

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

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Abstract. This paper aims at an account of the German “reportive subjunctive”, where the mood signals that the proposition is the object of an utterance report. The report can be explicit in the sentence or in the context, or more or less implicit. We interpret these uses as a more or less local verification or accommodation of a presupposition introduced by the subjunctive, thus accounting for a range of 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 attempts at a formal semantic analysis.² Yet this seems to promise some interesting insights. Let us, first, briefly sketch what we see as the most salient features of the Reportive Subjunctive (the RS), in pre-theoretic terms.

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

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

Here the subjunctive alternates with the indicative without a 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.

¹ The German terminology varies; “Konjunktiv der Redewiedergabe / der indirekten Rede”, “Konjunktiv in Indirektheitskontexten” (Zifonun et al. 1997), “Referatkonjunktiv” (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. Schlenker (2003) integrates the German reportive subjunctive into a general theory of indexicality and logophoricity; cf. the introduction to Section 3.

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



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- (2) Es bedauerte, dass es nicht ermächtigt sei, ein Berufsverbot zu verhängen.
it regretted that it not empowered bePresSub 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 bePresSub
 ‘In one case, the driver denied that he had been reckless.’

However, the RS can also occur in autonomous sentences, as in (4). As elsewhere, it signals that the proposition expressed by the sentence is the object of a speech act. Here 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 mustPresSub 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.

We will propose that the RS carries a **reportive presupposition**: That the proposition expressed in its sentence is uttered by somebody. In some cases, this is verified, and the indicative can be substituted. Elsewhere, the presupposition must be partially accommodated. There are various cases of verification or accommodation to be distinguished, accompanied by various semantic effects. One important distinction is that between **intrsentential** and **intersentential** justification. The more accommodation is needed, the greater is the difference between the subjunctive and the indicative. Finally, there are cases where accommodation is not possible and the indicative is mandatory.

In Section 2, “Phenomenology”, after 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 of 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 Reportive Subjunctive (the RS) has been described and discussed in great detail in the German linguistic literature. Some issues remain controversial, but many have been settled. In this section, we summarize the state of the art and try to answer some open questions. In 2.1, we situate the RS in the broader picture of German mood. We then go on to survey the array of contexts where the RS is to be found, with a view to a common denominator. To anticipate, this will be:

Descriptive Generalization

The RS clause is (in the same sentence or in the preceding context) the object of a verb of saying (claiming, asking, commanding), *or it is understood as if it were*.

The case where the proposition is the object of a verb of saying in the same sentence is our “prototypical indirect speech” (2.2), as in (1). It is understood as the object of a verb of saying in the same sentence when a verb is reinterpreted as such a verb, as in (2) (2.3), or when there is no verb but the clause is interpreted as if there were, as in (4) (2.5). Finally, the proposition can be (understood as if it were) the object of a verb of saying in the preceding context, as in (3) (2.4).

2.1. DEFINITIONS: FUNCTION VS. FORM

Before we can begin to discuss the features of the reportive subjunctive, we have to delineate it. It cannot be defined on formal grounds only; for several reasons, we need a mixed formal-functional definition.

2.1.1. Mood and Tense: Morphology

German mood is an inflectional category of the finite verb, on a par with finite tense (present vs. past). Leaving the (compound) future tense aside, 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 are termed “Konjunktiv I” (present morphology) and “Konjunktiv II” (past morphology). We will 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 in regard to mood, encoding past time reference or subjunctive semantics, depending on the context.

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

In the present tense, subjunctive mood is not clearly marked outside the 3. p. sg. (indicative -t vs. subjunctive -e), except for auxiliaries and some strong verbs. In particular, *sein* ‘be’ is the only verb differentiating between present indicative and subjunctive in the 1./3. p. pl.

2.1.2. Present Subjunctive: Function

In discussing the functions of the present subjunctive, it is practical to distinguish between independent and dependent (subordinate) clauses.

In modern standard German, the present subjunctive primarily has the reportive function illustrated in Section 1. This function is manifest in dependent and in independent clauses alike, cf. (1) and (4) above. Other functions are restricted to dependent or independent clauses:

The present subjunctive occurs autonomously in some types of 3. p. sg. directives ('hortative', 'volitive', 'optative') – (5) is an example. This variety reflects the origin of the subjunctive in the Germanic languages;⁴ but it has a clearly marginal status in modern German.

- (5) 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 exclusively used reportively in a strict sense, embedded under genuine *verba dicendi*; it also occurs in complement clauses of verbs of thinking, believing, imagining, fearing, wanting, etc.⁵

⁴ See e.g. Dal (1962: 137ff.).

⁵ It must be noted, however, that under the influence of the subjunctive, such verbs are often understood as *verba dicendi*; cf. 2.2.

- (6) Mit dreissig glaubte ich, das Leben **sei** vorbei.
with thirty believed I the life bePresSub past
 ‘At thirty, I thought life was over.’

The subjunctive in complements to wanting is “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 Italian or French clauses of the same type (Bybee et al. 1994: 222ff.). It remains related to the the RS 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**.

Occasionally, independent subjunctive sentences may seem to report thoughts rather than utterances. But this is evidently a stylistic device restricted to literary prose and heavily context-dependent; normally, the autonomous present subjunctive will be understood as reportive in the narrow sense; cf. (7) and the authentic translation (8).⁶

- (7) Der Direktor **sei** stolz auf diese Klasse.
the director bePresSub proud on this class
 (8) The principal, said the boy, is proud of this class.

Finally, the 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)’ (cf. (9)).

- (9) Er flüstert, als **sei** die Veranstaltung eine konspirative Sache.
he whispers as bePresSub the event a conspiratory matter
 ‘He whispers, as if the event were a conspiratory matter.’

Summing up so far, we note that the functions that compete with the reportive function – complements of *verba cogitandi* and *sentiendi*, autonomous directives, types of adjunct clauses – are all restricted to either independent or dependent clauses.

2.1.3. *Past Subjunctive: Function*

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

⁶ Normally, what we find in thought reports is the past indicative characteristic of “erlebte Rede” (“style indirect libre”); see 2.5.

- (10) Sie wäre nicht erstaunt gewesen, wenn sie schwanger geworden wäre.
she be_{PastSub} not amazed been if she pregnant become be_{PastSub}
 ‘She would not have been surprised if she had become pregnant.’

In addition, however, it occurs in nearly the same range of contexts as the present subjunctive, in roughly the same functions; the autonomous directive mentioned above is the only major exception.

