A semantics for complement fulfilling conditionals with glad¹

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Abstract. This paper argues that complement fulfilling conditionals with *glad* are true arguments of the corresponding predicates. For this to be possible, certain standard assumptions about *glad* have to be revised. I argue that (a) *glad* is not a factive predicate by itself; and (b) that it doesn't take propositions as its semantic argument. The main idea is based on an idea implicit in Heim (1992) that can be paraphrased as follows: "There is a hidden 'because'-clause in every factive desire report". The resulting picture allows for a unified account of complement fulfilling and hidden conditionals in desire reports.

Keywords: conditionals, desire reports, factivity, emotive factives.

1. Introduction

The topic of this paper are sentences in which *glad* occurs in a syntactic construction with an *if*-clause as in (1a). At first sight, these sentences look like regular conditionals, compare (1b).

- (1) a. Mary would be glad if she won the lottery.
 - b. Mary would be rich if she won the lottery.

2. Williams' account of CFCs

Williams (1974) was the first to note that there is something special about sentences like (1a). His assessment of the phenomenon is based on the assumption that *glad* is a factive predicate that obligatorily takes a sentential argument of a propositional type. He illustrates this by pointing out that *glad* cannot be used predicatively or attributively – in contrast to *happy*.

- (2) a. I am { happy / *glad }.
 - b. I am a { happy / *glad } person.

To visualize the difference, we could represent (1a) in contrast to (1b) with a gap, as in (3a).

- (3) a. [Mary would be glad ____][if she won the lottery]
 - b. [Mary would be rich][if she won the lottery]

Williams assumes that the open slot in (3a) is filled by the proposition made salient by the *if*-clause, leading to an interpretation that corresponds to the structure in (4).

(4) [Mary would be glad she won the lottery][if she won the lottery]

For Williams (1974), the *if*-clause plays a double role: It not only specifies the condition under which "gladness" holds. It also (somehow) fulfills the complement requirement of *glad* and thus specifies the "subject matter of emotion" (Pesetsky (1991)), what the gladness is all *about*. In that sense, the conditional is "complement fulfilling"². I want to call the reading corresponding to Williams' analysis of complement fulfilling conditionals (=CFCs) sketched

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²Pesetsky (1991) attributes this term to Williams.

in (4) **"conditional fact reading"**; or more specifically "counterfactual fact reading" in case the conditional is a counterfactual.

With *happy*, on the other hand, the subject matter of happiness can stay implicit, (2a); but it can also be made explicit by use of a *that*-clause, (5).

(5) Mary is happy that she won the lottery.

Accordingly, the *if*-clause in (6) can have two readings according to Williams: a reading that Williams calls "logical reading" (= as in a regular conditional), (7a); and a reading on which the conditional is "complement fulfilling", (7b).

- (6) Mary would be happy if she won the lottery.
- a. [Mary would be happy_{about something}][if she won the lottery]
 b. [Mary would be happy she won the lottery][if she won the lottery]

Note that on the logical reading the subject matter of happiness could be that Mary won the lottery; but it doesn't have to.

Williams analysis of CFCs is beautiful: (a) It explains the outer appearance of conditionals since CFCs *are* conditionals on his account, although special ones. (b) It allows to keep the standard analysis of *glad* as an (emotive) factive predicate that takes a proposition as its argument and presupposes its truth in the world of evaluation. (c) It explains the vanishing of factivity as a textbook case of filtering in conditionals. The only thing needed to make it work is a story for the copying of the antecedent proposition. The details are provided by Pesetsky (1991)'s *If Copying Rule*.

What I argue for in this paper is that although Williams is right about the fact that *if*-clauses as in (1a) are complement fulfilling, they are complement fulfilling in an even more direct way than he thought. With respect to the representation in (3a) one can say that CFCs directly fill the empty argument slot and not indirectly via a rule that copies the proposition made salient by the *if*-clauses. Or put differently: If the *that*-complements of *glad* "bear the θ -role Subject Matter of Emotion" (Pesetsky (1991)), so do the *if*-clauses. For this to be possible, certain standard assumptions about *glad* have to be revised. I argue that (a) *glad* is not a factive predicate by itself; and (b) that it doesn't take propositions as its semantic argument.

