Elliptical *dass*-clauses in German

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Abstract

The paper argues that independently used *dass*-clauses like *Dass Maria kommt* (*that Maria is coming*) are fragmentary constructions where the *dass*-clause is in the focus position of a matrix clause which contains a base-generated silent verbal head. If there is a linguistically given question like *What does Hans believe?*, the head is specified by the semantics of the question. If there is no linguistic context, the silent head is semantically indetermined and represented as a predicate variable which is specified pragmatically. Since only situations given in the actual context are accessible to the addressee, only predicates that can focus on such situations can specify the predicate variable. This is the reason why an independently used *dass*-clause differs semantically from a declarative root clause. The latter can be the argument of the assertoric illocutionary operator which focuses on a proposition by contributing to creating it for the addressee. The matrix predicate of a *dass*-clause, however, relates to a proposition that exists independently as a worldly entity.

1. Introduction

Apart from their canonical use as complement clauses of certain matrix predicates, as in (1), German *dass*-clauses (verb-final clauses) can also occur independently, either as the second part of a question/answer pair, as in (2), or as solitaires, i.e. without any linguistic context, as in (3).

(1) *Hans weiß, dass Anna heute kommt*.
Hans knows that Anna today comes
'Hans knows (that) Anna is coming today.'

(2) Q: *Was glaubt Hans?*
'What does Hans believe?'
A: *Dass Maria kommt.*
'That Maria is coming.'

(3) *Dass die U-Bahn noch fährt!*
that the tube still runs
'Well I never, the tube is still running!'

As for an independent *dass*-clause, the question arises as to whether it is the semantic equivalent of a corresponding declarative root clause (verb-second clauses). The following observations lead to the assumption that semantic equivalence does not obtain: As is shown in (4) and (5), answer and solitaire *dass*- complement clauses alone cannot be analysed as assertions since their content cannot be questioned and hardly be negated, and they cannot follow canonical assertions.

(4) Q: *Was glaubt Hans?*
'What does Hans believe?'
A: *Dass Maria kommt*?
'That Maria is coming?'
(≠ Is Maria really coming?)

(5) *#Hans studiert in Berlin. Dass er dort Jura studiert.*
Hans is studying in Berlin that he there law studies

The question as to whether *dass*-clauses are the semantic equivalent of declarative root clauses is not trivial since Brandt et al. (1992) and Zimmermann (1993) suggest that *dass*-clauses, like verb-second declaratives, express propositions. We will show that the observations above can be explained by the different semantics of verb-final and root declaratives suggesting that a declarative root clause creates a propositional situation s_p as a wordly object with the help of illocutionary force, which determines that s_p emerges as a worldly object upon uttering the sentence and that it is related to the utterer as well as to the addressee. *Dass*-clauses, however, provide the structure of a propositional situation which exists independently of uttering the sentence and they focus on a situation which is given in the

actual context.[1] We will show how the the relationship of a *dass*-clause to a proposition and situation is determined syntactically and semantically in general in Section Two. In Section Three we can tackle the question what for a syntax and semantics independently used *dass*-clauses have.

2. Syntax and semantics of declarative root and embedded clauses

We have hypothesized that declarative root clauses create a propositional situation and that verb-final clauses represent propositional situations that exist independently. What notion of a proposition do we have? What does it mean that a propositional situation is created or that it exists independently? And how do our semantic considerations match with syntax?

We regard a *proposition* to be a representation where a situation is selected which fulfills a *state of affairs* σ – cf. (6). Σ "holds in" ($\models$) *s* or *s* "supports" σ.

(6) $(s \models \sigma) \quad = \quad p$

According to Barwise (1989: 185), σ is a structure that classifies a situation *s*, the latter being the focus situation of the agent. It follows from Barwise's (1989: 226) reasoning "the situation classified by a proposition involves the cognitive activity of an agent in connection with his current focus situation" that the proposition itself can be seen as a representation. It can be seen as the representation of an abstract worldly object which, roughly speaking, is a thought. If one considers the HoldIn-relation between *s* and σ - the proposition - as a state of affairs of itself, i. e. the state of affairs σ' that *s* holds in σ, one can relate this state of affairs σ' to a thought, i.e. to a situation, which we call the propositional situation s_p.

(7) $s_p \models \underbrace{(s \models \sigma)}_{\sigma'} \quad = \quad (s_p \models p)$

So we regard a proposition as the descriptive content of a propositional situation, i.e. as the representation of s_p. The representation can be con-

1. This paper only deals with declarative clauses. The difference between root interrogatives and embedded interrogatives is the topic of Schwabe (t.a.).

ceptual, semantic, or given in some other way, as for instance as a titled picture. If it is semantic, the verbal meaning contributes a variable *s* for the situation thus causing a propositional predicate, i.e. a function from the set of situations into the set of propositions – cf. (8). The propositional predicate can be regarded as the descriptive meaning of a clause.

(8) $\lambda s.\ s \vDash \sigma$

If it is indicated that there is a situation *s* that exemplifies the propositional function as shown in (9), we obtain a proposition '$(\exists s.\ s \vDash \sigma)$' which represents the propositional situation s_p - cf. (10).

(9) $\exists s.\ \langle s\ ;\ \lambda s.\ s \vDash \sigma \rangle$
(10) $s_p \vDash (\exists s.\ s \vDash \sigma)$

As will be shown below, and in section 2.3 in particular, propositional situations are necessary as linguistic objects, e.g. i) to distinguish propositional situation matrix predicates like *believe* and *know*, for example, from simple situation predicates like *regret* and *want*, ii) to have a discourse referent for anaphoric expressions, and iii) to explain why certain propositional situation predicates in present time can 'embed' indicative verb-second clauses while state of affairs predicates and propositional situation predicates in the scope of negation cannot. A propositional situation can be located in different modal contexts such as in doxastic, assertoric or buletic ones. It is expressed to be understood in relationship to the cognitive agent determined by the syntactic subject of the matrix clause.

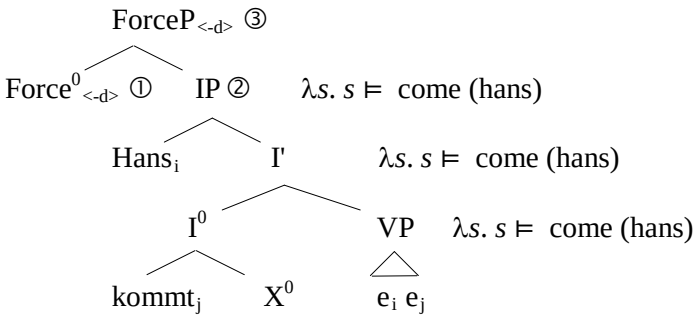
Depending upon their characteristics, situations can be classified as eventualities, states, statives, and propositions.[2] The latter may be objects of knowledge and beliefs. As we will show in the following, a propositional situation s_p can be introduced into the Common Ground by the semantics of a matrix predicate or by the illocutionary force of the sentence. We also will show that both root and embedded clauses have a functional category which is represented semantically as a propositional predicate and that both share a Force Phrase which determines that this propositional predicate is either an argument of a matrix predicate variable or of the illocutionary operator ASSERT.