In the shared types of contexts, the choice of mood 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 under conditions that make the subjunctive redundant; (ii) the indicative and the past subjunctive are more colloquial than the present subjunctive; (iii) one alternative may be preferred in order to avoid a temporal-modal ambiguity.

This means that the past subjunctive can have a reportive function: It can replace the present subjunctive when the latter is neutral wrt. mood – as is true of the 3. p. pl.; and it can be used consistently in the reportive function outside certain formal, primarily written registers.⁷ (11), for instance, contains a past reportive subjunctive where one would find a present subjunctive in more formal varieties of German.⁸

- (11) Er hat erzählt, er hätte dich auf ein Schild aufmerksam gemacht.
he has told he have_{PastSub} you on a sign aware made
 ‘He told us that he had called your attention to a sign.’

2.1.4. *Summing up*

The present and past subjunctive share the reportive function we are concerned with here. To delimit it from other functions of the present or past subjunctive, we will use the following working definition.

Working Definition

The Reportive Subjunctive (RS) is that pair of a subjunctive form and a function such that both the past and the present subjunctive can have the function in dependent and in independent clauses alike.

Now that we know what to identify it by at this superficial level, we can start to determine the substance, that is the semantics, of the RS. The semantic description we will propose is only intended to account for this function – we will not try to explain the relationship between this and other functions of the present or the past subjunctive or to provide a semantics for the German subjunctive in general.

⁷ The choice between (reportive) present and past subjunctive is orthogonal to temporal reference: Simple present and past both encode “zero tense” (cf. 3.2.2).

⁸ There is, however, considerable room for individual preferences and considerable variation in modern literary prose. For details see Zifonun et al. (1997: 1766ff.)

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 year old 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'). 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 causes an additional ambiguity: the V2 clause might be interpreted as direct rather than indirect speech.

- (13) UNO-Diplomaten **sagten**, Irak **habe** nicht mit offenen Karten gespielt.
UN diplomats said Iraq have_{PresSub} not with open cards played
 'UN Diplomats said, Iraq has not been playing with open cards.'

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 **sei**.
he asked whether it still far to-the laborcamp be_{PresSub}
 'He asked whether it was still far to the labor camp.'

Or it can be an indirect imperative (with a suitable modal) embedded under a verb of demanding or commanding:

- (16) Ich bat Dr. Stroncickij, er möge doch kurz in mein Büro kommen.
I begged dr. Stroncickij he mayPresSub briefly in my office come
 ‘I asked Dr. Stroncickij to drop in at my office.’

This seems to indicate that the relevant notion of a verbum dicendi should be wide enough to include interrogative and directive verbs.

How about cases like (17)?

- (17) Niemand hat behauptet, dass Kirchenräume anders zu bewerten seien als ...
nobody has claimed that churchrooms differently to assess bePresSub 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 also found (alongside the indicative) in complements of 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 a subjunctive in the complement clause may facilitate 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’.

- (18) ..., sagte Busemann und hoffte, dass es nicht auch ihn erwischen werde.
..., said Busemann and hoped that it not also him snatch FutPresSub
 ‘..., expressing his hope that he wouldn’t also be in for it.’

2.3. DISAMBIGUATION AND REINTERPRETATION EFFECTS

A propositional attitude verb which is not (strictly) a verbum dicendi can attain an interpretation as one if the embedded clause has the RS. Above, we suggested that a subjunctive in the complement clause of a verbum cogitandi facilitates a verbum dicendi reading of that verb. Below, we will 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 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 freuen* ‘be pleased’, which, on the face of it, are factive predicates describing the subject’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 1994, 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; embedding subjunctive ‘that’ clauses, however, 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 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_{PresInd}
‘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_{PresInd}
‘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 an evaluative attitude. They are factive when combined with a clausal complement showing the indicative. The subjunctive in the complement clause changes its role from the **object** of criticism or praise to the **content** of the criticism or praise, suspending factivity.

- (21) a. Einstein **kritisierte** (es) nie, dass Bohr voreilig die Kausalität aufgegeben hatte.
Einstein criticized it never that Bohr prematurely the causality upgiven had
‘Einstein never criticized that Bohr had prematurely sacrificed causality.’
- b. Einstein **kritisierte**, dass Bohr voreilig die Kausalität aufgegeben habe.
Einstein criticized that Bohr prematurely the causality upgiven have PresSub
‘Einstein made the criticism that Bohr had “prematurely sacrificed causality”.’

An attitude of criticism is implicit in the evaluative element *voreilig* ‘prematurely’ contained in the subordinate clause. The subjunctive in (21b) has the effect that the implicit evaluation is ascribed to the subject of the matrix verb (rather than to the Author, as in (21a)), so that the subordinate clause can 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 *kritisieren* is brought out in a construction with the nominalization *Kritik* ‘criticism’: With a prepositional correlate *daran*, the construction is implicative; without a correlate, it is **explicative** (Fabricius-Hansen and von Stechow 1989). Thus (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.

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

Eisenberg (1994: 131ff.) and Thieroff (1992: 253), i.a., have 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. In that case, one would expect the factive presupposition inherent to verba dicendi like *zugeben* ‘admit’, *eingestehen* ‘concede’, or *verraten* ‘reveal’ to get cancelled when they combine with a subjunctive complement clause, as in (23) or (24).⁹

⁹ 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. 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 bePresSub an enthusiastic member theGen 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 presupposition that somebody else has made that claim, and evidently, this presupposition is sufficient to motivate the reportive subjunctive.

The same is true of the conversely linking verb *erfahren* 'experience' or 'learn' ('be told'), which can also occur with the subjunctive, without, as it appears, sacrificing its factivity.

(26) demonstrates a related case: The sentence entails the opposite of what we might expect from the RS, but the essential element is the definite description ‘the opinion’, presupposing that the content of the embedded clause is an opinion held (and probably voiced) 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 Naziherrschaft.
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, exhibits the RS embedded under the 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
and I put REFL instead that fore that Herr Sommer
 überhaupt nicht etwas habe oder müsse, sondern dass er . . .
at all not anything have_{PresSub} or must_{PresSub} but that he . . .
 ‘And I imagined instead that Mr Sommer did not have or have to anything at all, but that he . . .’

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) are 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, in a *verbum dicendi* context where the utterer 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 – 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: According to him,
 the alleged proof against his client was definitely insufficient for a sentence.'

