and the attorney’s arguments simply couldn’t be taken seriously.’

Apart from the normal reportive use, the present subjunctive occurs autonomously in certain types of ‘optative’ (‘volitive’, ‘hortative’) 3. p. sg. directives. This variety reflects the origin of the subjunctive paradigm in the Germanic languages;⁵ but it has a clearly marginal status in modern German.

- (7) Man nehme einen kräftigen Oxydator, z.B. Fluor.
one take_{PresSub} a powerful oxydator e.g. fluor
 ‘Take a powerful oxydator, e.g. fluor.’

In subordinate clauses, the present subjunctive is not only used reportively in a strict sense, embedded under genuine *verba dicendi*, including verbs of command; it also occurs in complement clauses to verbs of thinking, believing, hoping, fearing, wanting, desiring etc.⁶

⁴ Normally, what we find instead of the autonomous subjunctive in contexts like (5) is the past tense indicative characteristic of so-called “erlebte Rede” (“style indirecte libre”); see 2.5.

⁵ See e.g. Dal (1962: 137ff.).

⁶ It must be noted, however, that under the influence of the subjunctive, such verbs are often understood as *verba dicendi*; cf. 2.3.

- (8) Man fürchtete, Milosevic werde wieder gestärkt aus dem Chaos hervorgehen.
one feared Milosevic will_{PresSub} again strengthened from the chaos emerge
 ‘There was fear that Milosevic would again emerge strengthened from the chaos.’

The subjunctive in complements to wanting is, of course, “harmonic” to the main clause volitive function (Bybee et al. 1994: 219ff.). The variety occurring under main clause propositional attitude predicates like *denken*, *glauben* ‘think’, ‘believe’ or *fürchten* ‘fear’, however, must be viewed as a “non-harmonic” subordinate subjunctive, corresponding to what we find e.g. in Latin, Italian, and French clauses of the same type (Bybee et al. 1994: 222ff.). It remains related to the the reportive subjunctive by marking an intensional context where finite tense acts as “zero tense” relative to the time of the (mental) act described by the matrix predicate, i.e. as present tense relative to the Now of the **Figure**, as opposed to that of the speaker, or what we will call the **Author**.

Finally, the subordinate Present subjunctive occurs (more or less optionally) in two types of non-complement subordinate clauses: Purposive clauses and comparative clauses with *als (ob)* ‘as (if)’ ((9)). Both cases are compatible with its use in complement (and main) clauses, the first as another instance of the ‘volitive’ subjunctive, the second as a parallel to the subjunctive in complements to possible-world creating predicates like *sich vorstellen* ‘imagine’.

- (9) Er flüstert, als sei die Veranstaltung eine konspirative Sache für Auserwählte.
he whispers as be_{PresSub} the arrangement a conspiratory matter for outchosed
 ‘He whispered, as if the arrangement were a conspiratory matter for the chosen.’

2.1.3. Past Subjunctive: Function

The past subjunctive encodes, on the one hand, counterfactuality in a broad sense (‘Irrealis’), corresponding to the compound conditional form *would* or *were to* + infinitive and counterfactual past tense in English (see Kasper (1987)).

- (10) Niemand hätte es Einstein verübelt, wenn er diesen späten Triumph
nobody have_{PastSub} it Einstein begrudged if he this late triumph
ausgekostet hätte, aber sich damit aufzuhalten war seine Sache nicht.
enjoyed have_{PastSub} but REFL therewith up-to-keep was his thing not
 ‘Nobody would have taken offense if Einstein had taken pleasure in this late triumph, but it was not in his style to be distracted by such a matter.’

In addition, however, it occurs in almost the same range of linguistic contexts as the present subjunctive, contributing to context updating in a way indistinguishable from the contribution made by the present subjunctive in the same type of context; the autonomous ‘volitive’ or ‘hortative’ function mentioned above is the only major exception to the substitutability of the present subjunctive.

In the shared context types, the choice of verbal mood, including the indicative, is determined in a complicated manner that it would take us too far to go into here. Suffice it to say that (i) the indicative can be used in subordinate clauses under conditions that make the subjunctive redundant, i.e. when the updating effect of the indicative and the subjunctive is the same (in one reading of either); (ii) the indicative is more colloquial and the present subjunctive more formal than the past subjunctive; (iii) one alternative may be preferred in order to avoid contextually relevant temporal-modal ambiguity correlated with other alternatives.⁷

That means that the Past subjunctive can carry the reportive meaning typically connected with the Present subjunctive; that the Past Reportive subjunctive can be expected in cases where a reportive mood is for some reason required and where the present tense paradigm does not offer a sufficiently marked subjunctive form – as is generally true of the 1./3. p. pl.; and that the Past subjunctive alone may be used to encode reportive semantics outside certain formal, primarily written registers. (11), for instance, contains a past reportive subjunctive where one would find a present subjunctive in more formal varieties of German. There is, however, considerable room for individual preferences in private communication and considerable variation in modern literary prose.⁸

- (11) Bössner berichtete mir über den letzten Haus-Klatsch, dass die japanischen
Bössner reported me over the latest house-gossip that the Japanese
Sekretärinnen alle für Herrn Hashimoto schwärmen würden, weil er immer
secretaries all for Mister Hashimoto swarm_{PastSubComp} because he always
noch so elegant gekleidet sei, dass der dicke Holländer seit gestern einen
still so elegant dressed be_{PresSub} that the fat Dutchman since yesterday an
Assistenten hätte und so weiter.
assistant have_{PastSub} and so further
 ‘Bössner told me of the latest house gossip; that the Japanese secretaries
 were infatuated with Mr Hashimoto because he still dressed so elegantly,
 that the fat Dutchman had got an assistant the day before, et cetera.’

⁷ Such an interplay between possibly conflicting principles obviously suggests an Optimality Theoretic approach to mood distribution in modern standard German.

⁸ For details see Zifonun et al. (1997: 1766ff.)

2.1.4. *Summing up*

The present and past subjunctive both cover a set of modal functions that are typically correlated with morphologically marked members of grammatical mood;⁹ specifically, they share the reportive function we are concerned with in this paper. It must be stressed that the semantic description we are going to propose is meant to account for that reading only. We make no attempt at explaining (within the framework of formal semantics) the relationship between this and other functions of either the present or the past subjunctive or providing a semantics for the German subjunctive in general (but see 3.6.3 for some speculations).

It should be stressed that the choice between present and past subjunctive has nothing to do with temporal reference: Regardless of the context, the simple present subjunctive and the simple past subjunctive in the reportive function, for instance, both encode “zero tense” (cf. 3.2.2) with respect to the epistemic Now of the ‘Figure’, and the present perfect and the past perfect subjunctive indiscriminately encode (absolute or relative) past with respect to that Now.

2.2. PROTOTYPICAL INDIRECT SPEECH

(1) in Section 1 is a canonical case of dependent indirect speech: An overtly subordinate (verb-final) clause embedded under a genuine *verbum dicendi*. Under these conditions, the subjunctive and the indicative (in an appropriate tense form) are semantically interchangeable, i.e., the former is redundant; compare (1) and (12).

- (12) Als der 21jährige Andreas seinen Eltern **sagte**, dass er schwul ist,
when the 21 yeary Andreas his parents said that he gay be_{PreInd}
 brach für diese eine Welt zusammen.
broke for these a world together
 ‘When Andreas, 21, told his parents he was gay, their world fell apart.’

(13) illustrates another typical variety of indirect speech which, however, differs from the canonical case by containing a subordinate clause in the shape of a (verb-second) main clause. Although not overtly marked as a dependent clause, it may be considered embedded from a structural (and intonational) point of view (Reis 1997) and analyzed as a complement clause with an empty complementizer (*dass* ‘that’) (but see Section 2.5 and 4). The indicative may occur in V2 complements, too, but it is considerably less frequent in V2 than in overtly dependent indirect speech, probably because the lack of formal embedding gives rise to additional ambiguity: the V2 clause might for instance be interpreted as direct rather than indirect speech.

⁹ Palmer (2001), Bybee et al. (1994: 176ff.)

- (13) UNO-Diplomaten **sagten**, Irak habe nicht mit offenen Karten gespielt und
UN diplomats said Iraq have_{PresSub} not with open cards played and
 und besitze wahrscheinlich wesentlich mehr als 11000 mit chemischen
and own probably essentially more than 11000 with chemical
 Kampfstoffen gefüllte Raketensprengköpfe, Bomben und Granaten.
armsubstances filled missilewarheads bombs and grenades
 ‘UN Diplomats said, Iraq has not been playing with open cards
 and are probably in possession of far more than 11.000 missile
 warheads, bombs, and grenades filled with chemical substances.’

Note that the subordinate clause can be an indirect question:

- (14) Doch vor dem Interview **teilte** man mir **mit**, was ich sagen dürfe.
though before the interview dealt one me with what I say may_{PresSub}
 ‘But before the interview, I was told what I was permitted to say.’

Here, the superordinate verb is still a verb of assertion, and the subordinate clause still denotes a proposition (in an appropriate theory). But evidently, the subjunctive clause can also be an indirect question embedded under a verb of asking:

- (15) Er **fragte**, ob es noch weit zum Arbeitslager, zu den Baracken der jüdischen
he asked whether it still far to-the laborcamp to the barracks the_{GEN} jewish
 Kolonie in Birkenau sei, denn sein Kind müsse bald gefüttert werden.
colony in Birkenau be_{PresSub} for his child must soon fed become
 ‘He asked whether it was still far to the labor camp, to the barracks
 of the Jewish colony in Birkenau, for his child must soon be fed.’

This seems to indicate that the relevant notion of a verbum dicendi should be wide enough to include interrogative verbs. This use of the subjunctive is relatively restricted, though, and we will discuss it separately later on (3.2.3). – How about cases such as (16)?

- (16) **Niemand** hat **behauptet**, dass Kirchenräume anders zu bewerten seien als ...
nobody has claimed that churchrooms differently to assess be_{PresSub} than
 ‘Nobody has claimed that church rooms should have a different status than ...’

Here the negated matrix clause contradicts what is otherwise signalled by the RS, viz. that someone has claimed the content of the complement clause. Why does the subjunctive occur, then? It could maybe be explained as a ‘harmonic’ subjunctive, locally triggered by the superordinate verb *behaupten* ‘claim’ irrespectively of the negation. However, the subjunctive may also have a less trivial ‘intersentential’ explanation: Pragmatically, the negative assertion invites the inference that someone might make the claim in question, or has made the claim that this claim has, in turn, been made (cf. 2.4 for other, clearer cases of this kind).

We mentioned in 2.1.2 that the subjunctive is found (alongside the indicative) also in complements to verbs of belief and the like (i.e. in “Indirektheitskontexte” ‘contexts of indirectness’ in a broader sense according to Zifonun et al. (1997)). We are not going to discuss such borderline cases here. But it should be noted that people’s thoughts, hopes, fears and opinions are not directly accessible to others but have to be expressed, externalized, linguistically or (less usually) by other means. And a subjunctive in the complement clause apparently facilitates a verbum dicendi reading of a superordinate verb of wishing, hoping, fearing, or believing, turning it into a predicate meaning ‘expressing the wish, hope, fear, belief that’.