2. For an overview on situation types cf. Asher (1993) and Smith (2003).

2.1. Declarative root clauses

Unlike interrogative clauses, both main and embedded declarative clauses do not have the functional category CP which determines their sentence type. Like interrogative and imperative clauses, they do, however, provide the functional category IP which is represented semantically as a propositional predicate – cf. (11②). Both main and embedded declarative clauses share a Force Phrase which determines the use of this propositional predicate: it is either an argument of a matrix predicate variable *M* or of the illocutionary operator ASSERT.

(11) *Hans kommt.*
'Hans is coming.'



In German, ASSERT is syntactically indicated by verb-second, which is determined by the syntactic independency feature <-d> in Force^0 and by the absence of the functional category CP. We suggest that ASSERT is an interface operator between the ordinary meaning and the conceptually illocutionary meaning – cf. (11①a), which provides the full representation of ASSERT, or (11①b), which provides its short form.[3]

① a. $\lambda P\ \exists s^{pass}.\ s^{pass} \vDash (\exists s^{utt\text{-}\alpha\text{-}P}\ \exists s_{p1}\ \exists s_{1}\ \exists s^{know\text{-}\alpha\text{-}sp1}\ \exists s^{bel\text{-}\alpha\text{-}sp2}\ \exists s^{p2}\ \exists s^{intend\text{-}\alpha} \Diamond \exists\ s^{aware.of\text{-}\beta\text{-}sp2}.\ (\phi_1 \wedge \phi_2 \wedge \phi_3 \wedge \varphi_4 \wedge \varphi_5))$

ϕ_1 $(s^{utt\text{-}\alpha\text{-}P} \vDash (\text{UTTER}\ (\alpha), (P)))$

3. The character '<' indicates a temporal relation such that, for example, $s^{know\text{-}2}$ is prior to s^{utt}. 'At' indicates that the situations are simoultaneous. Small capitals indicate that these predicates are not given linguistically. Superscripts indicate *indicated situations* and subscripts *described situations.*

ϕ_2 $(s^{know\text{-}\alpha\text{-}sp1} \vDash (\text{KNOW}\ (\alpha), (s_{p1})) \wedge (s_{p1} \vDash [_{pres}\ \langle s_1, P\rangle]))$

φ_3 $(s^{bel\text{-}\alpha\text{-}sp2} \vDash ((\text{BELIEVE}\ (\alpha), (s^{p2})) \wedge (s^{p2} \vDash (\exists s^{not.aware.of\text{-}\beta\text{-}sp1}.\ s^{not.aware.of\text{-}\beta\text{-}sp1} \vDash (\text{NOT.AWARE.OF}\ (\beta), (s_{p1})))))$

φ_4 $(s^{intend\text{-}\alpha} \vDash ((\text{WANT}\ (\alpha), (s^{aware.of\text{-}\beta\text{-}sp1})) \wedge (s^{aware.of\text{-}\beta\text{-}sp1} \vDash (\text{KNOW}\ (\beta), (s_{p1}))))$

φ_5 $(((s^{utt\text{-}\alpha\text{-}s1} \oplus s^{know\text{-}\alpha\text{-}sp1} \oplus s^{bel\text{-}\alpha\text{-}sp2} \oplus s^{not.aware.of\text{-}\beta\text{-}sp1} \oplus s^{intend\text{-}\alpha})\ \text{at}\ \tau_0) \wedge (s^{aware.of\text{-}\beta\text{-}sp2}\text{at}\ \tau_{+1}) \wedge (\tau_0 < \tau_{+1}))$

b. $\lambda P\ \exists s^{pass}.\ s^{pass} \vDash (\exists s_{p1}\ \exists s_1.\ \text{ASSERT}\ (s_{p1} \vDash (\langle s_1, P\rangle)))$

As shown in (11①a), ASSERT subsumes the illocutionary conditions φ_1 to φ_5. They say that the assertoric propositional situation s^{pass} is given if there is: 1) an utterance situation $s^{utt\text{-}\alpha\text{-}P}$ such that the agent α utters the propositional predicate *Hans is coming*, 2) the knowledge situation $s^{know\text{-}\alpha\text{-}sp1}$ such that α knows the propositional situation s_{p1} that Hans is coming,[4] 3) the belief situation $s^{bel\text{-}\alpha\text{-}sp2}$ such that α believes that there is the awareness situation $s^{not.aware.of\text{-}\beta\text{-}sp1}$ where β is not aware of s_{p1}, and 4) the intentional situation $s^{intend\text{-}\alpha}$ such that α wants the awareness situation $s^{aware.of\text{-}\beta\text{-}sp2}$ where β is aware of s_{p1}. It is additionally determined that 5) all situations are temporally located at the utterance time τ_0, except the awareness situation $s^{aware.of\text{-}\beta\text{-}sp1}$. The latter is established if β is aware of s_{p1}. ASSERT maps the semantics of the IP, the propositional predicate ②, onto a complex proposition which is the conceptual representation of the assertoric propositional situation s^{pass} – cf. (11③).

③ a. $\exists s^{pass}.\ s^{pass} \vDash (\exists s^{utt\text{-}\alpha\text{-}P}\ \exists s_{p1}\ \exists s_1\ \exists s^{know\text{-}\alpha\text{-}sp1}\ \exists s^{bel\text{-}\alpha\text{-}sp2}\ \exists s^{p2}\ \exists s^{intend\text{-}\alpha} \Diamond \exists s^{know\text{-}\beta\text{-}sp1}.\ (\phi_1 \wedge \varphi_2 \wedge \phi_3 \wedge \phi_4 \wedge \varphi_5))$

ϕ_1 $(s^{utt\text{-}\alpha\text{-}P} \vDash (\text{UTTER}\ (\alpha), (\lambda s.\ s \vDash (\text{come}\ (\text{hans})))))$

ϕ_2 $(s^{know\text{-}\alpha\text{-}sp1} \vDash ((\text{KNOW}\ (\alpha), (s_{p1})) \wedge (s_{p1} \vDash [_{pres}\ \langle s_1, \lambda s.\ s \vDash (\text{come}\ (\text{hans}))\rangle])))$

…

b. $\exists s^{pass}.\ s^{pass} \vDash (\exists s_{p1}\ \exists s_1.\ \text{ASSERT}\ (s_{p1} \vDash (\langle s_1, \lambda s.\ s \vDash (\text{come}\ (\text{hans}))\rangle)))$

4. The predicate *to know* provides the presupposition that the proposition it denotes is true – cf. (Kratzer 2003).

The proposition representing s^{pass} is not determined by a linguistically given predicate-argument structure, but by a conceptual structure which we call *conceptual illocutionary meaning*. The latter corresponds to a certain extent to Portner's (t.a.) *expressive meaning*. The conceptual representation of s^{pass} is true – or the performed assertoric speech act is felicitous – if the indicated situations exist in the actual world or in a possible one.

As shown in (11), ASSERT ① initiates that the propositional predicate ② is applied to s_1 and that this application provides the proposition '$\exists s_1$. $s_1 \vDash$ (come (hans))' which characterizes the propositional situation s_{p1}. ASSERT thus simulates the latter emerging at the very instant the verb-second clause is uttered. The agent introduces s_{p1} because he wants to update the Common Ground. In order to update the Common Ground, the illocutionary conditions which ASSERT determines must be met and the addressee must, at least, believe s_{p1}. If this is the case, the utterance of (11) can be regarded as an update of the Common Ground.