Often, Reported Speech occurs against a background of indirect speech, extending a report starting with a subordinate clause embedded under a verb of saying (henceforth: an *inquit*), as in (28). In cases like (29), however, the report starts with an independent subjunctive sentence.¹⁰ 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.
*the wall be*_{PresSub} *harder than heads which against it onrace would*
 'I used the loudspeaker of a police car, shouting that the wall
 would not yield to oncharging heads.'

In fact, there are many intermediate stages between, on the one hand, prototypical Indirect Speech and, on the other hand, Reported Speech without any explicit *inquit* in the context. Indeed, these two types can be regarded as extremes of a continuum of reportive constructions that differ as to how the report is encoded syntactically (V2 or subordinate), what type of report trigger (if any) the context contains, and what is the syntactic relation between the trigger and the reportive text segment (cf. Fabricius-Hansen 2002: 22).

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

Reported Speech is possible in a language like English as well, but because it cannot here formally be distinguished from what we can call Reported Thought (*erlebte Rede, style indirect libre*) or Author text, the absence of a reportive mood must sometimes be compensated by other means. Thus comparable English texts can be expected to show a higher frequency of direct speech and source quotations (cf. (32a) and the authentic translation (32b)), and a residue of genuine ambiguities.

- (32) a. Der Rat der Sachverständigen für Umweltfragen stellt in einem Gutachten fest, dass "in der Frauenmilch Beta-Hexachlorcyclohexan, Hexachlorbenzol und DDT of in bedenklichen Konzentrationen gefunden werden". Diese Giftstoffe sind in Pflanzenschutzmitteln enthalten, die inzwischen aus dem Verkehr gezogen wurden.
Ihre Herkunft **sei** ungeklärt.
- b. The Council of Experts on Environmental Issues determines in a report that "in mother's milk beta-hexachlorocyclohexane, hexachlorobenzol and DDT are often found in significant concentrations". These toxic substances are contained in pesticides and herbicides that have by now been taken off the market.
According to the report their origin is undetermined.

2.6. PRELIMINARY CONCLUSIONS

On the basis of a formal-functional working definition of the reportive subjunctive (the RS) (cf. 2.1.4), we have surveyed the different types of contexts where it occurs, ranging from prototypical Indirect Speech via clausal complements of verbs that are not (strictly) *verba dicendi* to – in suitable contexts – autonomous sentences (Reported Speech).

We have observed that if the RS clause is not the object of a verb of saying in the strict sense, it can be understood as if it were in that the matrix verb is reinterpreted as such a verb, and that if it is not the object of a verb of saying in the same sentence, it can be the object of such a verb in the preceding context, or this can be presupposed; finally, if the RS clause is not the object of anything, it can be understood as if it were the object of a verb of saying more or less implicitly given in the context. This amounts to the following common denominator:

Descriptive Generalization

The RS clause is (in the same sentence or in the preceding context) the object of a verb of saying (claiming, asking, commanding), *or it is understood as if it were*.

Again, this is not a generalization over the German subjunctive as such: Its validity is limited to the working definition developed in 2.1.

3. Theory

The facts we have identified may seem to form an incoherent picture. We will try to show, however, that they can all be traced to a uniform semantics for the mood morpheme, in terms of a presupposition. Mirroring the variety of reportive contexts, this presupposition can be verified or in various ways accommodated, and verification and accommodation can take a variety of forms regarding 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. We then go on to apply this machinery to the array of contexts and effects discussed above.

This is our semantic definition of the reportive subjunctive (the RS):

$$\text{RS}^* = \lambda K \wedge K [x \mid \Delta(\wedge K)(x)]$$

According to this, the RS does two things: It turns a sentence into a proposition, and it introduces the presupposition that somebody utters (Δ) that proposition. (We later, in 3.2.2, relativize Δ to a tense variable, and in 3.2.3, we modify its content to cover questions and commands.) In 3.2–3.5, we show how this general meaning can stretch to fit the facts we have identified in Section 2. These subsections correspond one-to-one to the subsections 2.2–2.5, on attitude verbs like *behaupten* ‘claim’, attitude verbs like *bedauern* ‘regret’, matrix verbs like *bestreiten* ‘deny’, and on RS in autonomous sentences (Reported Speech).

Our approach is compatible with recent suggestions for an analysis of the (reportive) subjunctive in German at a more general level, such as those made by Schlenker (2003) or, a bit differently, Stechow (2003): The subjunctive is a logophoric mood that must depend on the context of a reported speech act (Schlenker); the subjunctive checks a logophoric world variable which must be bound by an attitude verb (Stechow). Our analysis is more explicit and more restrictive, and therefore it can account for the cases where the RS depends on the context of a speech act not reported in the same sentence (2.4, 3.4 and, differently, 2.5, 3.5) or on the context of a speech act that must be reconstructed (2.5, 3.5).

3.1. PRESUPPOSITIONS AND THE SEMANTICS OF THE RS

It has seemed difficult to ascribe a specific semantics to the reportive subjunctive because often enough, it does not seem to mean anything. 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 far as the domain for verification and accommodation is concerned. While it **can** be verified or partially accommodated in the ‘usual’ way, in the intersentential context, often it is verified or, in various ways, accommodated in 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 Presupposition in a Compositional DRT*

Because in our view, Discourse Representation Theory (DRT) offers the best (or at least the most transparent) way to treat presuppositions, we will use this framework. Though we could use other formats, such as the dynamic semantic, update logic version of a Karttunen–Heim context change potential theory represented by Beaver (1997: 969ff.), our version of DRT promises a more explicit representation of certain aspects of our analysis. We will assume a compositional, “bottom-up” version of DRS construction, similar to that given by Asher (1993), combining “predicative” DRSs to form larger ones 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

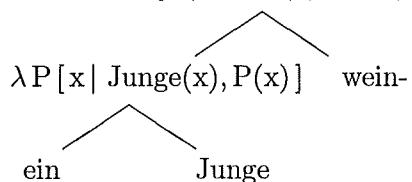
$$[x_1, \dots, x_n \mid \text{con}_1, \dots, \text{con}_n] =_{\text{def}} \langle \{x_1, \dots, x_n\}, \{\text{con}_1, \dots, \text{con}_n\} \rangle$$

The (moodless and tenseless) sentence

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

will have the following construction:

- (33) b. $[x \mid \text{Junge}(x), \text{wein}(x)]$



The words *ein*, *Junge*, and *wein* have the following translations:

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

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 (Greek upsilon).