- (17) ... , sagte Busemann und **hoffte**, dass es nicht auch ihn erwischen **werde**.
 ... , *said Busemann and hoped that it not also him snatch Fut_{PresSub}*
 ‘... , expressing his hope that he wouldn’t also be in for it.’
- (18) Sie versprach, es zu versuchen, **fürchtete** jedoch, dass es nicht gehen **werde**.
she promised it to try feared however that it not go Fut_{PresSub}
 ‘She promised to give it a try, warning, however, that it might not work out.’

2.3. DISAMBIGUATION AND REINTERPRETATION EFFECTS

A propositional attitude verb which is not or not strictly a verb of saying can attain an interpretation as a verb of saying when the embedded clause exhibits the RS. In the previous section, we suggested that the occurrence of the subjunctive in the complement of a verbum cogitandi facilitates a verbum dicendi reading of that verb. In any case, however, the matrix verb creates an intensional context that cannot be overruled by substituting the indicative for the subjunctive in the complement clause. In this section, we shall look at cases where using the subjunctive instead of the indicative in a complement clause has a definite semantic effect, leading to disambiguation or reinterpretation of the matrix predicate. This disambiguation or reinterpretation effect is particularly pronounced with **factive** attitude verbs.

2.3.1. *Having versus Expressing an Emotion*

Indicative is the natural mood in complement clauses of predicates like *überrascht* ‘surprised’, *bedauern* ‘regret’, *sich ärgern* ‘be annoyed’, *sich freuen* ‘be pleased’ which, on the face of it, are extensional (factive) predicates describing the subject experiencer’s mental attitude towards the fact expressed in the complement clause. If the subjunctive occurs instead, as in (2) in Section 1, the factive verb is coerced into a verbum dicendi (Jäger 1971, Wichter 1978). It has been noted (by Eisenberg 1989, Thieroff 1992) that the factive presupposition is not projected in

the context of a reportive subjunctive. As it appears (and as suggested by Kasper 1987: 110), this cancellation effect is a corollary of the dicendi interpretation effect.

- (19) Der Minister war **überrascht**, dass die EG nicht informiert worden **sei**.
the Minister was surprised that the EC not informed become be_{PresSub}
 ‘The Secretary expressed his surprise that the EC had not been informed.’

Additional evidence that such a reinterpretation occurs comes from minimal pairs demonstrating the limits to the power of the subjunctive: The verbs *sich ärgern* (REFL *annoy*) and *ärgern* (*annoy*) ‘be annoyed’ and ‘annoy’ are for most purposes synonymous modulo the linking shifts; here, however, embedding subjunctive ‘that’ clauses, they separate: Only the variant with the experiencer subject is felicitous in such a context, testifying to the coercion into a verbum dicendi. The variant with the patient clause as a subject and the experiencer as an object resists this coercion:

- (20) a. Sie hat sich geärgert, dass er sich verspätet hat.
she has REFL annoyed that he REFL belated have_{PreInd}
 ‘She was annoyed that he was late.’
 b. Sie hat sich geärgert, dass er sich verspätet habe.
she has REFL annoyed that he REFL belated have_{PresSub}
 ‘She was annoyed that he – as she said – was late.’
 c. Es hat sie geärgert, dass er sich verspätet hat.
it has her annoyed that he REFL belated have_{PreInd}
 ‘It annoyed her that he was late.’
 d. # Es hat sie geärgert, dass er sich verspätet habe.
it has her annoyed that he REFL belated have_{PresSub}

2.3.2. Object versus Content of Evaluation

Verbs like *kritisieren* ‘criticize’ and *loben* ‘praise’ denote the act of articulating the corresponding attitude. They are inherently extensional in the object position, hence factive when combined with a clausal complement showing the indicative. The RS in the complement clause changes its denotation from a fact – the object of criticism or praise – into a proposition, viz. the content of the criticism or praise.

- (21) a. Einstein **kritisierte** (es) nie, dass Bohr voreilig die Kausalität aufgegeben hatte.
Einstein criticized it never that Bohr prematurely the causality upgiven have_{PastInd}
 ‘Einstein never criticized that Bohr had prematurely given up causality.’
 b. Einstein **kritisierte**, dass Bohr voreilig die Kausalität aufgegeben habe.
Einstein criticized that Bohr prematurely the causality upgiven have_{PresSub}
 ‘Einstein criticized that Bohr had “prematurely given up causality”.’

An attitude of criticism is implicit in the evaluative element *voreilig* ‘prematurely’ contained in the subordinate clause. The subjunctive in (21b) (where *voreilig* is focused) has the effect that the implicit evaluation is ascribed to the subject of the matrix verb (rather than to the ‘Author’, as in (21a)), thus satisfying the condition that the subordinate clause is to denote the content of a criticism. Without such an evaluative element, the subjunctive becomes dubious:

- (22) a. Der Advokat kritisiert, dass K. grundlos verhaftet worden sei.
 the advocate criticizes that K. groundless arrested become be_{PresSub}
 ‘The counsel makes the criticism that K. was arrested without cause.’
 b. # Der Advokat kritisiert, dass K. verhaftet worden sei.
 the advocate criticizes that K. arrested become be_{PresSub}

The ambiguity of the verb *kritisieren* ‘criticize’ in connection with a ‘that’ clause – whether the proposition is the content of the criticism or the fact which is the object of criticism – is brought out in a construction with the nominalization *Kritik* ‘criticism’: With a prepositional correlate *daran*, the construction is implicative; without, it is explicative (Fabricius-Hansen and Stechow 1989): (22c) does not imply that the content of the ‘that’ clause is a criticism, but (22d) does.

- (22) c. Die Kritik daran, dass K. verhaftet worden ist, ist berechtigt.
 the criticism thereon that K. arrested become is is justified
 d. Die Kritik, dass K. grundlos verhaftet worden ist, ist berechtigt.
 the criticism that K. groundless arrested become is is justified

The subjunctive selects the variant corresponding to the explicative construction: To say in a way showing one’s critical attitude. What this means is that a sentence with *kritisieren* and a subjunctive *dass* clause cannot mean that the subject said she thought it was bad that etc. – as the case seems to be, *mutatis mutandis*, with *bedauern* ‘regret’. We have no conclusive explanation to offer for this fact.

2.3.3. *The RS as a Sign of Non-Factivity?*

It has been argued that the present subjunctive in general signals ‘non-factivity’ rather than ‘indirect report’ and that this is why factive presuppositions do not survive in subjunctive contexts (Eisenberg (1994: 131ff.), Thieroff (1992: 253)). In that case, one would expect the factive presupposition inherent to *verba dicendi* like *zugeben*, *eingestehen* ‘admit’, ‘concede’, or *verraten* ‘reveal’ to get cancelled when they combine with a subjunctive complement clause, as in (23) or (24).¹⁰

¹⁰ Strictly, *verraten* ‘reveal’ is not exclusively a *verbum dicendi*, but in the context of the present subjunctive, it is – another sign that the reportive function is basic.

- (23) Das Unternehmen hatte kürzlich **eingestanden**, dass der Umsatz 1999
the company had recently conceded that the sale 1999
 viel kleiner und der Verlust viel höher sein **werde** als geplant.
much smaller and the loss much higher be FUT_{PresSub} than planned
 ‘The company had recently conceded that in 1999, sales would be
 much lower and losses much higher than planned.’
- (24) Aboucabar hat naiverweise **verraten**, dass er sich illegal hier **aufhalte**.
Aboucabar has naively revealed that he REFL illegally hier stay_{PresSub}
 ‘Aboucabar naively has revealed that he is an illegal resident.’

It is difficult to judge whether these sentences presuppose the content of the ‘that’ clause, but we tend to think so. At any rate, substituting the indicative does not seem to make a difference in this regard. To come to a conclusion, we would have to construct tests; this, however, would go beyond the scope of the present paper.

Another indication that the meaning of the subjunctive does not affect factivity as such comes from indirect questions (cf. 2.2); in connection with verbs of telling, such clauses invariably denote true propositions (in an appropriate theory, cf. 3.2.3), thus the denotation of the ‘wh-’ clause follows from the sentence as a whole (in a trivial way, but all the same). For those who contend that the subjunctive is incompatible with considering the clause as a fact, this is problematic.

2.4. REPORTS BEYOND THE SENTENCE BOUNDARY

From the above, one might expect a sentence with a subjunctive clause embedded under a verb of saying to entail that the subject of that verb claims the relevant proposition. Interestingly, this is not always the case, though. As (3) in Section 1 or (25) go to show, sometimes the sentence will **presuppose** that **somebody else** claims the relevant proposition.

- (25) Gleichzeitig **bestritt** sie,
simultaneously denied she
 sie **sei** ein begeistertes Mitglied der NSDAP gewesen.
she be_{PresSub} an enthusiastic member the_{Gen} NSDAP been
 ‘At the same time, she denied that she had been an enthusiastic
 NSDAP member.’

Here, the subject of the matrix predicate disclaims the content of the embedded clause. At the same time, this ‘reactive’ predicate carries

The same is true of a conversely linking verb like *erfahren* ‘experience’ or ‘learn’ (‘be told’), which also occasionally goes with the subjunctive, without, as it appears, sacrificing its factivity.

the presupposition that someone different from the matrix subject has made that claim, and evidently, this presupposition is sufficient to license the reportive subjunctive. (26) demonstrates a related case: The sentence entails the opposite of what we might expect from the reportive subjunctive, but the essential element seems to be the definite description ‘the opinion’, presupposing that the content of the embedded clause is held as an opinion by somebody. Again, this seems to meet the requirements of the subjunctive.

- (26) Nachdrücklich sprach sich der Geistliche gegen **die Auffassung** aus,
emphatically spoke REFL the clerical against the opinion out
 irgendwann mal **müsse** endlich Schluss sein mit der Erinnerung an die
sometime once must_{PresSub} finally end be with the memory on the
 Verbrechen der Nazierrschaft.
crimes the_{Gen} Nazirule
 ‘The clergyman vehemently opposed the opinion that the commemoration
 of the crimes of the Nazi rule must end sometime.’

(27), finally, contains an occurrence of the RS embedded under the world-creating verb *sich vorstellen* ‘imagine’, but, again, it is motivated by the preceding context: The subject narrator imagines the opposite of what – as becomes clear from the broader context – his parents have been telling him.

- (27) Und ich stellte mir statt dessen vor, dass Herr Sommer überhaupt nicht etwas habe
and I put REFL instead that fore that Herr Sommer at all not anything have_{PresSub}
 oder müsse, sondern dass er einfach deshalb immer im freien herumliefe, weil
or must_{PresSub} but that he simply therefore always in free aboutran because
 ‘And I imagined instead that Mr Sommer did not have or have to anything at
 all, but that the reason he always strode about outdoors was that he liked it.’

To sum up, we must recognize the possibility that the reportive subjunctive is not licensed in the matrix sentence, although that does seem to represent the paradigmatic case; often enough, the preceding context plays the role usually played by the matrix sentence, supplying the assertion predication reflected in the mood.

2.5. REPORTED SPEECH: THE RS IN AUTONOMOUS SENTENCES

(4), (28), and (29) present standard cases of “berichtete Rede” (Reported Speech): Syntactically independent sentences in the subjunctive. The common denominator of these cases is that the sentence is understood as a speech report, more exactly, it is understood as if it were, after all, embedded in a verbum dicendi context where the subject of the utterance and other aspects of the utterance situation are provided by the preceding context.