2.2 *Dass*-clause

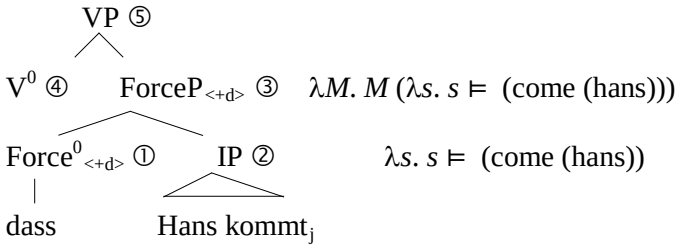
Both *dass*-clauses and declarative V2-clauses have in common that their IP is interpreted as a propositional predicate that characterizes a situation. Unlike the ForceP of declarative verb-second clauses, the ForceP of *dass*-clauses is marked by the feature <+d> which indicates – via the subordinator *dass* – the dependency of the clause on a matrix clause.[5] The latter, in its turn, determines that there is a situation *s* that is a subset of the set of situations denoted by the IP of the *dass*-clause and also what type of situation this situation is.

As to matrix predicates that embed *dass*-clauses, we distinguish between matrix predicates that have propositional situation arguments (s_p*-predicates*) and those that have simple situation arguments (s_i*-predicates*). S_p-predicates are, for instance, *glauben* (*believe*) and *hoffen* (*hope*). S_i-predicates are, for instance, *bedauern* (*regret*), *wollen* (*want*), and (*zeigen*) *indicate*. If the HoldsIn-relation is not in question, as is the case with respect to the latter group, it is presupposed or projected that the particular state of affairs holds in the current or anticipated actual situation. We shall show below that *dass*-clauses always have the same semantic representation, independently of whether they are embedded by s_p- or s_i-predicates.

5. See Huddleston and Pullum (2003: 955) who argue that the English *that* only indicates subordination.

Example (12) demonstrates a *dass*-clause which is embedded by an s_i-predicate. Its ForceP is marked by the feature <+d> which indicates its dependency on a matrix predicate. For this reason, the semantics of the feature <+d> (12①) introduces a variable for a matrix predicate – cf. Asher (1993).

(12) *Anna bedauert, dass Hans kommt.*
'Anna regrets that Hans is coming.'



① $\lambda P\, \lambda M\, .\, M\, (P)$

The matrix predicate *regret* ④ determines that there is a situation s_1 which is mapped onto a proposition by the propositional predicate ② and that this situation is related to the matrix subject. It determines furthermore that the situation is part of the presuppositional proposition s_{p1}.

$V^0_{matr.}$: ④ $\lambda P\, \lambda x\, \lambda s_{emo}\, \exists s_{p1}\, \exists s_1.\, s_{emo} \vDash ((\text{regret}\ (x), (s_1)) \wedge (s_{p1} \vDash [_{pres}\, \langle s_1, P\rangle]))$

$VP/IP_{matr.}$: ⑤ $\lambda s_{emo}\, \exists s_{p1}\, \exists s_1.\, s_{emo} \vDash ((\text{regret}\ (\text{anna}), (s_1)) \wedge (s_{p1} \vDash [_{pres}\, \langle s_1, \lambda s.\, s \vDash (\text{come}\ (\text{hans}))\rangle]))$

Since the matrix predicate determines the state of affairs which the V-final clause characterizes to be factive, the truth of the proposition '$\exists s_1.\ s_1 \vDash$ (come (hans))' is not in question. The proposition need not, therefore, be related to a cognitive agent.

As in root clause (11) above, the matrix clause (12) indicates the functor ASSERT which turns ⑤ into the assertoric propositional representation ⑥.

$ForceP_{matr}$:⑥ $\exists s^{pass}.\, s^{pass} \vDash (\exists s_{emo}\, \exists s_{p1}\, \exists s_1.\, \text{ASSERT}\ (s_{emo} \vDash ((\text{regret}\ (\text{anna}), (s_1)) \wedge (s_{p1} \vDash [_{pres}\, \langle s_1, \lambda s.\, s \vDash (\text{come}\ (\text{hans}))\rangle])))$

Propositional situation predicates like *believe* focus on a propositional situation. The syntactic and semantic representation of their *dass*-clause does not differ from the representation of the *dass*-clause in a construction with an s_i-predicate like *regret* – cf. (12③) and (13③).

(13) *Anna glaubt, dass Hans kommt.*
'Anna believes (that) Hans is coming.'

Force^0:	①	$\lambda P\, \lambda M\, .\, M\, (P)$
IP:	②	$\lambda s.\, s \vDash$ (come (hans))
ForceP:	③	$\lambda M.\, M\, (\lambda s.\, s \vDash$ (come (hans)))
V^0_{matr}:	④	$\lambda P\, \lambda x\, \lambda s_{bel}.\, s_{bel} \vDash$ ((believe (x), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1.\, \langle s_1$, $P\rangle$)))
IP_{matr}:	⑤	$\lambda s_{bel}.\, s_{bel} \vDash$ ((believe (anna), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1.\, \langle s_1, \lambda s.\, s \vDash$ (come (hans))$\rangle$)))

Each of the two *dass*-clauses in (12) and (13) characterizes a situation s_1 which is provided by the semantics of the matrix predicate. Since the situation s_1 provided by a matrix predicate like *believe* in (13④) is not anchored in the actual world, the matrix predicate affects the truth of the proposition it is related to. It is thus possible to infer the non-truth of the proposition if the matrix predicate is negated. Since, on the other hand, the situation variable s_1 provided by a predicate like *regret* in (12④) is anchored in the actual world, the truth of the proposition the matrix predicate is related to cannot be affected.

To give an answer to the question of whether independent *dass*-clauses can be used as assertions: they cannot. Since the feature <+d> in the *dass*-clause indicates dependency, an assertive illocutionary functor cannot be attached to the semantics of its IP. It follows that the illocutionary conditions which are connected with this illocutionary force are not valid. We will return to this point below.

2.3 Why nots and benefits

Obviously, the theory outlined above may give rise to various objections and questions: i) Why do we not adopt the claim made by Brandt et al. (1992) that root declaratives and *dass*-clauses have a uniform semantics? ii) Why do we not accept their view that *dass*-clauses and root clauses are rep-

resented semantically as propositions? And iii), is it compelling to assume that propositional situations are necessary as linguistic objects?

To i): Brandt et al. (1992) and Zimmermann (1993) argue that declarative root clauses and *dass*-clauses differ with respect to their syntactic structure, but also that both have a uniform semantic representation:

(14) a. *Peter schläft.*
'Peter is sleeping.'
b. ..., *dass Peter schläft.*
'... (that) Peter is sleeping.'
∃e [e INST (sleep (peter))]

The first objection which can be raised against this claim is that the semantic representation should mirror the syntactic dependency of a *dass*-clause. So we would expect that, analogous to our proposal, they should be the argument of a matrix predicate variable.
A second, more serious objection is related to the use of *dass*-clauses as solitaires. If they had a representation as in (14b), nothing would prevent them from being the argument of the illocutionary operator ASSERT. We consider that our non-uniform semantic analysis does account for the restricted illocutionary potential of solitaire *dass*-clauses. As shown above, declarative root clauses indicate assertoric illocutionary force syntactically via their non-dependency feature, while independently used verb-final clauses do not. As will be shown below, their illocutionary force results from the linguistic context if they are used as answers or by the situative context if they are used as solitaires.