The traditional notion of (anaphoric) presupposition verification (van der Sandt (1992), Kamp and Rossdeutscher (1992), Sæbø (1996)) can be formulated thus:¹¹

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 $v(C, A_P)$, the update of a context by a sentence carrying a presupposition, is the update of the context by the assertion if the presupposition follows from the context – under some substitution of its discourse referents, which then carries over to the assertion, “ $f(A)$ ”. The presupposition acts as an admittance condition unifying anaphoric referents, – as in the interpretation of (34), with a definite description:

- (34) There are a man and a woman. The man is young.

Assume that (note that A has an empty universe):

$$\begin{aligned} C &= [x, y | \text{man}(x), \text{woman}(y)], \\ A &= [| \text{young}(z)], \\ P &= [z | \text{man}(z)]. \end{aligned}$$

There is one and only one function $f: U_P \mapsto U_C$ such that $C \models "f(P)"$, namely, the one mapping z to x ; so $v(C, A_P)$ is defined as $v(C, "f(A)")$ and equals $v(C, [| \text{young}(x)]) = [x, y | \text{man}(x), \text{woman}(y), \text{young}(x)]$.

¹¹ For the general case, the assumed representation format may seem simplistic: A sentence can accumulate presuppositions, maybe in a hierarchy (as in van der Sandt's (1992) recursive structures); to avoid unnecessary complexities, we adopt a composition principle fusing two presupposition structures into one (cf. 3.2.1).

A traditional notion of (anaphoric) presupposition accommodation – 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:¹²

Presupposition Accommodation (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 $v(C, A_P) = v(v(C, "f(P)'), "f(A)")$.

These notions are “traditional” in the sense that the presupposition is only collated with the context, not with the context and the assertion, yet this seems to be required for the case of the RS* presupposition. To be sure, this is *prima facie* problematic. For certain presuppositions, it does not seem to make sense to first update the context by the assertion. We consider problems connected to revising traditional definitions generally in a separate subsection. For the moment, we will reserve an **untraditional** notion of presupposition verification / accommodation, relating the presupposition to the update of the context by the assertion, for certain presuppositions, 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 Accommodation (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 $v(C, A_P) = v(v(C, "f(P)'), "f(A)")$.

¹² This definition assumes a notion of determinism which is hardly justified; cf. the weaker formulations provided by van der Sandt (1992), treating verification and accommodation together. For our purposes, it is practical to maintain two separate definitions and a pseudo deterministic notion of accommodation.

As will be seen in Section 3.3 and in Section 3.5, for certain purposes it may be useful to, instead of modelling accommodation as the update by the presupposition, use a notion of accommodation as a repair strategy where the context is adjusted to admit the presupposition after all:

Presupposition Accommodation (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:¹³

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

The RS performs two functions: It turns a DRS into a DRS in intension – a proposition, and it introduces the presupposition that somebody says – normally, claims – that proposition. The speech act is symbolized by Δ (for ‘dicendi’). We later, in 3.2.2, relativize Δ to a tense variable, and in 3.2.3, we modify its content to cover questions and commands.

We will see in 3.2.1 how the result of combining RS^* with a K can in turn combine with a conjunction ‘that’ and / or a verbum dicendi. For the case where the result of combining RS^* with a K does not combine with anything more (“reported speech”; cf. 2.5 and 3.5), we define a special principle for updating a context DRS with a DRS in intension:

Intensional DRS update

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

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 may seem to cause problems for anaphoric presuppositions, where there is a discourse referent introduced in the presupposition; specifically when such a referent occurs in a condition in the assertion, as in cases of “presupposition as anaphora”; presuppositions like those generated by a personal pronoun or the definite article.

A definite description *the dog* will have the following representation:

¹³ We use a subscript notation for presuppositions familiar from e.g. Beaver 1997.

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

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

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

Obviously, the presupposition should not count as verified just because it is a logical consequence of the assertion (every Great Dane is necessarily a dog). But note that on the untraditional definition of verification, the presupposition must follow from the merge of the context and the assertion under the substitution of discourse referents introduced in that merge; and as y can be assumed to not have been introduced in the context, the condition “ $\text{GD}(y)$ ” will play no part in the justification of the presupposition.

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, part of the assertion should be available sometimes:

- (37) 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 according to the untraditional notions, 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.

It should be noted that our untraditional notions are unproblematic for most of the presuppositions frequently cited in the literature, like factive presuppositions, cleft presuppositions, additive presuppositions. So even if we cannot provide independent evidence for them yet, for the most part they seem innocuous.

3.2. INTRASENTENTIAL VERIFICATION

Below, we apply the machinery introduced above to **Indirect Speech** (cf. 2.2), where the presupposition is verified in the same sentence. In 3.2.1, we abstract away from temporal parameters; these are addressed in 3.2.2. In 3.2.3, we discuss the interpretation of Δ in interrogative and imperative contexts, and in 3.2.4, we confront a potential problem arising from 1st person present tense contexts.

3.2.1. *The Basic Case*

Consider (38).¹⁴

- (38) 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 conjunction *dass* and the verb *sagen* the following translations:

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

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

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

This ensures that a verbum dicendi can apply to a sentence even though neither the subjunctive nor the conjunction 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)).

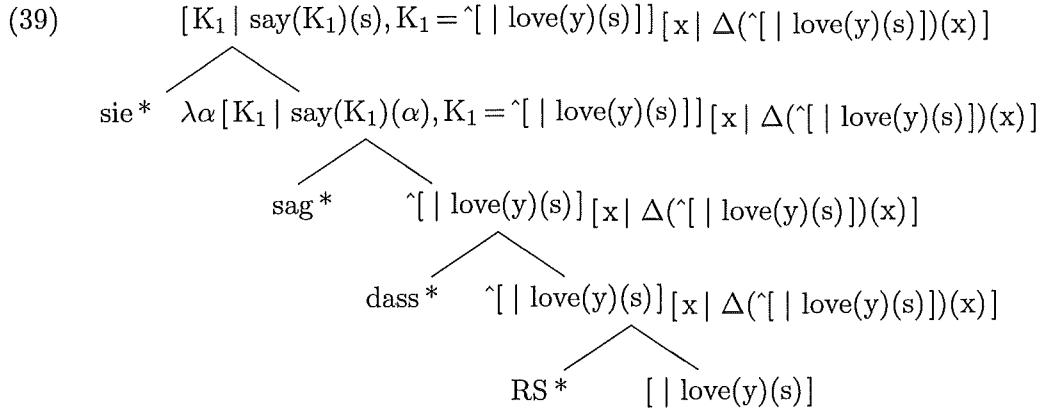
For a full analysis of (38), we need principles for the projection of presuppositions in semantic composition. In fact, we need one principle for the case where a function carries a presupposition, one for the case where an argument carries a presupposition, and one for the case where both function and argument carry a presupposition. In any case, the presupposition(s) attach(es) to the function:

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 $f_{\langle a,b \rangle} K_1 + g_{\langle a \rangle} K_2 = f_v(K_1, K_2)(g)$

(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 (38) is then:

¹⁴ Obviously, the pronoun *sie* should be treated as an additional presupposition; but to avoid the complexities of presupposition computation, discussed by Kamp (2001b), we choose to disregard this, treating the pronouns as if they were constants.