- (28) Er behauptete, dass er sich an das Geschehen nur unklar erinnern könne.
he claimed that he REFL at the event only unclearly remind can_{PresSub}
 ‘He claimed that he had only a vague memory of what happened.’
 Gegenwärtig **seien** ihm nur noch die starken Schmerzen.
present be_{PresSub} him only yet the strong pains
 ‘He was – as he said – only conscious of the strong pain.’
- (29) Wedells Verteidiger Mario Ortiz gab sich optimistisch. Der angebliche Beweis
Wedell’s defender Mario Ortiz gave REFL optimistic. the alleged proof
 gegen seinen Mandanten **reiche** zu seiner Verurteilung bestimmt nicht aus.
against his client reach_{PresSub} to his sentencing certainly not out
 ‘Wedell’s counsel Mario Ortiz gave a show of optimism: In his opinion, the
 alleged proof against his client was definitely insufficient for a sentence.’

Often, as in (28), Reported Speech occurs against a background of indirect speech, extending a speech report beginning with a subordinate clause embedded under a verb of saying (henceforth: an **inquit**). In cases like (29), however, the report starts with an independent subjunctive sentence.¹¹ But the subjunctive does not occur completely ‘out of the blue’: The context normally contains something from which a speech act (and a speaker) can be inferred and which may be said to trigger the segment of Reported Speech: *gab sich optimistisch* in (29) or *einer hat angerufen* ‘someone has called’ in (30).

- (30) Einer hat angerufen. Sie sollen zurückrufen. Es **wäre** dringend.
someone_{masc} has called. you shall backcall. it be_{PastSub} urgent
 ‘Someone called. You are to call back. It was urgent, he said.’

The trigger may come rather close to an *inquit*, like the sentence ending with a colon in (31).

- (31) Ich bediente mich des Lautsprechers eines Polizeiwagens:
I served REFL the loudspeaker a_{Gen} policewagon:
 Die Mauer **sei** härter als Köpfe, die gegen sie anrennen wollten, und
the wall be_{PresSub} harder than heads which against it onrace would and
 durch Bomben nicht aus der Welt zu schaffen.
through bombs not outof the world to bring
 ‘I used the loudspeaker of a police car, shouting that the wall
 was harder than heads and couldn’t be eliminated by bombs.’

Prototypical dependent Indirect Speech and (independent) Reported Speech having no explicit *inquit* in the preceding context can be viewed

¹¹ (4) in Section 1 presents an intermediate case: The subjunctive sentence extends a report that begins with an infinitival embedded under *raten* ‘advise’.

as two distinct prototypes in a continuum of reportive construction types that differ as to how the report is encoded syntactically, what kind of ‘report trigger’ (if any) the context contains, and what is the syntactic relation between the ‘trigger’ and the reportive text segment. Some intermediate varieties – reportive main clauses followed or interrupted by a deaccented inquit or the like – are shown below.

- (32) Vor dem Mauerfall **hätten** beide Teile Berlins ihren Müll dem Umland
before the wallfall have_{PastSub} both parts Berlins their waste the environment
 “vor die Füße gekippt”, sagte der Senator.
before the feet dumped said the Senator
 ‘Before the Wall fell, both East and West Berlin dumped their waste in the immediate environment, the Senator said.’
- (33) Für dieses scheinbar so paradoxe Phänomen,
for this seemingly so paradoxical phenomenon
 so Libet, **sei** nur eine Erklärung denkbar:
so Libet be_{PastSub} only one explanation thinkable
 ‘For this seemingly so paradoxical phenomenon, Libet says, there is only one explanation conceivable.’
- (34) Im Falle eines Wahlsieges der SPD bei den Landtagswahlen im nächsten Jahr,
in case a_{Gen} electionvictory the SPD by the stateassemblyelections in next year
 kündigte Lafontaine an, **werde** er im Zweifel mit den Grünen koalieren.
announced Lafontaine on FUT_{PastSub} he in doubt with the greens coalesce
 ‘“Should the SPD come out winner of next year’s state assembly elections, I will consider forming a coalition with the Greens”, Lafontaine announced.’

Borderline cases like these need not concern us here; they have no principled bearing on our theoretical approach to the RS. But they do suggest that the distinction we present in Section 3.1 between ‘traditional’ and ‘untraditional’ presupposition verification or justification may not be that fundamental after all.

Autonomous Reported Speech is, of course, possible even in languages that lack a formally distinct reportive mood. In English, for instance, Reported Speech occurs, in (narrative) past tense contexts, in the shape of independent sentences showing so-called backshifted past tenses ((35)). But backshifted Reported Speech cannot on formal grounds be distinguished from “erlebte Rede” or “style indirecte libre”, i.e. ‘Reported Thought’ ((36)); and neither differs in a conspicuous formal way from surrounding non-reportive text segments.

- (35) Mrs. Dalloway said she would buy the flowers herself. For Lucy had her work cut out for her. The doors would be put off their hinges; Rumpelmeyer’s men were coming. (cited by von Roncador (1988))

- (36) He could not grip the floor with his feet and sat heavily at his desk, opening one of his books at random and poring over it. Every word for him! It was true. God was almighty. God could call him now as he sat at his desk, before he had time to be conscious of the summons. (cited by von Roncador (1988: 162))

German, on the other hand, has a clear-cut formal distinction between prototypical Reported Speech exhibiting the subjunctive and prototypical Reported Thought showing the (backshifted) past tense indicative (Fabricius-Hansen 2001). The former underlies no restrictions as far as tense forms in the surrounding text are concerned; and the RS sets Reported Speech off against the (indicative) ‘basic text’ in present tense surroundings. For these reasons, comparable English texts can be expected to show a higher frequency of direct speech (cf. the translation of (34) above) and source quotations, and to contain a residue of genuine ambiguities.

2.6. SUBJUNCTIVE ADJUNCT CLAUSES AND CONTRASTIVE ASPECTS

When the subjunctive occurs in a clause which has a subordinate clause, it must occur in this clause as well. Semantically, this occurrence is then superfluous in the sense that it is c-commanded by the occurrence in the superordinate clause; whatever semantics is ascribed to the mood only has to apply once (and in fact, as we will see in 3.6, it can only apply once). Still, it can be important, to signal that the clause is in fact subordinate when in principle, it may be attached at a higher level. As a particularly interesting case in point, consider the following paragraph from Willy Brandt’s *Erinnerungen*; the boldfaced adjunct clause is repeated as (37a):

Wenige Tage nachdem sich der Mauerbau zum erstenmal ge­jährt hatte, am 17. August 1962, verblutete Peter Fechter, ein achtzehn­jähriger Bauarbeiter, jenseits des Checkpoint Charlie. Wir konnten – durften – nicht helfen. Sein Tod reichte weit und die Empörung tief. Es gab Demonstrationen der Trauer und des Zorns. Junge Leute redeten davon, Löcher in die Mauer zu sprengen; andere bauten Tunnel und machten sich um Mitbürger verdient – bis unverantwortliche Leute hieran zu verdienen begannen. Eine Boulevardzeitung bezichtigte mich des Verrats, **weil Polizei eingesetzt werde, um die Mauer zu schützen.** [...]

Few days after the first anniversary of the erection of the Wall, August 17 1962, the constructor Peter Fechter, 18, bled to death behind Checkpoint Charlie. We couldn’t – weren’t allowed to – help. His death reached far and indignation ran deep. There were demonstrations of grief and rage.

Young people talked about breaking holes in the Wall; others dug tunnels to assist their fellow citizens – until irresponsible people started to earn money on this. A tabloid accused me of treason because – as it wrote – police were deployed to protect the Wall.

- (37) a. ..., **weil Polizei eingesetzt werde, um die Mauer zu schützen.**
 ..., *because police deployed become_{PresSub} for the wall to protect*
 ‘..., writing that I was deploying police to protect the Wall.’

The subjunctive shows unambiguously that the causal clause is to be read as a continuation of the implicitly conveyed claim that Willy Brandt was a traitor, not as a reason given by the author of the text for this claim. Note that the authentic translation of the text to Norwegian, a language without a subjunctive, is ambiguous on this point; the causal clause can be attached at the level of the ‘accused’ sentence or at the level of the covert small (or maybe complement) clause ‘me of treason’:

- (37) b. ..., **fordi det ble satt inn politi for å beskytte muren.**
 ..., *because it was set in police for to protect wall-the*
 ‘..., because police were deployed to protect the Wall.’

Let us give an authentic example of a sentence which is ambiguous in a language like Norwegian but would be unambiguous in German, where one would have to decide whether to use the indicative, in which case the clause in question must be anchored to the ‘Author’, or the subjunctive, in which case it must be anchored to the ‘Figure’. The context is the following. In a testimony, one of four defendants in a trial over a triple murder in Norway 1999 reports from a conversation with another defendant (the report is in the historic present):

- (38) a. Hun sier at jeg skal passe meg, hvis ikke skyter hun meg bakfra
she says that I shall care REFL if not shoots she me backfrom
slik som hun gjorde med dem der oppe. (Aftenposten 4.5.2001)
so as she did with them there up
 ‘She tells me to take care, or else she’ll shoot me from behind,
 like she did with those at the farm.’

A German translation would be either (38b) or (38c):

- (38) b. Sie sagt, ich solle mich hüten, sonst schiesse sie mich von hinten,
she says I shall_{PresSub} REFL care or shoot_{PresSub} she me from back
wie sie es mit denen da drüben getan hat.
as she it with them there thereover done has
 ‘She tells me to take care, or else she’ll shoot me from behind,
 like we know she did with those at the farm.’

- c. ..., **wie sie es mit denen da drüben getan habe.**
 ..., *as she it with them there thereover done have*_{PresSub}
 ‘She tells me to take care, or else she’ll shoot me from behind,
 like – she said – she did with those at the farm.’

With (38b), with the indicative alongside the subjunctive, the content of the *wie* clause would unambiguously be anchored to the Author, amounting to an accusation, whereas with (38c), with the subjunctive throughout, the content of the *wie* clause would unambiguously be anchored to the Figure, amounting to a report of a confession. Needless to say, much would hinge on this choice, and the authentic interpretation of the original sentence (as a report throughout) has a great import.

3. Theory

The facts we have so far identified may seem to form an incoherent picture. We will try to show in this section, however, that they can all be traced to a uniform semantics for the mood morpheme, in terms of a presupposition. Mirroring the variety of indirectness contexts, this presupposition can be verified or in various degrees accommodated, and verification and accommodation can take a variety of forms as regards locality and globality. In 3.1, we introduce a framework for semantic composition and a set of working notions of presupposition, as well as presenting our proposal for the semantics of the subjunctive morpheme. We then go on to apply this machinery to the array of contexts and effects discussed above.

3.1. PRESUPPOSITIONS AND THE SEMANTICS OF THE RS

It has seemed difficult to ascribe a specific semantics to “this” subjunctive because often enough, it seems to mean nothing at all. But as we see it, this is typical of presupposition inducers when the presuppositions are verified. In other cases, it has a quite definite effect; we attribute this to some form and degree of accommodation.

At the same time, this is evidence of a particular type of presupposition as regards the domain of verification and accommodation. While it **can** be verified or (partially) accommodated in the ‘usual’ way, in view of the intersentential context, often it is verified or, in various ways, accommodated in view of the intrasentential context – the assertion portion of the sentence. This requires slightly modified versions of conventional definitions of presupposition justification. These are introduced in 3.1.1; their validity for presuppositions in general is discussed in 3.1.2.