To ii): We have shown that the ordinary meaning of declarative root clauses is represented as a propositional predicate that is the argument of the illocutionary functor ASSERT, with the latter not belonging to the ordinary meaning. When the clause is uttered, the agent selects a situation that exemplifies the propositional predicate and thus creates a propositional situation. Analyzing ASSERT as a function from the set of propositional predicates into a set of assertoric propositions (cf. 12①) takes Rehbock's (1992) idea that the agent establishes the reference of the sentence into account. And it makes semantically clear the difference between root declaratives and *dass*-clauses. Whereas the former establish propositional objects, the latter contribute to denoting propositional objects.

It is understandable that the IP of a *dass*-clause could also be interpreted as a proposition. And indeed, Steube (1987), Rosengren (1992), and

Zimmermann (1993) make this proposal. So why not represent *dass*-clauses like they do – cf. (14b)?[6] The *first* argument against this approach is, as we know, that matrix predicates may have either propositional or non-propositional situation arguments – cf. (12/13④). However, an analysis of *dass*-clauses as propositions makes it impossible to represent this difference. Consider first the example (13). Its semantic representation (15ii) obtains if we assume that the *dass*-clause is a proposition as in (14b) and specifies the propositional argument variable of the matrix predicate *believe* – cf. (15i). (15iii), which is the representation we have argued for in (13), corresponds to (15ii) to a certain extent.

(15) i. V^0_{matr}: $\lambda p\, \lambda x\, \lambda s_{bel}.\ s_{bel} \vDash$ ((believe (x), (p))
ii. IP_{matr}: $\lambda s_{bel}\ .\ s_{bel} \vDash$ (believe (anna), ($\exists s_1.\ s_1 \vDash$ (come (hans))))
iii. IP_{matr}: $\lambda s_{bel}.\ s_{bel} \vDash$ ((believe (anna), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1.\ \langle s_1$, $\lambda s.\ s \vDash$ (come (hans))$\rangle$))))

As to (12), the matrix predicate *regret* has a propositional argument variable for the complement clause if the complement clause is a proposition – cf. (16i). The representation in (16ii), however, shows that this is not an adequate representation. The subject cannot regret a propositon but can regret the situation s_1 in which the state of affairs 'come (hans)' holds. The situation s_1 is, therefore, the argument of the matrix predicate as represented in (16iii). The latter representation is only possible if we regard the *dass*-clause as a propositional predicate.

(16) i. V^0_{matr}: $\lambda p\, \lambda x\, \lambda s_{bel}.\ s_{bel} \vDash$ ((believe (x), (p))
ii. IP_{matr}: $*\lambda s_{emo}\, \exists s_1.\ s_{emo} \vDash$ (regret (anna), ($s_1 \vDash$ (come (hans))))
iii. IP_{matr}: $\lambda s_{emo}\, \exists s_{p1}\, \Box s_1.\ s_{emo} \vDash$ ((regret (anna), (s_1)) $\wedge$ ($s_{p1} \vDash$ [$_{pres}\langle s_1$, $\lambda s.\ s \vDash$ (come (hans))$\rangle$]))

To iii): a propositional situation variable s_p is necessary first, as shown above, to distinguish a propositional situation predicate like *believe*, for instance, from factive predicates like *regret*. Secondly, s_p is necessary to serve as a discourse referent for anaphoric expressions.

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6. The representation (14b) only obtains if the complementizer *dass* is interpreted as an operator that turns a set of situations into a proposition – cf. Steube (1987) and Zimmermann (1993).

(17) *Anna glaubte, dass Hans kommt, und bestätigte es (später).*
'Anna believed (that) Hans was coming and confirmed it (later).'

Third, we need s_p to explain why non-factive and non-volitional predicates like *believe* can embed verb-second clauses while factive predicates and negated non-factive and non-volitional ones cannot.[7]

(18) a. *Anna glaubt, Hans kommt.*
Anna believes Hans comes
'Anna believes Hans is coming.'
b. **Anna glaubt nicht, Hans kommt.*
Anna believes not Hans comes
c. **Anna bedauert, Hans kommt.*
Anna regrets Hans comes
d. **Anna möchte, Hans kommt*.
Anna would like Hans comes

The *conceptual* representation (19), which corresponds to (18a), consists of two propositions: s^{pass1} and $s^{pass1'}$. They represent two assertoric speech act situations s^{ass1} and $s^{ass1'}$. Since s^{ass1} is contained in $s^{ass1'}$and the proposition s_{p1} 'hans is coming', which is asserted by the actor α, is identical to s_{p3}, which is believed by Anna, the illocutionary condition φ_2 indicated by the embedded root declarative is overridden: the default predicate KNOW is substituted by BELIEVE and the attitudinal subject is Anna instead of α - cf. φ_2 in (19) and (11).

(19) i. $(\exists s^{pass1}.\ s^{pass1} \vDash (\exists s^{utt\text{-}\alpha\text{-}P1}\ \exists s^{believe\text{-}anna\text{-}sp1}\ \exists s_{p1}\ \exists s^{bel\text{-}\alpha\text{-}sp2}\ \exists s^{p2}\ \exists s^{intend\text{-}\alpha} \Diamond \exists s^{aware.of\text{-}\beta\text{-}sp1}.\ (\phi_1 \wedge \varphi_2 \wedge \phi_3 \wedge \phi_4 \wedge \varphi_5)))$

ϕ_1 $(s^{utt\text{-}\alpha\text{-}P1} \vDash (\text{UTTER } (\alpha), (\lambda s.\ s \vDash (\text{come (hans)}))))$

ϕ_2 $(s^{believe\text{-}anna\text{-}sp1} \vDash ((\text{BELIEVE (anna)}, (s_{p1})) \wedge (s_{p1} \vDash [_{pres}\ \exists s_{come}.\ \langle s_{come}, \lambda s.\ s \vDash (\text{come (hans)})\rangle]))))$

φ_3 $(s^{bel\text{-}\alpha\text{-}sp2} \vDash ((\text{BELIEVE } (\alpha), (s^{p2})) \wedge (s^{p2} \vDash (\exists s^{not.aware.of\text{-}\beta\text{-}sp1}.\ s^{not.aware.of\text{-}\beta\text{-}sp1} \vDash (\text{NOT.AWARE.OF } (\beta), (s_{p1})))))$

φ_4 $(s^{intend\text{-}\alpha} \vDash ((\text{WANT } (\alpha), (s^{aware.of\text{-}\beta\text{-}sp1})) \wedge (s^{aware.of\text{-}\beta\text{-}sp1} \vDash (\text{AWARE } (\beta), (s_{p1})))))$

7. See Gärtner (2002) and Meinunger (2004) on embedded declarative root clauses.

ii. $(\exists s^{pass1'}.\ s^{pass1'} \vDash (\exists s^{utt\text{-}\alpha\text{-}P2}\ \exists s_{p3}\ \exists s^{know\text{-}\alpha\text{-}sp4}\ \exists s_{p4}\ \exists s^{bel\text{-}\alpha\text{-}sp5}\ \exists s^{p5}\ \exists s^{intend\text{-}\alpha} \Diamond \exists s^{aware.of\text{-}\beta\text{-}sp4}.\ (\phi_1' \wedge \varphi_2' \wedge \phi_3' \wedge \phi_4' \wedge \varphi_5')))$