3. Arguments against Williams' analysis

A semantic interpretation corresponding to the conditional fact reading predicts counterfactual "gladness" with respect to facts, assuming that *glad*, apart from the syntactic differences, has a similar interpretation as *happy*. At LF, the scope relations are as follows:

(8) [... glad [(that) φ]][would [if φ]]

In recent literature, it has been pointed out that an interpretation that assumes such a structure makes the wrong predictions. (Longenbaugh, 2019: p. 128) characterizes the problem as follows: "The non-logical-*if* construction reports desires/attitudes in the actual world concerning counterfactual situations" – and not counterfactual desires with respect to facts. Similar doubts have been voiced in Grosz (2012); Kaufmann (2017). This section brings together old and new evidence against an analysis of CFCs resulting in truth conditions corresponding to the

conditional fact reading.

3.1. Unshifted evaluation of glad

As mentioned above, according to the counterfactual fact reading the predicate *glad* should be interpreted in the semantic scope of the conditional operator and therefore receive a "shifted" interpretation. The prediction is therefore that it should not be in conflict with a denial of an "actual" wish, (9a)/(10a). We find instead that in combination with a denial of an "actual" wish, we derive a contradiction, (9b)/(10b). This was first pointed out by Grosz (2012) for the construction with the adjective *nice*, (9).³

- (9) a. It's not the case that I want John to be here, but if he were here, it would be nice that he was here.
 - b. #It's not the case that I want John to be here, but it would be nice if he was here.

We get the same effect with I would be glad.

- (10) a. It's not the case that I want John to be here, but if he were here, I would be glad that he was here.
 - b. #It's not the case that I want John to be here, but I would be glad if he was here.

Another way to make the same point is as follows. The argument is based on two premises: First, the sentence in (11a) has a sensible interpretation that is false against the background of the famous novel "The Strange Case of Dr Jekyll and Mr Hyde".⁴ It is compatible with a context in which Dr Jekyll is (currently) not Mr Hyde and it reports that Dr Jekyll wants to be Mr Hyde. The second premise is that the sentence in (11b) can be used to paraphrase the intended meaning of (11a). (11b) on this interpretation is therefore false, too.

- (11) a. Dr Jekyll would be glad to be Mr Hyde.
 - b. Dr Jekyll would be glad if he was Mr Hyde.

If the sentence in (11b) had a conditional-fact reading, it could be paraphrased by (12).

(12) Dr Jekyll would be glad that he is Mr Hyde if he was Mr Hyde.

I'm not fully certain what to make of the sentence in (12). But if it makes sense to say something like (12), it is most certainly true against the background of the novel. What is more: It doesn't imply that Dr Jekyll wants to be Mr Hyde. This shows that there is a reading of (11b) that corresponds to (11a) and that is different from the conditional fact reading.

3.2. Filtering

Longenbaugh (2019) argues that if CFCs had a conditional fact reading it should be possible to filter a presupposition in the "consequent". This is not the case.

(13) Context: Mary has never held elected office there, but she is very popular in Georgia.a. If she represented Georgia in congress, her constituents would like it.

cf. Grosz (2012)

³The adjective *nice* is also discussed by Williams in the context of complement fulfilling conditionals.

⁴*Be* in (11) is to be understood in the sense of 'have turned into' (\approx stage level) and not in the sense of 'be identical to' (\approx individual level).

b. Her constituents would like #(it) if she represented Georgia in congress.

Longenbaugh (2019)

With respect to this example, the idea is that the DP *her constituents* introduces a presupposition that projects to the global context in the case of *like* without *it* (which requires the *if*-clause to be complement fulfilling) in (13b), while it is filtered in a sentence like (13a) that actually forces a conditional fact reading. Here again, we get the same effect with *would be glad* if evaluated against the same context.