3.1.1. *The Subjunctive Presupposition in a Compositional DRT*

Because in our view, Discourse Representation Theory (DRT) offers the best (or at least most perspicuous) way to treat presuppositions, we will use this framework. Though we could employ other formats, such as the dynamic semantic, update logic version of a Karttunen–Heim context change potential theory presented by Beaver (1997: 969ff.), our version of DRT promises a more explicit representation of certain aspects of the presupposition we consider. We will assume a compositional, “bottom-up” version of DRS construction, similar to that detailed by Asher (1993), combining “predicative” DRSs to form larger predicative DRSs and ultimately DRSs to be merged with the context DRS. Compositionality is important because we want to define the denotation of the reportive subjunctive in terms of the introduction of a presupposition and to show how this presupposition can be verified or accommodated in the ultimate carrier sentence, or in the larger (intersentential) context.

We write DRSs in a linear, semi-formal fashion which has become customary.

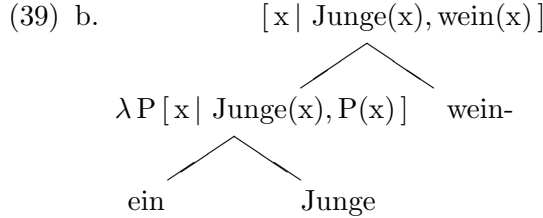
Simplified DRS Notation

$$[x_1, \dots, x_n \mid \text{con}_1, \dots, \text{con}_n] =_{\text{def}} \langle \{x_1, \dots, x_n\}, \{\text{con}_1, \dots, \text{con}_n\} \rangle$$

The (moodless and tenseless) sentence

- (39) a. ein Junge wein-
 a boy cry

will have the following construction:¹²



This presupposes that the words *ein*, *Junge*, and *wein* have the following translations, in a familiar notation:

$$\begin{aligned}
 \text{ein}^* &= \lambda P \lambda Q [x \mid P(x), Q(x)] \\
 \text{wein}^* &= \lambda \alpha [\mid \text{wein}(\alpha)] \\
 \text{Junge}^* &= \lambda \alpha [\mid \text{Junge}(\alpha)]
 \end{aligned}$$

¹² This sentence has a strongly preferred generic interpretation, but the reading we have in mind is the episodic interpretation described by Hans Henny Jahnn in the short story *Ein Knabe weint*.

The update of a (context) DRS by a DRS which does not carry a presupposition is defined in the usual way, as the merge of the two:

DRS update

$$\text{update}(C, K) = \langle U_C \cup U_K, \text{Con}_C \cup \text{Con}_K \rangle$$

For “update”, we will also use the sign v .

The traditional definition of (anaphoric) presupposition verification in DRT (cf. Sandt 1992, Kamp and Rossdeutscher 1992, Sæbø 1996) can be formulated thus:¹³

Presupposition Verification (trad.)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . $v(C, A_P)$ is defined if there is one and only one function $f: U_P \mapsto U_C$ such that $C \models “f(P)”$; then $v(C, A_P) = v(C, “f(A)”)$.

This says that the update of a context by a sentence carrying a presupposition equals the update of the context by the assertion provided the presupposition follows from the context – under some substitution of its discourse referents, which substitution then carries over to the assertion. The presupposition acts as an admittance condition unifying anaphoric referents.

A traditional notion of (anaphoric) accommodation (**justification**) – the strategy used when the presupposition fails to quite follow from the context (cf. Kamp and Rossdeutscher 1992, Kamp 2001a, 2001b) – can be formulated thus:¹⁴

Presupposition Justification (trad.)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . If there is not one and only one function $f: U_P \mapsto U_C$ such that $C \models “f(P)”$, $v(C, A_P)$ is defined if and only if there is one and only one function $f: U_P \mapsto U_C$ such that **almost**, $C \models “f(P)”$; then $v(C, A_P) = v(v(C, “f(P)”), “f(A)”)$.

¹³ For the general case, the assumed representation format may seem simplistic: A sentence can accumulate presuppositions, maybe in a hierarchy (cf. van der Sandt’s (1992) recursive structures); to avoid unnecessary complexities, we adopt a composition principle fusing two presupposition structures into one (cf. **Presupposition Composition 3** in 3.2.1).

¹⁴ This definition assumes a notion of determinism which is hardly justified; cf. the weaker formulations given by van der Sandt (1992), treating verification and accommodation together, and the discussion in Kamp (2001a, 2001b). For our purposes, it is practical to maintain two separate definitions and a pseudo deterministic notion of justification.

The reason we term these definitions “traditional” is that the presupposition is only compared with the context, not with the update by the assertion, yet this seems to be required for the presupposition we consider, that of the reportive subjunctive. To be sure, this is *prima facie* problematic. For certain well-known and well-studied presuppositions, it does not seem to make sense to first update the context by the assertion. These are in particular ‘additive’ presuppositions like those introduced by particles like *too*, and essentially anaphoric presuppositions like that introduced by the definite article (cf. Kamp 2001a: 9, fn. 9). We will consider the problems connected to revising traditional definitions generally in a separate subsection. For the moment, we will reserve an untraditional notion of presupposition verification and justification, relating the presupposition to the update of the context by the assertion, for certain presuppositions, like those introduced by the RS, momentarily excepting such as may not fit into this novel picture. After all, that presuppositions do not seem to all be of one kind has often been noted (cf. Beaver 1997: 995f.).

Presupposition Verification (untrad.)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . $v(C, A_P)$ is defined if there is one and only one function $f: U_P \mapsto U_{v(C, A)}$ such that $v(C, A) \models “f(P)”$; then $v(C, A_P) = v(C, “f(A)”)$.

Presupposition Justification (untrad. I)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . If there is not one and only one function $f: U_P \mapsto U_{v(C, A)}$ such that $v(C, A) \models “f(P)”$, $v(C, A_P)$ is defined iff there is one and only one function $f: U_P \mapsto U_{v(C, A)}$ such that **almost**, $v(C, A) \models “f(P)”$; then $v(C, A_P) = v(v(C, “f(P)”), “f(A)”)$.

As will be seen in Section 3.5, for certain purposes it may be useful to, instead of encoding accommodation in updating by the presupposition, use the more traditional notion of accommodation as a repair strategy where the context is augmented to admit the presupposition after all:

Presupposition Justification (untrad. II)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . If there is not one and only one function $f: U_P \mapsto U_{v(C, A)}$ such that $v(C, A) \models “f(P)”$, $v(C, A_P)$ is defined iff there is one and only one function $f: U_P \mapsto U_{v(C, A)}$ such that **almost**, $v(C, A) \models “f(P)”$; then $v(C, A_P) = v(C, “f(A)”)$ **minimally adjusted** so that $v(C, A) \models “f(P)”$.

Now let us present our proposal for the semantics of the RS:

$$RS^* = \lambda K \wedge K [x | \Delta(\wedge K)(x)]$$

According to this, the RS performs two functions: It turns a DRS into a DRS in intension, and it introduces the presupposition that somebody claims that proposition. (The claim is symbolized by the conventional sign Δ . We use the subscript notation for presuppositions familiar from e.g. Beaver 1997.)

We will see in the next subsection how the result of combining the subjunctive with a K can in turn combine with a subjunction ‘that’ and/or a verbum dicendi. For the case (cf. 2.5) where the result of combining the subjunctive with a K does not combine with anything more (“reported speech”), we define a special update principle for updating a context DRS with a DRS in intension:

Intensional DRS update

$$\text{update}(C, K_{(s,t)}) = \langle U_C \cup \{K_1\}, \text{Con}_C \cup \{K_1 = K\} \rangle$$

3.1.2. On the Generality of the Untraditional Notions

We noted above that treating the carrier sentence as a piece of context may not be appropriate for all presuppositions. In particular, the new notions, on which the presupposition is checked against the update of the context by the assertion, may seem to cause problems for anaphoric presuppositions, where, in DRT terms, the universe of the presupposition DRS is nonempty (there is a discourse referent introduced in the presupposition); in fact, the problem can be narrowed down to those cases where such a referent occurs in some condition in the assertion DRS – cases of “presupposition as anaphora”; anaphoric presuppositions like those generated by a personal pronoun or the definite article. A definite description *the dog* will have the following representation:

$$\lambda Q_{(e,t)} [\mid Q(y)] [y \mid \text{dog}(y)]$$

And the sentence *the dog is a Great Dane* will be represented thus:

$$[\mid \text{GD}(y)] [y \mid \text{dog}(y)]$$

Here, the assertion is “improper” (cf. Kamp and Reyle 1993: 111), containing a free occurrence of a discourse referent (y). This is hardly a critical point; after all, the merge of the preceding discourse and the assertion is only preliminary, and in the ultimate update, the referent (y) is (hopefully) mapped to a bound referent.

However, there may be reason to restrict the general option of using the assertion as a “target” for a referent introduced in a presupposition. To be sure, often the assertion or part of it should be available:

A farmer who owns a donkey and a horse beats the donkey.

Although it is not obvious how it should be done compositionally, it is evident that somehow, the subject NP must form part of the relevant context for the object NP (cf. van der Sandt 1992 for similar cases). But this subject NP could be treated as a “super-DRS” to be processed in advance anyway, reducing the relevant assertion to the VP and vindicating traditional notions. According to the untraditional notions (which, as will be seen in 3.2 below, are necessary for the presupposition of the subjunctive), a definite description can in principle have any indefinite description (not in its scope) in the same sentence as its antecedent – which is too liberal. However, there will be independent principles restricting intrasentential binding relations, and we have been unable to think of examples where the untraditional notions of presupposition justification can be held responsible for undesirable results. Therefore, we temporarily and tentatively choose to consider these notions adequate for the full spectre of presuppositions.

3.2. INTRASSENTENTIAL VERIFICATION

Below, we apply the definitions introduced above to the case of “prototypical indirect speech” (cf. 2.2), where the presupposition is verified. When a presupposition is verified, the inducer is redundant, so it is not surprising that in these cases, the indicative can be substituted for the subjunctive (but temporally the finite form is then, like the subjunctive, a “zero tense”; cf. 3.2.2). In 3.2.1, we abstract away from temporal parameters; these are addressed in 3.2.2. The question of justifying the subjunctive in interrogative contexts is delayed to 3.2.3.

3.2.1. *The Basic Case*

Consider (40).¹⁵

- (40) Sie sagte, dass sie dich liebe.
 *she said that she you love*_{PresSub}

In order to arrive at the right result, we must ascribe the subjunction *dass* and the verb *sagen* the following translations:

¹⁵ Obviously, the pronoun *sie* should be treated as an additional presupposition; but to avoid the complexities of presupposition computation, discussed by Kamp (2001a), we choose to disregard this, treating the pronouns as if they were constants.

$$\begin{aligned} \text{dass}^* &= \lambda K_{\langle s, t \rangle} K \\ \text{sag}^* &= \lambda K_{\langle s, t \rangle} \lambda \alpha [K_1 \mid \text{say}(K_1)(\alpha), K_1 = K] \end{aligned}$$

In other words, ‘that’ denotes the identity function over propositions, and ‘say’ also denotes a function from propositions. In case what these words combine with is not already a proposition denoting entity but a type t entity, as will normally be the case, we need a special composition principle, Intensional functional application:

Intensional functional application

$$f_{\langle \langle s, a \rangle, b \rangle} + g_{\langle a \rangle} = f(\hat{\cdot} g)$$

This ensures that a verbum dicendi can apply to a sentence even though neither the subjunctive nor the subjunction has applied in advance, at the same time as all three can also apply in sequence (for more on this principle, see Heim and Kratzer (1997: 308) or Sæbø (2001: 774)).