ϕ_1' $(s^{utt\text{-}\alpha\text{-}P2} \vDash (\text{UTTER}\ (\alpha), (\lambda s_{bel}.\ (s_{bel} \vDash ((\text{believe}\ (\text{anna}), (s_{p3})) \wedge (s_{p3} \vDash (\exists s_{come}.\ \langle s_{come}, \lambda s.\ s \vDash (\text{come}\ (\text{hans}))\rangle)))))))$

ϕ_2' $(s^{know\text{-}\alpha\text{-}sp4} \vDash ((\text{KNOW}\ (\alpha), (s_{p4})) \wedge (s_{p4} \vDash [_{pres}\ \exists s_{bel}.\ s_{bel} \vDash (\text{believe}\ (\text{anna}), (s_{p3}))]))$

φ_3' $(s^{bel\text{-}\alpha\text{-}sp5} \vDash ((\text{BELIEVE}\ (\alpha), (s^{p5})) \wedge (s^{p5} \vDash (\exists s^{not.aware.of\text{-}\beta\text{-}sp4}.\ s^{not.aware.of\text{-}\beta\text{-}sp4} \vDash (\text{NOT.AWARE.OF}\ (\beta), (s_{p4})))))$

φ_4' $(s^{intend\text{-}\alpha} \vDash ((\text{WANT}\ (\alpha), (s^{aware.of\text{-}\beta\text{-}sp4})) \wedge (s^{aware.of\text{-}\beta\text{-}sp4} \vDash (\text{AWARE.OF}\ (\beta), (s_{p4}))))$

Since the embedded root declarative is an assertoric speech act providing φ_3 and φ_4, the propositional situation s_{p1} or s_{p3}, respectively, must be an update of the Common Ground. A construction with an embedded *dass*-clause does not, however, provide φ_3 and φ_4. Therefore it is not necessarily an update.

If the matrix predicate *believe* is negated, as in (18b), it cannot override the default predicate KNOW. If it did, it would be a contradiction. Since factive predicates, as in (18c), and volitional ones, as in (18d), are related to propositions which are presupposed to be true, i.e. which are not in question, they cannot override the predicate KNOW which focuses on a proposition which is in question.[8]

3. Syntax and semantics of independent *dass*-clauses

We have shown that independent *dass*-clauses characterize a situation but do not denote it. But why do we interpret that such a situation exists and what enables us to locate this situation in a specific world? Can we do this because there is, in fact, a silent syntactic structure that contributes to this interpretation (*ellipsis approach*)? Or is there, rather, an algorithm at the interface between Grammar and interpretation, as Stainton (2004) suggests for NP and PP fragments that reconstructs propositions (*algorithm approach*)? If there is such a silent syntactic structure, how is it constituted? Can it consist of fully specified lexical material that has no phonological content as Merchant (2004) suggests? It cannot, at least as far as solitaires

are concerned. It would be impossible to recover what the lexical material would be. What we are interested in now is whether there are empirical arguments that help to decide if independent *dass*-clauses are fragments or sententials, to use Stainton's (2004) notion, or whether they are the ellipsis of a matrix verb clause.

As for ellipsis, we suggest that it pertains when the sound pattern corresponds to what is syntactically a more complete structure. This implies that the syntactic strucure contains phonologically empty categories. The latter are not specified by any clause internal syntactic material as, for instance, traces or copies with deleted phonological content, respectively, are. Clear cases of ellipsis are gapping, VP-ellipsis, sluicing, and right node raising, to name only the most common ellipsis types – cf. Winkler & Schwabe (2003). A sound pattern corresponds to what is syntactically more complete, if the given material needs syntactically silent constituents to be syntactically licensed – cf. Lobeck (1995). As for our notion of syntactic licensing, we suggest that a constituent is licensed syntactically if its syntactic features are interpreted syntactically.

3.1. *Dass*-clauses as answer acts

As for *dass*-clauses that are used as answer acts, it is obvious that their grammatically determined structure is not complete with respect to their use. On the one hand, they are a propositional predicate that is an argument of a matrix predicate – cf. (20i). And we have learned that this semantic object cannot be the argument of ASSERT. On the other, they function as an answer speech act – cf. (20ii). Congruent answer speech acts are assertions in that they introduce a propositional situation and determine that the proposition which holds in this situation must be true. How, then, can it be the *dass*-clause answer – see (20i) – that does not have the syntax and semantics of an assertion can be interpreted as an assertion with the propositional content 'anna believes that hans is coming' – cf. (20ii)?

(20) Q: *Was glaubt Anna?*
'What does Anna believe?'
A: *Dass Hans kommt.*
'That Hans is coming.'
i. $\lambda M.\ M\ (\lambda s.\ s \vDash$ (come (hans))

ii. $\exists s^{pass}.s^{pass} \vDash (\exists s_{bel}\, \exists s_{p1}.$ ASSERT $(s_{bel} \vDash$ ((believe (anna), $(s_{p1}))$
$\wedge (s_{p1} \vDash (\exists s_1. \langle s_1, \lambda s.\, s \vDash$ (come (hans)))))))

The claim that the answer act is in fact an assertion of the proposition 'anna believes hans is coming' can be confirmed by the observation that only the full answer can be the background of a polarity question which can follow the constituent question – cf. (4A).

The fact that *dass*-clause answer acts are assertions does not necessarily mean they are elliptical with respect to their syntactic structure. Recall that ellipsis is given when the sound pattern corresponds to what is syntactically a more complete structure, that this is the case if the given material needs to be syntactically licensed, and that a constituent is licensed syntactically if its syntactic features are checked syntactically. As far as independently used *dass*-clauses are concerned, we are confronted with the question as to whether they need to be licensed syntactically. If not, we could adopt an algorithm that, operating at the interface between semantics and pragmatics, construes a proposition out of the given semantic material.

There is some empirical evidence to back up the ellipsis approach. We submit that the <+d>-feature of the *dass*-complement corresponds to a case feature of an NP to a certain extent, in that it indicates dependency – cf. (21). Like case features, the <+d>-feature needs to be checked by syntactic agreement, i.e. the *dass*-clause must be licensed syntactically. It follows that there must be at least a minimum of syntactic structure that enables this feature checking.

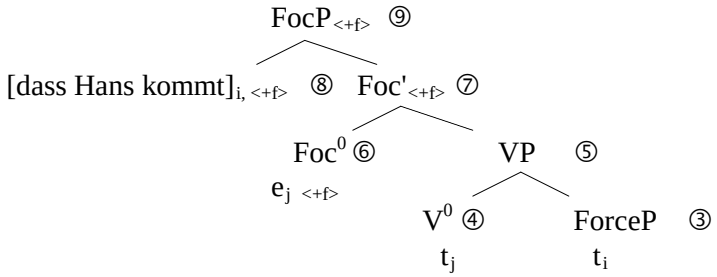
(21) Q: *Was glaubt Hans*?
What does Hans believe
A: *Eine ziemlich dumme Behauptung.*
'A rather stupid assertion.'

The idea that an independently used complement clause is part of a more complex syntactic and semantic structure than indicated phonologically is unescapable if we take into account the fact that adverbials can precede the complement clause. If we choose not to assume a special grammar for ellipsis, these adverbials need a syntactic position. Suppose it were in the left periphery of the matrix clause.

(22) a. Q: *Was glaubt Anna*?
What does Anna believe
b. A: *Hoffentlich, dass Hans kommt.*
'Hopefully that Hans is coming.'