Once the presupposition generated by the mood has been projected to the top level of (39), it can be verified according to the untraditional notion (cf. 3.1.1), 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 assertion). The update by the whole then reduces to the update by the assertion. 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 some part of the carrier sentence must be processed in advance of a presupposition (cf. Heim (1983) or Kamp (2001a)), here the matter is different insofar as the entire representation must be built before checking the presupposition. It is not as if the presupposition were sought verified in a first conjunct or conditional clause; rather, there is an essential part of the relevant assertion in the scope of the trigger. 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

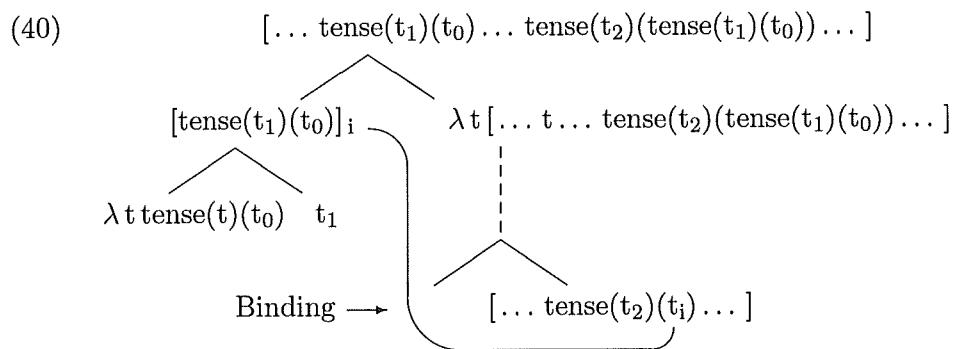
It has long been known that the tense we find in the present subjunctive is a **relative** present; the overlap relation it conveys is not between a reference time and an utterance time but between the reference time and the (reference or) event time for the superordinate speech act (not the utterance time of the ‘Author’ but that of the ‘Figure’ is relevant). When the past subjunctive is substituted, it conveys the same relation. A future or perfect subjunctive (with a present subjunctive auxiliary) (or a past auxiliary substitute) conveys a relative future or past. 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 crucial property of relative tense is that the role usually played by the utterance time is played by the reference time of a higher tense. In line with Stechow (1995), we 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 it has a certain value, as if it were always contextually given.

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 .

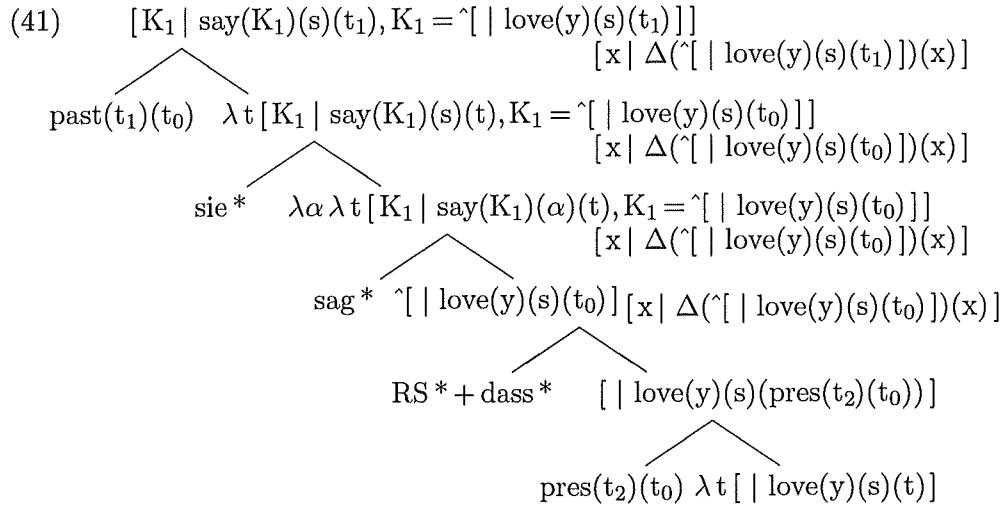
Bound tense implies that the analogy between tenses and pronouns (Partee 1973) can carry over to bound pronouns: While absolute tenses are similar to anaphora, relative tenses are similar to anaphors.

The schematic, general picture of bound tense will be as in (40).¹⁵ The coindexation between $[\text{tense}(t_1)(t_0)]_i$ and t_i means that the latter inherits the value of the former. Alternatively, we could choose to not coindex but call t_i the *distinguished time variable*, t_0 , 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 (38), which was ascribed the atemporal semantics (39), 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:

¹⁵ Both here and in (41), it is the reference time for the superordinate speech act which acts as the evaluation time for the subordinate tense. In the general case, it may be more adequate to anchor this tense to the *event* time of the speech act. This can best be accomplished by taking **aspect** into account. To keep matters reasonably simple, however, we do not carry out such a modification.



How about the time reference of the Δ predicate, which was hitherto suppressed? There are two options: This predicate can be equipped with the distinguished time parameter, unifying with the higher tense time; or its time variable can be introduced in the presupposition, to unify with some reasonable antecedent time in the procedure of justification. The first option seems preferable in cases like the one considered here, where the presupposition is verified in the carrier sentence; however, when we turn to cases of intersentential justification it will become clear that only the second option is sufficiently general (cf. 3.4). The presupposition DRS will thus ultimately read:

$$[x, t | \Delta(^[| love(y)(s)(t1)])(x)(t)]$$

And the revised semantics for the RS is:

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

3.2.3. *The Question of Questions etc.*

In Section 2.2, we noted that the subjunctive clause can be an indirect interrogative or imperative, suggesting that the relevant notion of a verb of saying transcends the speech act category of representatives. Let us consider questions first.