For a full analysis of (40), we need a couple of principles for the projection of presuppositions in semantic composition. In fact, we need one principle for the case where a function carries a presupposition, one for the case where an argument carries a presupposition, and one for the case where both function and argument carry a presupposition.

Presupposition Composition

- 1 $f_{\langle a, b \rangle} + g_{\langle a \rangle} K = f_K(g)$
- 2 $f_{\langle a, b \rangle} K + g_{\langle a \rangle} = f_K(g)$
- 3 $f_{\langle a, b \rangle} K_1 + g_{\langle a \rangle} K_2 = f_{\nu(K_1, K_2)}(g)$

(1 and 2 are used in the analysis of (40) below; 3 will be necessary for the analysis of cases in 3.4.) The analysis of (40) is then:

$$\begin{aligned} (41) \quad & [K_1 \mid \text{say}(K_1)(s), K_1 = \hat{[\mid \text{love}(y)(s)]}] [x \mid \Delta(\hat{[\mid \text{love}(y)(s)]})(x)] \\ & \swarrow \quad \searrow \\ \text{sie}^* \quad & \lambda \alpha [K_1 \mid \text{say}(K_1)(\alpha), K_1 = \hat{[\mid \text{love}(y)(s)]}] [x \mid \Delta(\hat{[\mid \text{love}(y)(s)]})(x)] \\ & \swarrow \quad \searrow \\ & \text{sag}^* \quad \hat{[\mid \text{love}(y)(s)]} [x \mid \Delta(\hat{[\mid \text{love}(y)(s)]})(x)] \\ & \quad \swarrow \quad \searrow \\ & \quad \text{dass}^* \quad \hat{[\mid \text{love}(y)(s)]} [x \mid \Delta(\hat{[\mid \text{love}(y)(s)]})(x)] \\ & \quad \quad \swarrow \quad \searrow \\ & \quad \quad \text{RS}^* \quad [\mid \text{love}(y)(s)] \end{aligned}$$

It should be clear that once the presupposition generated by the subjunctive has been projected to the top level of this representation, it can be verified according to the untraditional notion (cf. 3.1), where the presupposition is entailed by the update of the context by the assertion; here it is in fact entailed by the assertion (the *x* referent in the universe of the presupposition can be anchored to the *s* referent in (the universe of) the assertion). The update by the whole representation then reduces to the update by the assertion (under the substitution of *s* for *x*, which is irrelevant). Thus the sentence as a whole does not presuppose anything; the presupposition is **intrasententially** resolved.

Note that while it is by no means novel that a part of the assertion, or the carrier sentence, must be processed in advance of a presupposition (cf. Heim (1983), Beaver (1997), Kamp (2001a)), here the matter is different insofar as the entire representation must be built up prior to checking the presupposition. It is not as if the presupposition were sought verified in the local context of a first conjunct or a conditional clause; rather, there is an essential part of the relevant assertion in the scope of the presupposition generating item. This makes the relevant notion of verification and (as we will see below) accommodation more local than what is commonly associated with that term.

3.2.2. *Remarks on Tense and Time*

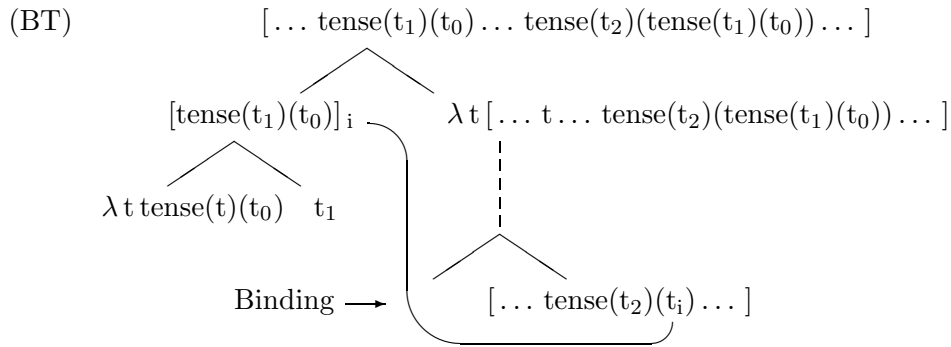
It has long been acknowledged that the tense we find in the present subjunctive is a **relative** present; the identity or overlap (or immediate future) relation it conveys is not between the reference time and the utterance time but between the reference time and the reference or event time for the superordinate speech act (we might say, not the speech time of the ‘Author’ but that of the ‘Figure’ is relevant). When the preterite subjunctive is substituted for the present subjunctive, it conveys the same relation. A future or perfect subjunctive (with a present subjunctive auxiliary) (or a past future or past perfect subjunctive substitute) conveys a relative future or past. Accommodating this requires slight complications of the simple semantic schemes presented above. A relative present tense can be modelled in various ways; we will try to apply von Stechow’s (1995) notion of **bound tense**.

The essential property of relative tense is that the role normally, in connection with absolute tense, played by the utterance time is now played by the reference time of a higher tense. We will, in line with Stechow (1995), take a tense to denote a function from a time t_1 (a reference time, temporal frame) to a function from a time t_2 (an evaluation time, normally the utterance time) to a time. The frame time is often given by a time adverbial; here we will simply assume that the parameter has a certain value, as if it were always contextually given.

$\text{Past}(t_1)(t_2)$ denotes the intersection between t_1 and the past of t_2 ;
the maximal interval in t_1 prior to t_2 .

Bound tense implies that the analogy between tenses and pronouns (Partee 1973) can carry over to bound pronouns: While absolute tenses are similar to anaphora, relative tenses are similar to anaphors.

The general, schematic picture of bound tense will be as in (BT).¹⁶ The coindexation between $[\text{tense}(t_1)(t_0)]_i$ and t_i means that the latter inherits the value of the former, in fact, the former is substituted for the latter in the tree. Alternatively, we could choose to not coindex but call t_i t_0 (the *distinguished time variable*) and let it by convention be bound by the closest λ abstractor, here λt . Both methods have their merits; for simplicity we adopt the latter in the following.



The sentence (40), which was ascribed the atemporal semantics (41), can now be ascribed a semantics using this notion of relative tense. The relative tense is here Present, which allows us to simplify matters by assuming that $\text{tense}(t_2)(t_0) = t_0$; again for the sake of simplicity, we rewrite $\text{past}(t_1)(t_0)$ as t_1 in the last step. Ignoring aspect, we treat the event argument of verbs immediately as a time argument. In (42), we start from the point where the time argument of the lower verb is to be saturated. In the second step, we for brevity assume that the subjunctive and the subjunction apply at once. Note that in the last step, we use the second of the three rules for Presupposition Composition.

¹⁶ Both here and in (42), it is the reference time for the superordinate speech act which acts as the evaluation time for the subordinate tense. It may well be more adequate, in the general case, to anchor the subordinate tense to the *event* time of the speech act. This can be accomplished in more than one way, but any way, it complicates the picture. If we continue to ignore aspect, we could typeshift t_1 to denote **some time in** the frame time; what would correspond to $[\text{tense}(t_1)(t_0)]_i$ in the second last composition step would denote a set of sets of times. To keep matters reasonably simple, though, we do not carry out such a modification.

$$\begin{array}{c}
(42) \quad [K_1 \mid \text{say}(K_1)(s)(t_1), K_1 = \hat{[\mid \text{love}(y)(s)(t_1)]}] \\
\swarrow \quad \searrow \\
\text{past}(t_1)(t_0) \quad \lambda t [K_1 \mid \text{say}(K_1)(s)(t), K_1 = \hat{[\mid \text{love}(y)(s)(t_0)]}] \\
\swarrow \quad \searrow \\
\text{sie}^* \quad \lambda \alpha \lambda t [K_1 \mid \text{say}(K_1)(\alpha)(t), K_1 = \hat{[\mid \text{love}(y)(s)(t_0)]}] \\
\swarrow \quad \searrow \\
\text{sag}^* \quad \hat{[\mid \text{love}(y)(s)(t_0)]} [x \mid \Delta(\hat{[\mid \text{love}(y)(s)(t_0)]})(x)] \\
\swarrow \quad \searrow \\
\text{RS}^* + \text{dass}^* \quad [\mid \text{love}(y)(s)(\text{pres}(t_2)(t_0))] \\
\swarrow \quad \searrow \\
\text{pres}(t_2)(t_0) \quad \lambda t [\mid \text{love}(y)(s)(t)]
\end{array}$$

How about the time reference of the Δ predicate, which was hitherto suppressed? As far as we can see, there are two options: This predicate can be equipped with the distinguished time variable, which eventually unifies with the higher tense time; or its time variable can be introduced in the presupposition DRS, in order to unify with some reasonable time in the process of justification. The first option would seem preferable in cases like the one considered here, where the presupposition is verified in the carrier sentence; however, when in 3.4 we turn to cases of intersentential justification it will become clear that only the second option is sufficiently general.

The presupposition DRS will thus ultimately read:

$$[x, t \mid \Delta(\hat{[\mid \text{love}(y)(s)(t_1)]})(x)(t)]$$

Now for this presupposition DRS to be verified in the carrier sentence, as in (42), the assertion DRS must supply a target for the t referent. As it stands, the assertion part of (42) does not contain such a referent in its universe, but it will have to: The t_1 referent which seems to occur freely will have to be introduced there. This is, in fact, an issue which requires some thought, because if t_1 does not originate in an absolute time adverbial, it comes from the context in one of several ways, often anaphorically, which means that it depends on a presupposition on its own. We will content ourselves with having pointed this out; in the context of the present inquiry, a thorough investigation of contextual temporal matters would shift the focus unduly. Let us just conclude this discussion by giving the revised semantics for the RS:

$$RS^* = \lambda K \hat{K}_{[x,t] \mid \Delta(\hat{K})(x)(t)}$$

3.2.3. *The Question of Questions*

In Section 2.2, we noted that the subjunctive clause can be an indirect question, suggesting that the relevant notion of a verb of saying should ultimately transcend the speech act category of representatives. Now is the opportunity to address this question.

Note that question embedding verbs which can also embed ‘that’ clauses do not present a serious problem. In these cases, if we follow Groenendijk and Stokhof (1982), the question can be taken to denote a proposition (in contrast to ‘that’ clauses, its meaning is a **nonconstant** function to propositions). The relevant verbs roughly mean ‘tell’, and the direct speech counterparts will consist in declaratives:

- (43) a. ... , als er in einer Zeitungsanzeige **verriet**, wer der Mörder **sei**.
 ... *when he in a newspapernotice revealed who the murderer be*_{PresSub}
 ‘... when in an advertisement he disclosed who was the murderer.’
 b. Er schrieb: “Der Mörder ist ...”
 he wrote the murderer is ...

Thus these cases can be subsumed under Δ = ‘claim’ (though, to be sure, more must be said about the interaction between the mood and the interrogative sentence). – Verbs of asking present more of a problem.

- (44) a. ... und fragte, warum die beiden sich nicht endlich **zusammentäten**.
 ... *and asked why the both REFL not finally togetherdo*_{PastSub}
 ‘... asking why the two of them did not finally join up.’