And if we accept that independently used *dass*-clauses are focused constituents which are located in a special focus position, we need an additional projection in the matrix clause, a focus projection:

(23)



As Merchant (2004) shows, there are further arguments that support the ellipsis approach, such as *connectivity effects*, as in (24a), *preposition stranding*, as in (24b), *island effects* as in (24c), *complementizer deletion filter* as in (24d), and *polarity items*, as in (24e). This evidence relates to constituents that are not clauses. Since *dass*-clauses are, however, constituents as well, Merchant's arguments can be used to substantiate the ellipsis approach.

(24) a. Q: Where is he_2 staying?
A: In John's$_{*2/1}$ appartment.
b. Q: Who was Peter talking with?
A: Mary.
c. Q: Did Ben leave the party because ABBY wouldn't dance with him?
A: *No, BETH.
d. Q: What does no-one believe?
A. #(That) I'm taller than I really am.
A'. No-one believes (that) I'm taller than I really am.
e. Q: What didn't Mary read?
A: Anything.

In agreement with Merchant (2001), we submit that categories can be left empty if they are c-commanded by a constituent that is in a focus position as in (23). The semantics of the empty category must be given by the context, or to use Merchant's terms, it must be e-*given*.[9] The difference between Merchant's and our approach is, however, that he generates a syntactic structure which is fully specified semantically although the e-*given* material is not phonologically pronounced while we generate a minimal syntactic strucuture with phonologically empty and semantically underspecified constituents. As will be shown below, our approach takes better account of the ellipsis in sluicing and solitaires.

When structures like (23) or (25A), respectively, are mapped onto their semantic form, it is obvious that the semantics of their syntactically empty V^0 is not provided by the verb-final clause itself. The semantic form of the silent matrix predicate is provided linguistically, by the preceding question, as in (25).

(25) Q: *Was glaubt Anna?*
'What does Anna believe?'
④ $\lambda P\, \lambda s_{bel\text{-}anna}\, s_{bel\text{-}anna} \vDash$ ((believe (anna), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1 \vDash$ ($\langle s_1, P\rangle$))))
A: *Dass Hans kommt.*
'That Hans is coming.'

Following Krifka (2001), we regard *wh*-questions as functions from the set of answers into the set of propositional predicates. If the variable ③ left behind by the focus-moved answer, i.e. the meaning of the *dass*-clause, is applied to the copied semantics ④, the propositional predicate ⑤ results.

ForceP: ③ $\lambda M\, .\, M\,(V)$
$V^0_{matr.}$: ④ $\lambda P\, \lambda s_{bel\text{-}anna}.\, s_{bel\text{-}anna} \vDash$ ((believe (anna), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1 \vDash$ ($\langle s_1, P\rangle$))))
$VP_{matr.}$: ⑤ $\lambda s_{bel\text{-}anna}.\, s_{bel\text{-}anna} \vDash$ ((believe (anna), (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1 \vDash$ ($\langle s_1, V\rangle$))))

8. E-*GIVEN* means that they must be contained in E that has a contextually given antecedent A such that A entails E and E entails A.

As shown in ⑥, the semantic form of Foc^0 introduces a template for a structured propositional predicate consisting of the variable *B* for the background part and the variable *F* for the focus part.

$Foc^0_{matr.}$: ⑥ $\lambda B\, \lambda F.\, \langle F, \lambda Q.\, \langle Q, \lambda V.\, B\rangle\rangle$

If ⑥ is applied onto the background ⑤, we derive ⑦, the semantics of the matrix Foc'.

$Foc'_{matr.}$: ⑦ $\lambda F.\, \langle F, \lambda Q.\, \langle Q, \lambda V.\, \lambda s_{bel\text{-}anna}.\, s_{bel\text{-}anna} \vDash ((\text{believe}\ (\text{anna}), (s_{p1})) \wedge (s_{p1} \vDash (\exists s_1 \vDash (\langle s_1, V\rangle)))))\rangle\rangle$

The application of ⑦ onto ⑧, the semantics of the moved *dass*-clause, results in the propositional predicate ⑨ which is structured with respect to information structure.

$SpecFoc_{matr.}$: ⑧ $\lambda M\, .\, M\, (\lambda s.\, s \vDash (\text{come}\ (\text{hans})))$

$FocP_{matr.}$: ⑨ $\langle \lambda M\, .\, M\, (\lambda s.\, s \vDash (\text{come}\ (\text{hans}))), \lambda Q.\, \langle Q, \lambda V.\, \lambda s_{bel\text{-}anna}.\, s_{bel\text{-}anna} \vDash ((\text{believe}\ (\text{anna}), (s_{p1})) \wedge (s_{p1} \vDash (\exists s_1 \vDash (\langle s_1, V\rangle)))))\rangle\rangle$

Since the illocutionary conditions of the preceding root interrogative determine that the answer act is an assertion (cf. Schwabe t.a.), it follows that ASSERT is applied to ⑨, such that the conceptual proposition ⑩ results.

⑩ $\exists s^{pass}\, .\, s^{pass} \vDash (\exists s_1.\ \text{ASSERT}\ (\langle s_1, \langle \lambda M\, .\, M\, (\lambda s.\, s \vDash (\text{come}\ (\text{hans}))), \lambda Q.\, \langle Q, \lambda V.\, \lambda s_{bel\text{-}anna}.\, s_{bel\text{-}anna} \vDash ((\text{believe}\ (\text{anna}), (s_{p1})) \wedge (s_{p1} \vDash (\exists s_1 \vDash (\langle s_1, V\rangle)))))\rangle\rangle))$

To sum up so far, we have shown that *dass*-clauses, when used as answer acts, are actually sentences that consist of a matrix and a complement clause. This ellipsis approach was supported by empirical evidence so that complement clauses need syntactic projections where they can check both their dependency and focus features and locate adverbials and particles. As far as the ellipsis appoach is concerned, we have confirmed Merchant's (2004) proposal. We did, however, deviate from his theory when stating that elliptical structures are not a result of deletion, but are generated with empty phonological and underspecified semantic categories. We submitted that there is always as much syntactic structure as is necessary to license

the remnants. This approach has several advantages, the first relating to sluicing. Unlike the deletion approach suggested by Merchant (2004) and Romero (2003), our non-deletion approach does not require copying the whole preceding proposition – cf. (26) and (27).

(26) a. They want someone who speaks a Balkan language, but I cannot tell you which one$_i$ ~~they want someone who speaks t$_i$~~.
b. *They want someone who speaks a Balkan language, but I cannot tell you which one$_i$ they want someone who speaks t$_i$.

(27) [They want someone who speaks a Balkan language, but I cannot tell [you which one]$_i$ ... [$_{VP}$ t$_i$ [$_V{}^0$ e]]]

Our approach allows a syntactic structure without a relative clause that would be a problem for the wh-extraction as (26b) shows – cf. Schwabe (2003). So we need not concern ourselves with the question as to why wh-extraction out of wh-islands is possible with respect to ellipsis but not to non-ellipsis. And considering solitaires, what could be copied to derive the semantic content of the missing material? As we will be shown in the next section, our non-deletion approach can provide an answer to this question.