(14) Context: Mary has never held elected office there, but she is very popular in Georgia.#Her constituents would be glad if she represented Georgia in congress.

3.3. Use conditions of conditionals

The use conditions of an *if*-clause in subjunctive mood in a construal with *glad* are belief-relativized in a similar way as the factivity on a factive interpretation with a *that*-clause:

- (15) Mary, who was under the illusion that it was Sunday, was glad that she could stay in bed. (Heim, 1992: p. 217, fn. 37): Klein 1975, as cited in Gazdar (1979: 122)
- (16) Today is Sunday. Mary, who is under the illusion that it is Monday, would be glad if she could stay in bed.

Another way to show this is (17). The sentence with the *if*-clause in subjunctive mood is slightly degraded. Nevertheless, it's the only possible way to talk about Peter's desires against this background using *glad*.

- (17) Mary is at home. Peter believes that Mary is NOT at home.
 - a. ?He would be glad if she was at home.
 - b. #He is glad (that) she is at home.

This is in complete analogy to the factive case.

- (18) Mary is not at home. Peter believes that Mary IS at home.
 - a. #He would be glad if she was at home.
 - b. ?He is glad (that) she is at home.

Note that since the conditional has widest scope according to the conditional fact reading, the use conditions associated with the *if*-clause on a counterfactual interpretation should exclude the use of (17a) against the conversational background given in (17).

3.4. De Re-interpretations of DPs in the *if*-clause

In a recent paper, Blumberg observes that a DP like *the person who robbed him* in a wish-report can receive an opaque interpretation relative to the belief-worlds of the attitude holder. In the scenario that Blumberg discusses Bill "believes that someone robbed him, and he feels that it would have been better if that person had never robbed anyone." (Blumberg, 2018: p. 531). Unbeknownst to Bill, the person who supposedly robbed him doesn't exist: He mistook the things his family left lying around the house as evidence for a robbery. Bumberg's point is: We

can report Bill's wishes without committing ourselves to the existence of a robber and without attributing a contradictory wish to Bill with a sentence like (19).

(19) Bill wishes that the person who robbed him had never robbed anyone. Blumberg (2018)

Blumberg takes this to show that the DP *the person who robbed him* is evaluated with respect to Bill's belief worlds, i.e., it has a *de credito*-interpretation.⁵ I take it that the same is true for the following sentence with *glad*.

(20) Bill would be glad if the person who robbed him had never robbed anyone.

As in Blumberg's original example, there doesn't have to be a person who robbed Bill except for in Bill's belief worlds.⁶

With a paraphrase in the sense of Williams, on the other hand, we are committed to there being a robber in the actual world.

(21) If <u>the person who robbed him</u> had never robbed anyone, Bill would be glad that the person who robbed him had never robbed anyone.

3.5. Iterim summary

The discussions in Grosz (2012) and Longenbaugh (2019) suggest that CFCs can never have a conditional fact reading but only a reading that one could call the "subject matter reading" or, as I will do in the case of desire predicates, the "desire object reading".⁷

What I argue for in the rest of the paper is that we can account for these readings if we assume that the corresponding *if*-clauses are true arguments of the predicates. In different words, CFCs are more complement fulfilling than Williams thought. They fulfill the complement requirement directly as true arguments and not indirectly via a copying rule that provides a suitable proposition.

An important conceptual aspect of this account is the assumption that predicates that allow CFCs don't have a result-state interpretation but an interpretation as desire predicates when combined with a CFC.^{8,9} This is also the assumption we find in Heim (1992) for *glad that*, as we will see below. This is worth mentioning since this is, I think, one of the main sources of confusion over the possible readings.¹⁰

⁵The expression "*de credito*" is used in Yanovich (2011).

⁶This argument loses its power if the DP could be analysed as "the person he believes to have robbed him" assuming, for example, some covert material in the DP. I assume that in this case the same would hold for Blumberg's original argument.