Let us assume that they require a complement denoting a function to propositions. Here, it is evident that Δ cannot have the meaning ‘claim’. Note, now, first, that it remains important that the verb denotes a speech act; with a verb which does not necessarily do so, such as *sich wundern* ‘wonder’, the subjunctive produces the same disambiguation effect as with the declarative verbs like *bedauern* (cf. 2.3 and 3.3): The question must have been uttered, either directly or indirectly.

- (45) a. “...”, erklärte Horten-Geschäftsführer Georg Köslich und wunderte sich,
 “...”, *declared Horten-businessleader Georg Köslich and wondered REFL*
 wer auf den Gedanken gekommen **sei**, Heiligabend zu öffnen.
 ... *who on the thought come be*_{PresSub} *holyevening to open*
 ‘“...”, manager Georg Köslich of Horten declared, wondering out loud
 who had had the idea of keeping shops open on Christmas Eve.’
 b. Er fragte: “Wer ist auf den Gedanken gekommen, Heiligabend zu öffnen?”
 he asked who is on the thought come holyevening to open
 c. Er sagte: “Ich wundere mich, wer auf den Gedanken gekommen ist, ...”
 he said I wonder REFL who on the thought come is ...

Second, note that reportive readings of direct questions, on a par with “Berichtete Rede” (Reported Speech) (cf. 2.5 and 3.5), are not available; the interrogative verb must be explicit.

We see two strategies for dealing with this problem. We might try to consider the topic portion of the indirect question as a presupposition, thus vindicating the narrow notion of Δ . This may be plausible in many cases, but regarding ‘whether’ questions, where often there is no topic portion of any proportion, it risks vacuity.

The second option is to redefine our verbum dicendi Δ as

the normal speech attitude to an entity of the given type:

A $\langle s, t \rangle$ complement yields a claim; a $\langle s, \langle s, t \rangle \rangle$ complement a query.

While we are aware of the problems of encoding this case distinction compositionally, it is still what we envisage as the general strategy. For simplicity, however, we will continue to view Δ as an assertion relation and the complement as a proposition.

3.3. DISAMBIGUATION AND REINTERPRETATION

We saw in 2.3 that when the subjunctive is embedded under a factive verb which is not strictly a verb of saying, this verb is reinterpreted or disambiguated as a verb of saying; in the process, the factive presupposition is eliminated. We described this reinterpretation or disambiguation informally as a coercion. Now we turn to the task of accounting for this effect as a consequence of the justification – a mixture of verification and accommodation – of the presupposition of the subjunctive, tracing the failure of the factive presupposition to project to a filtering effect of this context change (verba dicendi as ‘plugs’ (Karttunen 1974)).

Consider (46).

- (46) Sie ärgerte sich, dass er zu spät **komme**.
she annoyed REFL that he too late come_{PresSub}
 ‘She was annoyed that he – as she said – was late.’

After semantic composition in analogy with (41) above, we arrive at the preliminary representation (47) (“annoy” translates *sich ärgern*; tense is again disregarded):

- (47) $[K_1 \mid \text{annoy}(K_1)(s), K_1 = \hat{[\mid \text{late}(h)]}] [x \mid \Delta(\hat{[\mid \text{late}(h)]})(x), K_1]$

Clearly, the assertion does not provide a verifying context for the presupposition. The predicate *sich ärgern* is reinterpreted to mean to express one’s annoyance. Note that it will not do to describe this as

the accommodation of the presupposition (with *s* substituted for *x*), leaving the condition $\text{annoy}(K_1)(s)$ unchanged but adding the condition $\Delta(K_1)(s)$; the sentence does not mean that she said he was late and that she was annoyed that he was late. So evidently, justification here takes the form of modifying the relation which is already given and close enough to Δ – **annoy** – resulting in something like this:

$$\text{sag-arg-}^* = \lambda K_{\langle s,t \rangle} \lambda \alpha [K_1 \mid \text{say}(\hat{\text{annoy}}(K_1)(\alpha))(\alpha), K_1 = K]$$

And then, it is clear how the factive presupposition fails to project: It is filtered out by the verbum dicendi, acting, according to Karttunen (1974: 188f.), as a ‘plug’. Note that this general analysis is supported by the fact that a factive verb which is “already” a verbum dicendi does not seem to sacrifice its factivity in the presence of the subjunctive; recall the discussion of verbs meaning ‘concede’ or ‘disclose’ in 2.3.

We are not entirely content with this analysis, however, and for two reasons. First, it is not quite clear in what sense the adjustment verifies the presupposition. Strictly, saying (or claiming) that you are annoyed at something does not entail that you **say** (claim) that something; it only entails that you presuppose it.

Second, the adjustment is a simplification: The sentence does not necessarily mean that she **said** she was annoyed that he was late – she may have expressed her annoyance in any way, say, by gestures and mimics. In fact, the case seems to be different with *bedauern* (cf. 2.3): Here the conclusion does seem compelling that the subject actually uttered that she regretted the embedded proposition.

- (48) Sie bedauerte, dass er zu spät **komme**.
*she regretted that he too late come*_{PresSub}
 ‘She expressed her regret that he was late.’

This form of justification seems to favor our definition (**untrad. II**) (from 3.1.1) since it involves “repairing” the (intrasentential) context. It could maybe be derived on the definition (**untrad. I**) as well if the act of saying or the attitude of annoyance were introduced as event(uality) discourse referents; the presupposed Δ event would be required to unify with the asserted annoyance event or state, and the coexistence of the two descriptions of one and the same referent upon update would – maybe – naturally be interpreted as a ‘saying in a way showing one’s (purported) annoyance’.

We are not prepared to draw definitive conclusions about the technical solution. Essentially, however, we are convinced that what we see is a semantic reanalysis resulting from the justification of the dicendi presupposition of the mood.

3.4. INTERSENTENTIAL JUSTIFICATION

Sometimes when the RS is used felicitously, the embedding verb is too different from a *verbum dicendi* (proper) to be reinterpreted as one by the form of accommodation discussed in the last subsection. Or, the RS clause forms part of a definite description. The presupposition of the RS is then, as it appears, salvaged by coinciding with a presupposition induced by the embedding verb or the definite description (in the so-called explicative construction, cf. 2.4); in turn, the presupposition is verified or justified in the intersentential context, beyond the sentence boundary.

Consider (49).

- (49) Er dementierte nicht, Geishas für Liebesbeziehungen bezahlt zu haben,
he disclaimed not geishas for love relations paid to have
 bestritt aber, dass das unmoralisch sei.
denied however that that immoral be_{PresSub}
 ‘He didn’t deny that he had paid geishas for love relations,
 but he did deny that that was immoral.’

Here, we might say, the presupposition is blatantly falsified intrasententially: The assertion expresses the exact opposite of what it should to verify the presupposition. The reason the presupposition can still count as verified or at least justified is that it has the capacity to transcend the sentence boundary, finding an antecedent in a piece of previous discourse expressing that **someone else** has claimed what the subject of the assertion disclaims – the content of the embedded clause. This shows that the RS presupposition is not so special after all; its relevant context is not the carrier sentence alone but, as on the untraditional notion of verification or justification in 3.1, the merge of the carrier sentence and the larger context.

This capacity seems to be correlated with the presupposition stemming from the embedding verb, coinciding with the presupposition stemming from the subjunctive. The verb *bestreiten* presupposes that someone other than the subject claims what the subject disclaims, the content of the embedded clause. A verb like *zustimmen* ‘agree’ is parallel as far as the presupposition is concerned, but here the subject claims (or believes) the same as someone else.

This corroborative presupposition may be typical but is hardly essential for an intersentential justification, at least not as a lexical, semantic presupposition: Recall from 2.4 that we encounter cases where an embedding predicate just makes the status of the subjunctive clause as a claim plausible as a pragmatic inference; such a “pragmatic presupposition” is, it seems, sufficient.

- (50) Es ist falsch zu glauben, Rassismus **sei** allein eine deutsche Erscheinung.
it is false to believe racism be_{PresSub} alone a German phenomenon
 ‘It is wrong to think that Racism is a purely German phenomenon.’
- (51) Dass die Freiheit nicht teilbar **sei**, wussten wir schon.
that the freedom not divisible be_{PresSub} knew we already
 ‘That Freedom is indivisible, this we did not have to be told.’

Let us present an explicit analysis of (49). First, the representation of the verb *bestreiten* should include a presupposition:

$$\text{bestreit-}^* = \lambda K_{\langle s,t \rangle} \lambda \alpha [K_1 \mid \text{say}(\neg K_1)(\alpha), K_1 = K] [x \mid \Delta(K)(x)]$$

The semantic composition of the second part of (49) might then take the following form (having paid geishas for love relations is represented as e). Again, as in 3.2, the principles for presupposition projection in semantic composition must be applied; in fact, in the second last step we need the third rule, for the case where both function and argument carry a presupposition:

$$\begin{array}{c}
 (52) \quad [K_1 \mid \text{say}(\neg K_1)(er), K_1 = \hat{[\mid \text{immoral}(e)]}] [x \mid \Delta(\hat{[\mid \text{immoral}(e)]})(x)] \\
 \swarrow \quad \searrow \\
 er^* \quad \lambda \alpha [K_1 \mid \text{say}(\neg K_1)(\alpha), K_1 = \hat{[\mid \text{immoral}(e)]}] [x \mid \Delta(\hat{[\mid \text{immoral}(e)]})(x)] \\
 \swarrow \quad \searrow \\
 \text{bestreit}^* \quad \hat{[\mid \text{immoral}(e)]} [x \mid \Delta(\hat{[\mid \text{immoral}(e)]})(x)] \\
 \swarrow \quad \searrow \\
 \text{dass}^* \quad \hat{[\mid \text{immoral}(e)]} [x \mid \Delta(\hat{[\mid \text{immoral}(e)]})(x)] \\
 \swarrow \quad \searrow \\
 RS^* \quad [\mid \text{immoral}(e)]
 \end{array}$$

Note that the embedding word is not necessarily a verb:

- (53) Die Behauptung, dass die Partei keine Kritik zulasse, ist übertrieben.
the claim that the Party no criticism permit_{PresSub} is exaggerated
 ‘The claim that the Party does not permit criticism is exaggerated.’