3.2 *Dass*-clauses as solitaires

Two approaches suggest themselves for *dass*-solitaires,: the ellipsis-approach and the non-ellipsis approach. The latter is suggested by Reis (1985), Meibauer (1989), Brandt et al. (1992), Truckenbrodt (2004), and Stainton (2004). According to these authors, *dass*-solitaires, like interrogative ones, are subsententials. This means that there is no syntactic structure for the matrix clause, i.e. in our terms, the Grammar outputs a semantic form that represents a set of situations. According to Stainton, there is an algorithm which transforms this non-propositional semantic form into a propositional form. In our framework, this would mean that this propositional form contained a matrix predicate with a underspecified semantic form. The content of the propositional form and the pragmatic context determine the illocutionary function of the expression.

Referring, for instance, to Reis (1985), Truckenbrodt (2004) discussing interrogative solitaires argues that i) ellipsis is not licensed since the deleted material cannot be recovered by the linguistic material given by the

linguistic context; ii) solitaire interrogative V-final clauses have an interrogative intonation, whereas embedded interrogative V-final clauses do not; iii) interrogative solitaire are marked without the particle *wohl* whereas embedded verb-final interrogatives are marked with this particle:

(28) a. ?*Ich frage mich, wohin sie wohl gegangen ist.*
I ask myself where to she PART gone is
'I wonder where the heck she's gone to.'
b. *Wohin sie* ?(*wohl*) *gegangen ist?*
where to she PART gone is

And iv) he objects that the conjunction *und* (*and*) can only precede interrogative solitaires, but not embedded V-final clauses.

(29) a. Q: *Hast du Hans gesehen?*
'Have you seen Hans?'
A: Und OB ich ihn gesehen habe!
and whether I him seen have
'Sure I saw him!'
b. A': *Anna fragt, und OB/WIE ich ihn gesehen habe.
Anna asks and whether /howI him seen have

In rebuttal of his first argument: suppose solitaires, like complement clause answers, are ellipses since they exhibit a dependency feature that indicates a matrix predicate variable which is not specified by any lexical material given by the utterance itself. They are thus similar to fragmentary utterances, like the Greek one in (30a), where the case of the DP must be explained – cf. Merchant (2004) and Schwabe (1994). The same holds true for the polarity item in (30b) – cf. Wilder (1995).

(30) a. *(Enan) kafe (parakalo)!*
a coffee.ACC please
'A coffee please!'
b. Any problems?

Merchant supposes that ellipsis as in (31) is deletion of <*do it*>.

(31) [*Seeing a small child jumping and reaching for a set of paints*]
After dinner, okay?

It follows from Schwabe (1994), however, that the assumption of *do it* deletion is, at the very least, problematic since it is not clear what the subject of *do* is if we neglect the context. And it is not clear what verbal mood the deleted *do* has. Is it imperative or indicative? We submit, instead, that fragmentary expressions, similar to *dass*-clause answers, have as much syntactic structure as necessary to license the fragments. The minimal syntactic structure contains an empty V^0 which is, viewed semantically, a variable that is specified by non-linguistic context. Since the empty category is not the result of deletion, the non-recoverability argument can no longer be valid.

Turning to the second objection: solitaire interrogative V-final clauses are said to exhibit interrogative intonation, whereas embedded interrogative V-final clauses do not.

(32) a. LH*
Ob es noch gut ist?
'Whether it is still good?'

b. HL*
Ich frage mich, ob es noch in Ordnung ist.
'I wonder if it's still in order.'

We can reject this objection in arguing rising intonation is determined by the <+w> feature in C^0 and by the absence of a wh-phrase in SpecC. Both facts lead to the phonological interpretation 'LH*', provided this interpretation is not overridden by any other phonological interpretion. The latter would occur if there were a matrix clause exhibiting assertoric illocutionary force, as is the case with respect to (32b).

Regarding the third objection that interrogative solitaires are unmarked with the particle *wohl*, whereas embedded verb-final interrogatives are marked with this particle, we reject it by drawing attention to the following: the particle *wohl* determines, among other things, that there exists a question and a positive doxastic attitude towards an propositional answer. Therefore focusing on a question with an explicit interrogative matrix predicate seems to be inappropriate. If, on the other hand, the matrix clause is defocused, as is the case with respect to interrogative complement answers or interrogative solitaires, the use of *wohl* is not marked. It also is unmarked if not the question but the question situation is salient as in *Anna*

hat sich immer wieder gefragt, wohin Hans wohl gegangen ist. (*Anna asked herself again and again where Hans PART has gone to*.)

The fourth objection concerns the conjunction *und* (*and*) which can be combined with *ob* (*if*) or *wie* (*how*) only if the complement clause is used as a solitaire – cf. (29A). This objection can be overcome if we take into account that there are constructions like (33) where the complement clause is moved to a focus position such that the conjunction conjoins a contextually given proposition with an informationally structured proposition where the background constituent can be elliptical.

(33) $[_{ConjP}$ und $[_{CP1}$ $[_{CP2}$ OB ich ihn sah$]_i$ $[_{C1'}$ ist t_i außer Frage)]]]
and whether I him saw is beyond question

As to the syntactic analysis of solitaires, we have rebutted four of Truckenbrodt's (2004) objections against the ellipsis approach and we are now able to present two arguments in favor of it. Firstly, since particles and adverbials can also precede the *dass*-solitaires, they need a structural position.

(34) *Nicht, dass er jetzt an die Ostsee fährt!*
Not that he now to the Baltic drives
'Not that he drives to the Baltic now!'

Secondly, consider sentences like (35), where the VP is left dislocated. If we were critics of the ellipsis hypothesis, we should find a position for the left-dislocated VP. Suppose it were in the complement clause, as in (35ii).

(35) i. *Einen Porsche zu kaufen, dass jeder das will!*
a Porsche to buy that everyone this wants
'That everybody wants to buy a Porsche!'
ii. $[_{CP}$ [einen Porsche zu kaufen$]_i$ $[_{C'}$ dass [jeder das$_i$ will]]

If (35ii) were an adequate representation, the left dislocated VP should be embeddable under a matrix predicate. But this is not the case:

(36) **Ich wundere mich, einen Porsche zu kaufen, dass jeder das will.*
I'm surprised a Porsche to buy that everybody this wants

It is, however, possible to locate the VP at the left periphery of the matrix clause as in (37):

(37) *Einen Porsche zu kaufen, ich wundere mich, dass jeder das will.*
a Porsche to buy I am surprised that everybody this wants
'I'm surprised (that) everyone wants to buy a Porsche.'

Taking these data into account, we can conclude that expressions like (35) are ellipses with a syntactically silent matrix predicate:

(38) [einen Porsche zu kaufen]$_i$ ... [$_{FocP}$ [dass jeder das$_i$ will]$_j$ [$_{F'}$ ... t$_j$ [$_V{}^0$ e]]]

As to the syntactic representation of *dass*-solitaires, we submit that it does not differ from the representation of *dass*-complement answers – cf. (23). As (23) demonstrates, the syntactic structure contains an empty verbal element that licenses the remnant *dass*-solitaire. As for solitaires, the semantic form of this empty verbal element ④ contains the existentially bound variable *M* which is specified conceptually by a predicate inferred from the context. With this variable, the semantic structure of the solitaire is underspecified – cf. (39⑨).