⁷This is not to say that the predicates that license CFCs can never have a conditional fact reading. As pointed out already by Pesetsky (1991), many of the predicates that license CFCs may allow for a construction where the conditional fact reading comes about mediated via a pro-form; for example, Longenbaugh (2019)'s (13a). Another way may be via an implicit or contextually provided argument, as suggested in (7a). For Pesetsky, these constructions don't involve CFCs in the relevant sense and this is what I am going to assume here, too.

⁸See also the discussion of Pesetsky (1991)'s semantic assumption in section 5.1

⁹Onea (2015) proposes a dispositional analysis of *bedauern* ('regret') and other predicates that combine with *wenn* ('if')-clauses in German in subjunctive mood.

¹⁰There is an explanation why a reading in the sense of Williams has a certain plausibility in the case of a desire object reading. The dispositional result-state is a normality inference of the desire interpretation: If you prefer cer-

4. The theory

Given the semantic evidence, a more promising structure than (8) (=conditional fact reading) would be [... glad [would [if φ]]]. This section spells out how we can make sense of this.

4.1. Heim's semantics of desire reports

For Heim (1992), *be glad*-reports are *desire reports*. Heim's analysis of desire reports is based on the intuition that there is "a hidden conditional in every desire report".

"The analysis of desire verbs I want to pursue here is sketched in Stalnaker (1984: 89): 'wanting something is preferring it to certain relevant alternatives, the relevant alternatives being those possibilities that the agent believes will be realized if he does not get what he wants.' An important feature of this analysis is that it sees a hidden conditional in every desire report. A little more explicitly, the leading intuition is that *John wants you to leave* means that *John thinks that if you leave he will be in a more desirable world than if you don't leave*." (Heim, 1992: p. 193)

As for wish and be glad she writes:

"I want to propose that *wish* and *be glad* have the same core semantics as *want*, but there is a difference that is analogous to that between indicative and subjunctive conditionals. [...] John thinks that if you leave he will be in a more desirable world than if you don't leave. If we try to construct similar paraphrases for sentences with *wish* and *be glad*, here is how they come out: *John wishes you were gone* means 'John thinks that if you were gone he would be in a more desirable world than he is in because you are not gone'. *John is glad you are gone* means 'John thinks that be cause you are gone he is in a more desirable world than he would be in if you were not gone.' The common pattern is apparent, and the differences are in the choice of indicative vs. subjunctive mood and of *if* vs. *because*."

The analysis that I propose tries to make explicit all the elements that go into Heim's proposal. The new contribution of this paper is to assign a new place to these elements in the compositional structure at the syntax-semantics interface. The next section presents the formal details.

4.2. Heim's semantics for want

There are three ingredients to the general form of desire reports on Heim's account. The first ingredient – that is at the core of every desire report – is a preference relation between possible worlds; cf. (Heim, 1992: p. 197):

$$\lambda w'. \ \lambda w''. \ w' <_{a,w} w''$$
 (w' <_{a,w} w'' reads: w' is more desirable to a in w than w'')

The second ingredient are the conditionals that flank the left and the right of this preference relation. I have highlightened them in the corresponding paraphrases:

tain conditions over others and these conditions come true, you are happy (given that under these conditions your preferences remain the same in the counterfactual situation, i.e., given that your preferences have a counterpart under the counterfactual circumstances).

- (22) a. John wants you to leave. \rightsquigarrow 'John thinks that <u>if you leave</u> he will be in a more desirable world than if you don't leave.'
 - b. John wishes you were gone. \sim 'John thinks that <u>if you were gone</u> he would be in a more desirable world than he is in because you are not gone.'
 - c. John is glad that you are gone. → 'John thinks that <u>because you are gone</u> he is in a more desirable world than he would be in <u>if you were not gone</u>.'