In this “explicative construction” (cf. Fabricius-Hansen and Stechow 1989), the presupposition stemming from the subjunctive coincides with the presupposition stemming from the definite article as applied to the nominalization *Behauptung*: The proposition that the party does not tolerate criticism is a claim. Let us present an explicit analysis of (53), based on the following assumptions. The nominalization *Behauptung* denotes a set of propositions:

$$\text{Behauptung}^* = \lambda K_{\langle s,t \rangle} [\mid \text{claim}(K)]$$

As a sister to this in the explicative construction, the *dass* clause is treated as if it were to denote a set of propositions as well, the singleton set containing the proposition it normally denotes:

Explicative Composition

$$f_{\langle \langle s,t \rangle t \rangle} + g_{\langle s,t \rangle} = \lambda K_{\langle s,t \rangle} [\mid f(K), K = g]$$

The definite article normally denotes a relation between two sets of individuals, but here it denotes a relation between two sets of propositions, introducing the presupposition that there is a proposition in the “nominal” set:

$$\text{die}^* = \lambda \Phi_{\langle \langle s,t \rangle t \rangle} \lambda \Psi_{\langle \langle s,t \rangle t \rangle} [\mid \Psi(K)] [K \mid \Phi(K)]$$

Assume for simplicity that the proposition that the Party does not permit criticism is K_1 , and that the subjunction and the subjunctive apply in one step:

$$\begin{aligned}
 (54) \quad & [\mid \text{exaggerated}(K)] [K, x \mid \text{claim}(K), K = K_1, \Delta(K_1)(x)] \\
 & \swarrow \quad \searrow \\
 & \text{übertrieben}^* \quad \lambda \Psi_{\langle \langle s,t \rangle t \rangle} [\mid \Psi(K)] [K, x \mid \text{claim}(K), K = K_1, \Delta(K_1)(x)] \\
 & \quad \swarrow \quad \searrow \\
 & \quad \text{die}^* \quad \lambda K_{\langle s,t \rangle} [\mid \text{claim}(K), K = K_1] [x \mid \Delta(K_1)(x)] \\
 & \quad \quad \swarrow \quad \searrow \\
 & \quad \quad \text{Behauptung}^* \quad K_1 [x \mid \Delta(K_1)(x)] \\
 & \quad \quad \quad \swarrow \quad \searrow \\
 & \quad \quad \quad \text{RS}^* + \text{dass}^* \quad \neg K_1
 \end{aligned}$$

3.5. ACCOMMODATION AND DISCOURSE SEGMENTATION

The phenomenon known as Reported Speech (**Berichtete Rede**) is characterized by the absence of any item embedding the subjunctive clause. Syntactically, the clause is a main clause and an independent sentence, and the subjunctive is the only sign that it is semantically dependent. By accommodation, the interpretation is ultimately one where the clause is embedded in a verbum dicendi context after all, and in this subsection we will try to show how. There are two cases to be distinguished, according to whether the context includes a speech report in advance or not, each favoring a slightly different approach.

Reconsider for the first case (55) and for the second case (56).

- (55) Er behauptete, dass er sich an das Geschehen nur unklar erinnern könne.
he claimed that he REFL at the event only unclearly remind can_{PresSub}
 ‘He claimed that he had only a vague memory of what happened.’
 Gegenwärtig **seien** ihm nur noch die starken Schmerzen.
present be_{PresSub} him only yet the strong pains
 ‘He was – as he said – only conscious of the strong pain.’
- (56) Der Verteidiger gab sich optimistisch. Der angebliche Beweis **reiche** nicht aus.
the defender gave REFL optimistic. the alleged proof reach_{PresSub} not out
 ‘The counsel for the defense gave a show of optimism.’
 In his opinion, the alleged proof was insufficient.’

3.5.1. Commenced Reported Speech

Let us first look at the second case, where an indirect speech context has not yet been established. It is obvious that the RS presupposition is not verified, so we need one of our notions of justification from 3.1. We might use either “PJ untrad. I” or “PJ untrad. II”, but for the sake of simplicity we choose the latter, repeated here:

Presupposition Justification (untrad. II)

Let C be a context DRS and let A_P be an assertion DRS A carrying a presupposition DRS P . If there is not one and only one function $f:U_P \mapsto U_{v(C,A)}$ such that $v(C,A) \models “f(P)”$, $v(C,A_P)$ is defined iff there is one and only one function $f:U_P \mapsto U_{v(C,A)}$ such that **almost**, $v(C,A) \models “f(P)”$; then $v(C,A_P) = v(C, “f(A)”)$ **minimally adjusted** so that $v(C,A) \models “f(P)”$.

Let us now for simplicity assume that the context consists in the first sentence:

$$C = [x \mid \text{counsel}(x), \text{optimistic}(x)]$$

The presupposition generated by the subjunctive is the following:

$$P = [y \mid \Delta(\wedge [\mid \text{insufficient}(p)])(y)]$$

And the assertion is represented as a DRS in intension:

$$A = \wedge [\mid \text{insufficient}(p)]$$

The update of C by A follows the special principle of Intensional DRS update, repeated here:

Intensional DRS update

$$\text{update}(C, K_{(s,t)}) = \langle U_C \cup \{K_1\}, \text{Con}_C \cup \{K_1 = K\} \rangle$$

So:

$$v(C,A) = [x, K \mid \text{counsel}(x), \text{optimistic}(x), K = \wedge[\mid \text{insufficient}(p)]]$$

Now this must be assumed to almost entail P under some substitution of referents, in order that finally, the minimal augmentation such that P is in fact entailed constitutes the result of updating the context by the incoming sentence. It seems clear that the relevant substitution must be of x for y , anchoring the referent presupposed to claim the proposition to the counsel for the defense mentioned in the context:

$$“f(P)” = [x \mid \Delta(\wedge[\mid \text{insufficient}(p)])(x)]$$

The minimal adjustment of $v(C,A)$ to entail this consists in adding the condition $\Delta(K)(x)$, resulting in:

$$[x, K \mid \text{counsel}(x), \text{optimistic}(x), K = \wedge[\mid \text{insufficient}(p)], \Delta(K)(x)]$$

Note that “commenced Reported Speech” thus represents a mixture of intersentential and intrasentential justification: The utterer (and the utterance time, cf. 3.5.3) is verified in the preceding context, whereas the utterance relation is accommodated on top of the sentence itself.

As it appears, the requirement for this accommodation of a dicendi relation is that it is plausible. It is nearly entailed in the sense that it is a plausible continuation of the last sentence. Evidently, this has to do with the lexical content of the words *gab sich optimistisch* and the discourse relation (Elaboration) which can be inferred between the two sentences. To us, this provides a striking instance of the role that plausibility can play in semantic inference. The borderline case of a **colon** after the previous sentence (cf. (31)) can be seen in this perspective: Signalling a discourse relation, it assists the search for plausibility and facilitates accommodation.¹⁷

3.5.2. Continued Reported Speech

Now if the context does provide an indirect speech segment, there is an alternative, simpler and maybe more adequate way to describe the accommodation. Instead of adding the condition $\Delta(K)(x)$ (where Δ is the general, underspecified verbum dicendi), we may replace a condition of the form $K_1 = \wedge[\dots]$ by the corresponding condition $K_1 = v(\wedge[\dots], K)$ – and this will amount to attaching the proposition in the indirect speech context.

Let us represent the first sentence of (55) as C :

$$C = [K_1 \mid \text{claim}(K_1)(h), K_1 = \wedge[\mid \text{amnesia}(h)]]$$

¹⁷ Not to forget, of course, that a colon often marks direct speech; note, however, that the substitution of a *dass* clause is in cases like (31) as a rule ruled out.

Updated by the assertion, this becomes $v(C,A) =$:

$$[K_1, K \mid \text{claim}(K_1)(h), K_1 = \wedge[\mid \text{amnesia}(h)], K = \wedge[\mid \text{condition}(h)]]$$

for some “condition” expressing recalling only the strong pains. The presupposition will be represented as:

$$P = [y \mid \Delta(\wedge[\mid \text{condition}(h)])(y)]$$

Evidently, the shortest way to justify this presupposition in $v(C,A)$ is to replace $K_1 = \wedge[\mid \text{amnesia}(h)]$ by $K_1 = v(\wedge[\mid \text{amnesia}(h)], K)$, thus extending the content of the report: The incoming sentence does not update the top level context but the subordinate level context embedded under the verbum dicendi already present. The result according to “PJ untrad. II” will then be:

$$\begin{aligned} &[K_1, K \mid \text{claim}(K_1)(h), K_1 = v(\wedge[\mid \text{amnesia}(h)], K), \\ &K = \wedge[\mid \text{condition}(h)]] \end{aligned}$$

This replacement can be argued to constitute the minimal adjustment of the context (updated by the assertion) to let the presupposition follow, and it does seem to give a fair picture of what is going on in continued reported speech. Note that continued Reported Speech thus emerges as a case of intersentential justification: The utterer (and the utterance time, cf. 3.5.3) is, as before, verified in the preceding context, and what is accommodated is not an utterance relation on top of the sentence itself but an equation replacing an equation in the context, reusing the utterance relation already present.

Note, also, that this case is reminiscent of the treatment of modal subordination as accommodation proposed by Roberts (1989). That treatment has been criticized by Frank (1997) or Geurts (1999), who treat modal subordination as a more regular case of context dependence or presupposition resolution. Continued Reported Speech, however, does seem to require an analysis relying on a notion of accommodation.

3.5.3. *Tense and Time in Reported Speech*

When, as in Reported Speech, a sentence behaves like an embedded clause without being one, the question of relative tense is raised anew. In fact, the relative tense in Reported Speech is **anaphoric**. This is a point which should be appreciated.

In 3.2.2 we assumed that the present, perfect, or future subjunctive temporally conveys a relative present, perfect (or past), or future, and we modelled this by having the “utterance time parameter” of this tense be bound by the λ abstractor which binds the time parameter of the superordinate verb; so both are instantiated at once, through

the superordinate tense. When now there is no superordinate verb or tense in the compositional sense of the word, we need to rethink this procedure. In fact, when, as here, the “utterance time parameter” t_0 fails to encounter a time type λ abstractor, we must treat it as an anaphoric element lest it be interpreted as an absolute utterance time. And that means introducing it in a (the) presupposition.

Actually, this case reveals a weakness in the analysis of relative tense assumed in 3.2.2, where nothing intrinsic distinguishes a relative from an absolute tense – it depends on the (intrasentential) context whether the t_0 variable unifies with the value of a higher tense or with the speech time. As long as relative tense is restricted to embedded clauses, this is okay. But the occurrence of relative tense (and not just zero tense; we still find relative past or future) in autonomous sentences makes it necessary to ascribe to the subjunctive an intrinsic tense relativity and to open the option of an anaphoric, presuppositional, saturation of the relative utterance time. Whether this option should cover “bound tense” as well, we leave an open question.

3.6. RELATIVE MOOD, CONTRASTIVE ASPECTS, AND LOOSE ENDS

In this section, we first return to the problem noted in 2.6 that a subjunctive in the scope of another subjunctive should not generate an independent presupposition. The solution to this leads us naturally to an account of the disambiguation effects that were also noted in 2.6, within German or between German and, say, English, and to questions concerning a language like English more generally. Finally, we turn to some potentially problematic aspects of the phenomenon under consideration, sketching a possible account of some but granting that others must for now be left unaccounted for.

3.6.1. *Zero Mood*

It is a *prima facie* problem that in complex subjunctive clauses, where the subjunctive morpheme occurs more than once, the semantics associated with that morpheme should not accumulate; only one, the highest, occurrence should count semantically.

- (57) Sie sagte, sie schiesse, wenn er sich bewege.
she said she shoot_{PresSub} if he REFL move_{PresSub}
 ‘She said she’d shoot if he stirred.’

If here, the presupposition that the proposition has been claimed is counted twice, first at the level of the *wenn* clause and then again at the level of the main clause, the result is a double presupposition: Not only, that somebody says or has said that she shoots if he stirs, but also, that

somebody says or has said that he stirs. Since the (deeply) embedded clause is here a conditional clause, there is the separate problem that the content of this clause is not claimed at all, so the presupposition should definitely not be generated at this level.

The sole solution we see to this problem is to assume a mood version of the “zero tense” analysis of the English past in intensional contexts (Stechow 1995): What is superficially a past tense is in intensional contexts really a relative present, provided it is c-commanded by another past tense. That is, we assume a **Zero mood** principle on which what is superficially a subjunctive is substantially a relative indicative if it is c-commanded by another subjunctive. A relative indicative is, of course, just like an absolute indicative, a zero element, with no interpretation. At the moment, we can only offer a very heuristic formulation:

Zero mood

Delete a subjunctive in the scope of a subjunctive!