(39) *Dass Hans kommt*
that Hans comes

ForceP:	③	$\lambda M\,.\,M\,(V)$
$V^0_{matr.:}$	④	$\lambda V\,\exists M.\,M\,(V)$
$VP_{matr.:}$	⑤	$\exists M.\,M\,(V)$
$Foc^0_{matr.:}$	⑥	$\lambda B\,\lambda F.\,\langle F, \lambda Q.\,\langle Q, \lambda V.\,B\rangle\rangle$
$Foc'_{matr.:}$	⑦	$\lambda F.\,\langle F, \lambda Q.\,\langle Q, \lambda V.\,\exists M.\,M\,(V)\rangle\rangle$
$SpecFoc_{matr.:}$	⑧	$\lambda M\,.\,M\,(\lambda s.\,s \vDash (\text{come (hans)}))$
$FocP_{matr.:}$	⑨	$\langle\lambda M\,.\,M\,(\lambda s.\,s \vDash (\text{come (hans)})), \lambda Q.\,\langle Q, \lambda V.\,\exists M.\,M\,(V)\rangle\rangle$

As for *dass*-solitaires like (39), the situationally given predicate can be an EMOTIVE one (40a), so that the expression can be interpreted as an *exclamative* act, or a VOLITIONAL one (40b) determining a *command*.

(40) a. *Dass Hans kommt!*
that Hans comes
'So, Hans is coming!'
b. *Dass Du jetzt an die Ostsee fährst!*

That you now to the Baltic drive
'So drive to the Baltic now!'

Assuming contexts where the predicate inserted for *M* in (39⑨) is either EMOTIVE (41i) or VOLITIONAL (42ii), both focusing on a non-propositional situation s_1, and being related to propositions that are true in the current or anticipated actual world.

(41) i. $\langle\lambda M\,.\,M(\lambda s.\ s \vDash$ (come (hans))), $\lambda Q.\,\langle Q, \lambda V.\,\exists s_1\,\exists s_{p1}\,\Box s^{emo}.$ $s^{emo} \vDash$ ((IS.AMAZED (α), (s_1)) $\wedge$ ($s_{p1} \vDash$ [$_{pres}\langle s_1, V\rangle$]))$\rangle\rangle$

ii. $\langle\lambda M\,.\,M\,(\lambda s.\ s \vDash$ (Baltic.drive (β)), $\lambda Q.\,\langle Q, \lambda V.\,\exists s_{p1}\,\exists s_1$ $\exists s^{want}.\ s^{want} \vDash$ ((WANT (α), (s_1)) $\wedge$ ($s_{p1} \vDash$ [$_{proj}\langle s_1, V\rangle$]))$\rangle\rangle$

The contextually given matrix predicate provides a situation s_1 so that the propositional predicate given by the semantics of the *dass*-solitaire can be applied to this situation. EMOTIVE predicates are presuppositional while VOLITIONAL ones are projective, i.e. their s^i-arguments are related to propositions that are true in the present or anticipated real world. The situation they denote is thus easy to access. The person who is amazed or wants something is the speaker, since he is the most salient person. The situations s^{emo} and s^{want} characterized by the AMAZE- and WANT-predicate are given by the actual context as well and thus easily accessible for the addressee. This last observation explains why *dass*-solitaires cannot be used as assertions, namely because the condition φ_3 of an assertion – the agent α believes that the addressee β is not aware of the propositional situation s_{p1} – is not satisfied (cf. (11)). It is not satisfied because s_{p1} is obvious from the actual context.

If the matrix clause contains a negation particle, which takes a proposition as in (42) and (43), TRUE or VOLITIONAL predicates can be inserted. Note that the proposition (42i) implies (42ii) and that both imply (42iii).

(42) *Nicht dass du gerade schön singst!*
Not that you exactly well sing
'You don't exactly sing well!'

i. $\exists s_{p1} \neg \exists s^{true}.\ s^{true} \vDash$ ((TRUE (s_{p1})) $\wedge$ ($s_{p1} \vDash$ ($\exists s_1.\ s_1 \vDash$ (sing.well (β)))))

ii. $\neg\,\exists s_1.\ s_1 \vDash$ (sing.well (β))

iii. $\exists s_2.\ s_2 \vDash$ (sing.not.well (β))

A TRUE matrix predicate can only be inserted if the matrix clause contains negation. A VOLITIONAL predicate can be inserted independent of the matrix clause contains negation or not – cf. (41ii) and (43).

(43) *Nicht dass du jetzt an die Ostsee fährst!*
Not that you now to the Baltic drive
'Don't drive to the Baltic now!'
i. $\exists s_{p1}\, \exists s_1 \neg \exists s_{want1}.\ s_{want1} \vDash ((\text{WANT}\ (\alpha), (s_1)) \wedge (s_{p1} \vDash [_{proj} \langle s_1, \lambda s.\ s \vDash (\text{Baltic.drive}\ (\beta))\rangle]))$
ii. $\exists s_{p2}\, \exists s_2\, \exists s_{want2}.\ s_{want2} \vDash ((\text{WANT}\ (\alpha), (s_2)) \wedge (s_{p2} \vDash [_{proj} \langle s_2, \lambda s.\ s \vDash (\text{not.Baltic.drive}\ (\beta))\rangle]))$

(43i) conversationally implicates (43ii) with s_2 the agent wants to be realized. Unlike TRUE and VOLITIONAL predicates, silent EMOTIVE predicates permit neither the negation in the matrix clause nor its floating into the complement clause. The reason for the latter might be that EMOTIVE predicates are presuppositional and thus exclude the complementary s_{p2} and s_{p1}.

4. Conclusion

The starting point of this paper was the question as to why *dass*-solitaires are not semantically equivalent to corresponding root declaratives. We have shown that a root declarative contributes to creating a proposition in that its semantics is regarded as a propositional predicate which is taken by the illocutionary functor ASSERT, which in its turn transforms it into a complex conceptual assertoric proposition containing the propositional situation s_p the clause represents. ASSERT can only be attached if the clause is marked by the syntactic dependency feature <-d>. A *dass*-clause, on the other hand, is regarded as a propositional predicate that is an argument of a matrix predicate variable which is contributed by the dependency feature <+d>. If the *dass*-clause is used canonically, its semantics applies to the matrix predicate. If it is used non-canonically, as is the case with respect to *dass*-solitaires, its semantics applies to a conceptually given predicate.

We have presented some evidence to show that *dass*-complement answers and *dass*-solitaires are ellipses, with a silent matrix clause structure which must be e-GIVEN in the sense of Merchant (2004). The missing matrix predicate of *dass*-complement answers and their illocutionary function is provided by a preceding question. The semantics of the *dass*-solitaire

complement, on the other hand, is applied to a predicate that is provided by the non-linguistic context. The type of predicate is not arbitrary, but depends on the content of the *dass*-clause as well as on the semantics of the elliptical matrix clause. If the latter contains a negation particle, one can only insert a VOLITIONAL or TRUE predicate. If it does not contain negation, one can only insert a VOLITIONAL or EMOTIVE predicate. The latter are s_i-predicates, which focus on a non-propositional situation. The illocutionary function of a *dass*-solitaire is not determined syntactically, but by its ordinary meaning and the non-linguistic context. Since matrix predicates provided by the situative context are related to propositions which are true in the present or anticipated real world, *dass*-solitaires cannot update the Common Ground and thus be used as assertions. A *dass*-solitaire with negation and a TRUE predicate contributes to constituting a *denial* act, a *dass*-solitaire with a VOLITIONAL predicate determines a *directive* act, and solitaires with EMOTIVE predicates always determine *exclamative* acts. The approach outlined in this paper can account for the observation that *dass*-solitaires select precisely those predicates which, if expressed linguistically, do not permit German root declaratives to be embedded.

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