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

- (42) 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 $\Delta = \text{‘claim’}$.

Verbs of asking present more of a problem; recall (15).

- (15) Er **fragte**, ob es noch weit zum Arbeitslager **sei**.
 he asked whether it still far to-the laborcamp be_{PresSub}
 ‘He asked whether it was still far to the labor camp.’

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 that it remains important that the verb describes an utterance; with a verb that does not necessarily do so, like *sich wundern* ‘wonder’, the subjunctive produces the same disambiguation effect as with verbs like *bedauern* (cf. 2.3 and 3.3): The question must have been uttered, either directly ((43b)) or indirectly (43c)).

- (43) 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 . . .

The obvious response to these observations is to generalize the proto verbum dicendi Δ to represent

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 what we envisage as the general strategy.

Imperatives embedded under verbs of demanding or commanding require special attention. Recall (16):

- (16) Ich **bat** Dr. Stroncickij, er möge doch kurz in mein Büro kommen.
 I begged dr. Stroncickij he may_{PresSub} briefly in my office come
 ‘I asked Dr. Stroncickij to drop in at my office.’

It is reasonable to assume that the direct speech counterpart consists in an imperative: ‘Come to my office, will you?’ Interestingly, the modal in the present subjunctive, *mögen*, could hardly have been used in the direct speech counterpart. While very many modalized sentences can be interpreted as propositions that can be asserted, these directives seem to defy such an analysis. While we are not sure about the proper treatment of them, it does seem right to recognize that Δ can encompass a verb rendering a directly directive speech act.

For simplicity, however, we will in the following continue to view Δ as an assertion relation and the complement as a proposition.

3.2.4. A 1st Person Present Problem

What would appear to be a case of Indirect Speech with a 1st person present matrix presents a potential problem for our theory. In such a context, the RS cannot be used:

- (44) a. # Ich **behaupte**, dass ich unschuldig **sei**.
I assert that I innocent bePresSub

Note that the present tense must be used in the strict identity-with-the-time-of-utterance sense for this effect to obtain; in the authentic (44b), we have a historic present:

- (44) b. ✓ Ich lüge in Bezug auf meine Haarfarbe und **behaupте**,
I lie in relation on my haircolor and assert
 meine Augen **seien** blau.
my eyes bePresSub blue
 ‘I lie about the color of my hair and say that my eyes are blue.’

Descriptively, it is true that in these cases, the embedded proposition is systematically added to or necessarily belongs to the Common Ground. But this cannot, as suggested by Schlenker (2003: 87) (in connection with *glauben* ‘believe’), be the reason that the RS is infelicitous. We recall from 2.3.3 that the RS occurs under factive verbs as long as they are verba dicendi; factivity as such does not violate its presupposition, so it is compatible with the proposition being in the Common Ground. We believe the reason to be that the sentence is used performatively, with the consequence that the proposition that I make that claim is not added to the Common Ground. The presupposition $[x | \Delta(\neg K)(x)]$ must be verified through the assertion, not the performance, of a claim; for the purposes of justification, what the superordinate sentence adds to the context is not that I plead innocent but that I am innocent.¹⁶

¹⁶ As pointed out by an anonymous referee, it is possible to refer to a speech act, performative or not, with a demonstrative description: ‘This/that claim’. In our view, however, this depends on a turn in a dialogue or at least a shift in perspective and does not constitute conclusive counterevidence to our analysis.

What a performatively used sentence “I claim that I am innocent” adds is not claim(that I am innocent)(I) but just I am innocent.

According to this argument, the RS is infelicitous in these contexts because its presupposition fails to find a target in the carrier sentence, so we have a case of presupposition failure. The possibility is left open that the presupposition may be resolved intersententially (cf. 3.4) – and indeed, such examples seem to exist:

- (45) Ich teile die Auffassung, dass das Gemälde eine Fälschung sei.
I share the opinion that the painting a forgery be_{PresSub}
‘I agree that the painting is a forgery.’

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 informally as a coercion. Now we turn to the task of accounting for this effect as a consequence of the justification of the presupposition of the subjunctive, tracing the failure of the factive presupposition to project to the well-established property of 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) $[K_1 \mid \text{annoy}(K_1)(s), K_1 = \hat{[} \mid \text{late}(h) \hat{]}] [x \mid \Delta(\hat{[} \mid \text{late}(h) \hat{]}) (x), K_1]$

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 *annoy(K₁)(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 $\Delta - \text{annoy}$ – 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 verb of saying, acting as a ‘plug’ (Karttunen 1974: 188f.). Note that this general analysis is supported by the fact that a factive verb which is “already” a verb of saying 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 that you are annoyed at something does not entail that you say that something; it only entails that you presuppose it. Second, the adjustment is a simplification: (46) 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 seems 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 accommodation seems to favor our definition (**untrad. II**) (from 3.1.1) since it involves “repairing” the (intrasentential) context. It might 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 would – maybe – naturally be interpreted as a ‘saying in a way showing one’s 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 accommodation 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 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 RS presupposition is then, as it appears, salvaged by coinciding with a presupposition introduced by the verb or definite description; 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.’

Intrasententially, the presupposition is blatantly falsified: The assertion expresses the exact opposite of what it should to verify it. The reason it can still be justified is that it can transcend the sentence boundary, finding an antecedent in a piece of preceding discourse expressing that **someone else** has claimed what the subject disclaims. 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 notions of justification in 3.1, the merge of that sentence and the larger context.

This option seems to be correlated with a 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 the same as someone else.

This corroborative, external presupposition may be typical but it is hardly essential, at least not as a semantic, or a lexical presupposition: Recall from 2.4 that we encounter cases where a 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:

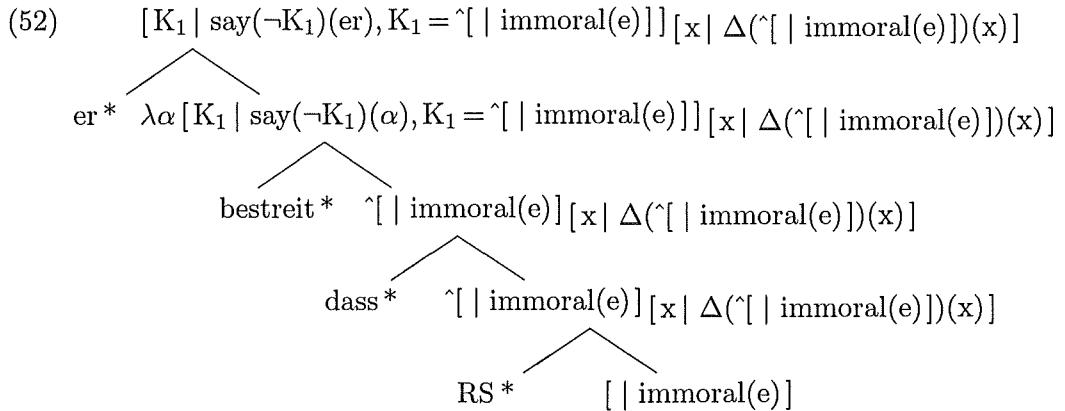
- (50) Es ist falsch zu glauben, Rassismus **sei** allein eine deutsche Erscheinung.
 ‘It is wrong to think that Racism is a purely German phenomenon.’
- (51) Dass die Freiheit nicht teilbar **sei**, wussten wir schon.
that the freedom not divisible be_{PresSub} knew we already
 ‘That Freedom is indivisible,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

It might be argued that intrasentential justification is the primary option and intersentential justification is a secondary option, only resorted to when the primary option is closed, and that therefore, one should keep the two notions separate, using two different definitions. Note, however, that when the superordinate verb is one like *zustimmen* ‘agree’, it is difficult to decide whether the assertion of this verb or its presupposition is the target of resolution for the RS. This, in our opinion, argues against distinguishing too sharply between the local and the more global level of justification.

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

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

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). Recall from 3.2.1 the principles for presupposition projection in semantic composition; in the second last step we need the 3rd rule, for the case where both function and argument carry a presupposition:



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.

The explicit analysis of (53) is based on the following assumptions. The nominalization *Behauptung* denotes a set of propositions:

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

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 that it normally denotes:

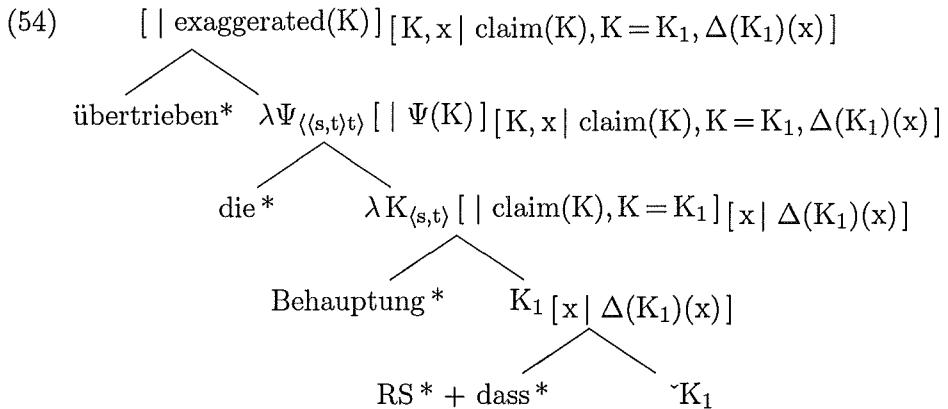
Explicative Composition

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

The definite article here denotes not a relation between two sets of individuals but a relation between two sets of propositions, introducing the presupposition that there is a proposition in the “nominal” set:

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

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



3.5. ACCOMMODATION AND DISCOURSE SEGMENTATION

Reported Speech (**Berichtete Rede**) is characterized by the absence of any item embedding the RS clause. Syntactically, the clause is 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 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 vaguely 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 reachPresSub 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 two notions of accommodation from 3.1. We might use either (untrad. I) or (untrad. II), but for the sake of simplicity we choose the latter, repeated here:

Presupposition Accommodation (untrad. II)

Let C be a context DRS and let AP 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 $v(C,A) \models "f(P)"$, $v(C,AP)$ 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 $v(C,AP) = v(C, "f(A)")$ 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:

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

And the assertion is represented as a DRS in intension:

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

Note that the assertion is thus **not interpretable** in isolation. This implies that although the presupposition may be verified, as in (56a), the autonomous RS sentence cannot be read as a claim by the Author:

- (56) a. # Sie meint, der Mann ist unschuldig. Er sei es in der Tat.
she thinks the man is innocent he bePresSub it indeed

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

Intensional DRS update

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

So what the assertion adds is a tautology, but it prepares the ground for the subsequent accommodation:

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

Now this must be assumed to almost entail P under some substitution of referents, in order that finally, the minimal adjustment such that P is in fact entailed constitutes the update of the context by the sentence. The natural substitution is of x for y, anchoring the discourse referent presupposed to claim K to the lawyer mentioned in the context:

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

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

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

Commenced Reported Speech thus requires 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 relation of utterance 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.

3.5.2. *Continued Reported Speech*

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

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

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

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

$$\underline{[K_1, K \mid \text{claim}(K_1)(h), K_1 = \hat{[} \mid \text{amnesia}(h)], K = \hat{[} \mid \text{recall}(h)]]}^{17}$$

¹⁷ for some condition “recall” expressing recalling only the strong pains.

The presupposition will be represented as:

$$P = [y \mid \Delta(\hat{[} \mid \text{recall}(h)])(y)]$$

Evidently, the shortest way to justify this presupposition in $v(C, A)$ is to substitute $K_1 = \hat{v}([\mid \text{amnesia}(h)], \hat{K})$ for $K_1 = \hat{[} \mid \text{amnesia}(h)]$, thus extending the content of the report: The incoming sentence does not update the top level but the lower level context embedded under the verbum dicendi already present. The reduced result according to **Presupposition Accommodation (untrad. II)** will then be:

$$\begin{aligned} & [K_1, K \mid \text{claim}(K_1)(h), K_1 = \hat{v}([\mid \text{amnesia}(h)], \hat{K}), \\ & \quad K = \hat{[} \mid \text{recall}(h)]] = \\ & \underline{[K_1 \mid \text{claim}(K_1)(h), K_1 = \hat{[} \mid \text{amnesia}(h), \text{recall}(h)]]} \end{aligned}$$

This substitution can be argued to constitute the minimal adjustment of the assertion-enriched context to allow the presupposition to follow, and it seems to give a fair picture of what is going on.

Note that Continued Reported Speech emerges as a case of intersentential justification: The speaker (and the speech time, cf. 3.5.3) is, as before, verified in the context, and what is accommodated is not a speech relation on top of the sentence itself but an equation replacing an equation in the context, reusing the speech relation already present.