This principle may seem trivial, but it has some interesting consequences, even in its present raw form. Let us assume that a subjunctive in an adjunct clause is a deletable subjunctive – a reasonable assumption; to the extent that a subjunctive adjunct clause can occur as an autonomous sentence, it must be a Continued Reported Speech. Consider in this light the case (58a):

- (58) a. Eine Boulevardzeitung bezichtigte mich des Verrats,
 a boulevard newspaper accused me the_{Gen} treason
 weil Polizei eingesetzt werde, um die Mauer zu schützen.
 because police deployed become_{PresSub} for the wall to protect
 ‘A paper called me a traitor, sending police to protect the Wall.’

If the subjunctive in the causal clause were a first occurrence, not in the scope of another, the following reading would be possible: *The reason the tabloid accused me of treason was that it claimed that police were sent to protect the Wall* – but this reading is in our opinion unavailable; the interpretation is unambiguously: *The tabloid accused me of treason citing the reason that police were sent to protect the Wall*. If we assume, however, that the subjunctive in the causal clause is really a second occurrence to be deleted, a first occurrence must be reconstructed, resulting in a decomposition of the verb *bezichtigen* ‘accuse’:

- (58) b. Eine Boulevardzeitung bezichtigte mich, dass ich Verrat übe,
 a boulevard newspaper accused me that I treason work_{PresSub}
 weil Polizei eingesetzt werde, um die Mauer zu schützen.
 because police deployed become_{PresSub} for the wall to protect
 ‘A paper wrote I was a traitor, sending police to protect the Wall.’

We do not claim that this reconstruction is actually carried out at a syntactic level; the point is that the causal clause subjunctive is to be assigned a zero interpretation but since this is dependent on a subjunctive with a wider scope, the meaning of the subjunctive must be merged with some type *t* constituent including the causal clause; in the absence of an overt finite verb (not in the indicative, like *beziehtigte*), the natural site to posit this meaning is at the covert small clause or complement clause ([*mich des Verrats*] or [*PRO des Verrats*]).

3.6.2. *Contrastive Aspects*

A sentence translating (58a) or (58b) will be ambiguous in a language like English or Norwegian. Quite generally, in a language without subjunctive mood (and with an overt past as a relative present), an adjunct clause in a speech report will show an ambiguity as to whether it is adjoined at the level of the report or at the level of the inquit (provided both sites are syntactically possible).

But autonomous sentences can be ambiguous as well, in the context of a speech report. The last question we want to address is what makes it possible for a moodless sentence to “creep into” a speech report:

- (35) Mrs. Dalloway said she would buy the flowers herself. For Lucy had her work cut out for her. The doors would be put off their hinges; Rumpelmeyer’s men were coming. (cited by von Roncador (1988))

The second sentence is in principle ambiguous, as it can be anchored to the Author (Mrs. Woolf) or the Figure (Mrs. Dalloway), although the second, Reported Speech, reading is preferred. We do not want to say that the indicative (or zero mood) is ambiguous, say, between an **absolute** and a **relative indicative**, where the latter may have a nonzero meaning. On the other hand, the past tense does show a double function, as an absolute past or, on the preferred interpretation, a relative present. However, the relative present reading is not a sure sign of reported speech; as noted in Section 2.5, it is equally compatible with **Reported Thought**, as in (35a):

- (35) a. Mrs. Dalloway thought she would buy the flowers herself.
For Lucy had her work cut out for her.

Here, the past indicative will be used in German as well. On the whole, it seems that we cannot discount the possibility that a report, be it speech or thought, may stretch across a sentence boundary in the absence of any formal marking and that a sentence without a modal element may increment a modal context, the past tense being read as a relative present. As we see it, this possibility testifies to a general flexibility of discourse segmentation.

3.6.3. *Loose Ends*

Let us make a few comments on two areas where our story is incomplete:

- The RS in the broader spectre of subjunctive functions, and
- The RS in the broader spectre of Figure oriented expressions.

The RS is a central functional variety of the subjunctive in German; but as mentioned in 2.1, the present and, particularly, the past subjunctive each occur in other types of context, too. These other functional varieties do not fall out from the semantics of the RS as defined in 3.2.2 and, consequently, demand semantic explications of their own. Our approach thus takes both morphological varieties to be inherently ambiguous (polysemous) – but synonymous with respect to the reportive reading.

On the face of it, assigning a set of different formalized meanings to each subjunctive category may not seem a particularly satisfactory way of accounting for the semantics of the German subjunctive in general. It is, however, a necessary (first) step towards a precise compositional account of the semantics of subjunctive clauses.

The different semantic variants of the subjunctive(s) probably have the intensor function, i.e. the assertion part of our proposal for the meaning of the RS, in common while relevant parameters of variation concern the types of restrictions the particular functional variety puts on its context: whether it may or must be used in an embedded position or is confined to autonomous sentences; what kind of presuppositions or implicatures it triggers; what type of modal background it conjures up; etc. On a higher level of abstraction, the individual functional varieties can be compared with respect to their relative similarity, as hinted at in 2.1.3 (cf. also Stirling 1993: 259), and mapped into a universal ‘semantic space’ established through typological and diachronic studies on modality as a linguistic category (Bybee et al. 1994, van der Auwera and Plungian 1998, Bybee and Fleischmann 1995). Such an enterprise, however, lies beyond the scope of this paper.

There is another issue we cannot pursue here although it is highly pertinent to the discussion in 3.2.2 and 3.5.3. We mentioned there that RS turns finite tense (present or past) into a relative present tense, unifying the designated time variable t_0 (‘utterance time’) with the time of the speech act the content of which is reported (Figure’s Now) rather than the external time of utterance (Author’s Now). This effect of the RS is part of a broader picture, having to do with what may be termed (Figure-oriented) **perspective** in discourse (Fabricius-Hansen 2001 and forthcoming, Smith 2002): the interpretation of deictic units and (other) linguistic expressions that are directly dependent on the Author’s conversational background or state of mind in a broad sense – his or her preferences, intentions, knowledge, sensations, etc.

In the default case of the unmarked (indicative) mood, of course, it is the Author's background that counts. But the RS, by shifting the relevant utterance time from Author's to Figure's Now, must be expected to shift the relevant epistemic background, too, since the location of the Author puts a limit to what (s)he can possibly know in the strictest sense of the word (Abusch 1997). Thus, the modal expressions *angeblich* 'alleged' and *bestimmt* 'definitely' in (29) evidently reflect the Figure's rather than the Author's knowledge and judgments.

- (29) Wedells Verteidiger Mario Ortiz gab sich optimistisch. Der angebliche Beweis
Wedell's defender Mario Ortiz gave REFL optimistic. the alleged proof
 gegen seinen Mandanten **reiche** zu seiner Verurteilung bestimmt nicht aus.
against his client reach_{PresSub} to his sentencing certainly not out
 'Wedell's counsel Mario Ortiz gave a show of optimism: In his opinion, the
 alleged proof against his client was definitely insufficient for a sentence.'

Likewise, the evaluative adverbials *voreilig* 'prematurely' and *grundlos* 'without cause' encode the Figure's evaluation in the subjunctive clauses (21b) and (22a) whereas *voreilig* is anchored to the Author in the indicative counterpart (21a).

- (22) a. Der Advokat kritisiert, dass K. grundlos verhaftet worden sei.
the advocate criticizes that K. groundless arrested become be_{PresSub}
 'The counsel makes the criticism that K. was arrested without cause.'

Non-modal categories, e.g. temporal and spatial deictic framesetting adverbials like *heute* 'today', *gestern* 'yesterday' and *hier* 'here', seem to behave differently; at any rate, they allow and may even demand an Author-oriented interpretation in subordinate indirect Speech. In syntactically autonomous Reported Speech, however, external anchoring may not be available any more.

Although indicative mood and Author-oriented anchoring of other relevant linguistic categories normally go hand in hand, Figure-oriented anchoring is not restricted to RS contexts. Thus, Reported Thought combines indicative ('backshifted') past tense with Figure's perspective in modal and deictic expressions (von Roncador 1988; cf. 2.5 and 3.6.2 above). And using the indicative tense forms of direct speech in indirect speech – which is not excluded in German (Fabricius-Hansen 2001) – probably involves corresponding shifts in other context-dependent categories in addition to substituting Figure's Now for Author's Now. – On the whole, however, the principles governing perspective shift in German discourse, including the interplay between grammatical mood and syntactic embedding, are as yet poorly understood.¹⁸

¹⁸ See Plank (1986) for some interesting suggestions, which, however, are based solely on syntactically embedded indirect speech.

4. Conclusions

We have presented what we, despite apparent disparities, perceive as a unified account of the functions of the German reportive subjunctive. The account utilizes presuppositions in novel ways and adds to the theory of presupposition. Specifically, our treatment introduces the need to consider the assertion prior to the presupposition and underscores the view of accommodation as a multi-faceted and non-mechanistic process. Besides, we have shown that the relevant presupposition **can** behave in traditional ways. The applicability of the notion of presupposition to this subject matter testifies to the power of the notion.

It is important that the gap between the totally dependent use of the mood (Prototypical indirect speech, 2.2) and the totally independent use of the mood (Reported speech, 2.5) are bridged by cases where the subjunctive is used in a partially dependent, partially independent manner: Cases where a verb is coerced to a verbum dicendi (2.3) and cases where the reason for the subjunctive must be sought beyond the sentence boundary (2.4). At a descriptive level, the existence of a spectre of cases between the totally dependent and the totally independent use has been acknowledged, but not interpreted: By ascribing the subjunctive a presupposition, we have been able to understand the totally dependent use as cases of an intrasentential verification (3.2), the totally independent use as cases of (intra- or intersentential) accommodation (3.5), the coercion cases as cases of partial intrasentential accommodation (3.3), and the residue as cases of intersentential justification, where the presupposition behaves more “traditionally” (3.4). Thus the reportive subjunctive emerges as a semantically uniform sign whose variability is a function of contextual variation.

To be sure, German is not the only language where a subjunctive has a reportive function. In Icelandic, to take a close relative, subjunctive forms can be employed, i.a., in both indirect and Reported Speech (Stirling 1993: 263ff. and references there). Since the same forms have a wider use than the present subjunctive in German, we do not assume our analysis to carry over to Icelandic or other languages without modifications; yet we do believe central aspects of it to be of relevance for the analysis of reportive mood and (other) logophoric phenomena more generally (cf. Stirling 1993, who also uses DRT as a framework).

On the other hand, in comparison with a language without a mood to mark a speech report, such as English, German stands out as a language with the means to

- modify the meaning of a range of propositional attitude verbs to an assertion relation, supplementing or supplanting their normal interpretation,

- unambiguously identify the content of sequences of apparently autonomous, discourse top-level sentences as a speech report, the source of which is to be sought in the preceding discourse.

This latter faculty must, we may assume, be counterbalanced by a more intensive use of direct speech and source quotations in a language like English. Whether this is in fact the case is of course an empirical question, to be answered through parallel corpus investigations. There is also reason to believe that such investigations will reveal a residue of ambiguities in English – or, rather, cases where world knowledge must be relied on to resolve an ambiguity. In this perspective, the German reportive subjunctive emerges as a means of generalizing the phenomenon of indirect discourse in a language without overburdening the role of pragmatic reasoning.

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