Our treatment of this case is strongly reminiscent of the account of **modal subordination as accommodation** given by Roberts (1989). However, modal subordination can also be regarded as a more regular form of context dependence or presupposition resolution, as argued by Frank (1997) and Geurts (1999); a conversational background can be assumed to accumulate through a discourse, to serve as a restrictor for another modal in the usual way. It is maybe not so natural to assume that a report context is regularly available as yet another contextual parameter. Thus Continued Reported Speech does seem to require an analysis relying on some notion of accommodation.

3.5.3. Tense and Time in Reported Speech

When 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**.

In 3.2.2, we assumed that the present subjunctive conveys a relative present, and we modelled this as a unification of its utterance time parameter t_0 with the time parameter of the superordinate verb. When now there is no superordinate verb, t_0 must act as an anaphoric element lest it be interpreted as an absolute utterance time. And that means that it must be introduced in the presupposition.

Actually, this case reveals a weakness in the analysis of relative tense assumed in 3.2.2, where nothing intrinsical distinguishes a relative from an absolute tense – it depends on the (intrasentential) context whether t_0 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 saturation of the relative utterance time.

3.6. RELATIVE MOOD, CONTRASTIVE ASPECTS, AND LOOSE ENDS

In this section, we first face the problem that a subjunctive in the scope of another subjunctive should not introduce an extra presupposition. A solution to this leads to an account of some disambiguation effects, and to questions concerning a language like English. Finally, we turn to some problematic aspects of our theory, sketching a treatment of some but granting that some 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 mood 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 a mood version of the “zero tense” analysis (Stechow 1995) of the English past in intensional contexts: What is superficially a past tense is in such contexts really a relative present, provided it is c-commanded by another past tense. So 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!

It is imaginable, of course, that an RS in a clause can be motivated by a verbum dicendi in another RS clause, as in (58):

- (58) Sie sagte, sie zeige ihn an, wenn er behauptete, sie habe gelogen.
she said she sign_{PresSub} him if he claim_{PresSub} she have_{PresSub} lied
 ‘She said she’d report him if he claimed she had lied.’

It is not easy to decide, though, whether the last occurrence of the RS is conditioned by the verb in the ‘if’ clause or by the maximally superordinate verb. A test case would be whether the reinterpretation of a verb like *bedauern* (cf. 3.3) survives in a context like (59):¹⁸

- (59) Sie sagte, sie zeige ihn an, wenn er bedauere, dass sie gelogen habe.
she said she sign_{PresSub} him if he regret_{PresSub} that she have_{PresSub} lied
 ‘She said she’d report him if he regretted that she had lied.’

But it does not seem to survive: The sentence cannot be taken to mean that she said she’d report him if he said he regretted she had lied. We conclude, therefore, that an occurrence of the RS in the scope of another is consistently invisible to semantic interpretation.

Evidently, a subjunctive in an adjunct clause should generally be treated as deletable, even if it is not in the scope of another overt subjunctive. In (60a), the causal clause must be read as a continuation of the implicitly conveyed claim that Willy Brandt was a traitor, not as a reason given by the Author for that claim.¹⁹

- (60) a. Eine Boulevardzeitung bezichtigte mich des Verrats,
a boulevard newspaper acccused me theGen 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,

¹⁸ We are indebted to a referee of *Natural Language Semantics* for this observation.

¹⁹ The authentic translation into Norwegian is in fact ambiguous on this point.

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’:

- (60) 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 RS must be assigned a zero interpretation but since this is dependent on a subjunctive with a wider scope, the meaning of the RS must be merged with some type t constituent including the causal clause; in the absence of an overt verb (not in the indicative), the natural site to posit this meaning is at the small or complement clause ([*mich des Verrats*] / [*PRO des Verrats*]).

3.6.2. *Contrastive Aspects*

A sentence translating (60a) or (60b) will be ambiguous in a language like English. Quite generally, in a language without subjunctive mood (and with a past as a relative present), an adjunct clause in a report will be ambiguous 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).

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:

- (61) a. 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 to 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 an ambiguity, 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; it is equally compatible with **Reported Thought**, as in (61b):

- (61) b. 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, we cannot discount the possibility that a report, be it speech or thought, may stretch across a sentence boundary without 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 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 function of the subjunctive in German; but as mentioned in 2.1, the present and, particularly, the past subjunctive occur in other functions, too. These other functions do not fall out from the semantics of the RS as defined in 3.1.1, and, consequently, they demand semantic explications of their own. Thus our approach takes both morphological variants to be inherently polysemous – but synonymous in regard to the reportive reading.

While the *Konjunktiv* is thus greatly underspecified, we should accentuate that it is by no means licensed in just any nonveridical context; ‘non-factivity’ may be a convenient common denominator, but it is far removed from constituting a sufficient condition.

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 general account.

The different semantic variants of the subjunctive(s) probably have the intensor function (i.e., the assertion portion of the meaning of the RS) in common while differences concern syntactical and morphological constraints (e.g., only the RS is indifferent with respect to past/present and to dependent/independent clauses, cf. 2.1.4) and constraints concerning modality (\pm counterfactuality; types of propositional attitude). On a higher level of abstraction, the different variants can be compared with respect to their relative similarity 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 relevant to the discussion in 3.2.2 and 3.5.3. We mentioned there that the 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 utterance act the content of which is reported (Figure's Now) rather than with the external time of utterance (Author's Now). This effect is part of a broader picture of what may be called **perspective** in discourse (Fabricius-Hansen 2001, Smith 2002): The interpretation of deictic and other expressions depending directly on some Author's conversational background or state of mind in a wide 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, through shifting the utterance time from Author's to Figure's Now, can be expected to shift the epistemic background, too, since there will be limits to what the Author can possibly know (Abusch 1997). Thus the modal adverbs *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 reachPresSub 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 adverbs *voreilig* 'prematurely' and *grundlos* 'without cause' reflect the Figure's evaluation in (21b) and (22a).

Non-modal categories, e.g. temporal and spatial deictic framesetting adverbials like *heute* 'today' and *hier* 'here', seem to behave differently; they allow and may even demand an Author-oriented interpretation in Indirect Speech. In Reported Speech, on the other hand, an external anchor may not be accessible.

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 (Steinberg 1971, von Roncador 1988, cf. 3.6.2). And the use of the indicative tense forms of direct speech in indirect speech (cf. 2.1.3) may involve not just substituting Figure's for Author's Now but shifting other context-dependent categories as well. 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.²⁰

²⁰ 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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