The differences between these conditionals (I include the 'because'-clauses in these paraphrases also under the label "conditional") is "in the choice of indicative vs. subjunctive mood and of *if* vs. *because*", as Heim points out. Since everything else stays the same, the differences in truth-conditions between these desire reports reduce to the hidden conditionals that go into the truth-conditions and their differences in choice of mood and complementizers.

Abstracting away for the moment from the difference related to mood and complementizer choice, the core contribution of all these conditionals is spelled out by Heim as follows:

(23) 'If φ , ψ ' is true in w iff every φ -world maximally similar to w is a ψ -world.

Given the definition (25) and the usual set theoretic conventions, she abbreviates:

(24) 'If
$$\varphi, \psi$$
' is true in w iff $\operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq \llbracket \psi \rrbracket$.

(25) $\operatorname{Sim}_{w}(p) =_{def} \{ w' \in W : w' \in p \text{ and } w' \text{ resembles } w \text{ no less than any other world in } p \}$

To make the general form more transparent, I make use of the following abbreviation:

(26) IF_w(
$$\llbracket \varphi \rrbracket$$
) =_{def} λq . Sim_w($\llbracket \varphi \rrbracket$) $\subseteq q$

Given this assumption, the general form integrating the second ingredient can be represented as follows: $\operatorname{IF}_{w^*}(\llbracket \varphi \rrbracket)(\lambda w'. \operatorname{IF}_{w^*}(W \setminus \llbracket \varphi \rrbracket)(\lambda w''. w' <_{a,w} w''))$

simplified (by notational convention):¹¹

$$\mathrm{IF}_{w^*}(\llbracket \varphi \rrbracket) <_{a,w} \mathrm{IF}_{w^*}(W \setminus \llbracket \varphi \rrbracket)$$

The third ingredient is sometimes referred to as "belief-parasitism" of desire reports in more recent literature. In the paraphrases, this ingredient is given by 'John thinks'. Here Heim's paraphrase is in a way misleading since it suggests that the "desire-comparative" is interpreted in the semantic scope of 'think', i.e., that the predicate 'is more desirable' in the informal paraphrase is evaluated with respect to the doxastic alternatives (as it usually is with the main predicate of a complement clause). But Heim's formal account makes it clear that what is relativized to the beliefs of the attitude holder are only the hidden conditionals (the worlds marked with * above) and not the preference predicate. Therefore we get:¹²

$$IF_{w'}(\llbracket \varphi \rrbracket) <_{a,w} IF_{w'}(W \setminus \llbracket \varphi \rrbracket),$$

for every $w' \in Dox_a(w)$

¹¹For any $w \in W$, $X \subseteq W$, $Y \subseteq W$, $X <_{a,w} Y$ iff $w' <_{a,w} w''$ for all $w' \in X$, $w'' \in Y$. (Heim, 1992: p. 197) ¹²Here is Heim's version of *want* for comparison:

⁽i) 'a wants ϕ ' is true in w iff for every $w' \in \text{Dox}_a(w)$: every ϕ -world maximally similar to w' is more desirable to a in w than any non- φ -world maximally similar to w'.

Given this general form, the differences corresponding to the paraphrases in (22) can be captured in agreement with Heim's assumption that the variation is due to the choice of mood and complementizers with the hidden conditionals under the following assumptions for the different conditional clauses:

(27) a.
$$\operatorname{IF}^{\operatorname{IND}}(\llbracket \varphi \rrbracket) = \lambda w. \ \lambda q. \ \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q$$
 indicative conditional
b. $\operatorname{IF}^{\operatorname{SUBJ}}(\llbracket \varphi \rrbracket) = \lambda w. \ \lambda q. \begin{cases} w \in W \setminus \llbracket \varphi \rrbracket \\ \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q \end{cases}$ indicative conditional
 $\operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q$ indicative conditional
(counterfactual use)
c. $\operatorname{BEC}^{\operatorname{IND}}(\llbracket \varphi \rrbracket) = \lambda w. \ \lambda q. \begin{cases} w \in \llbracket \varphi \rrbracket \\ \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q \end{cases}$ factive conditional

We get the following interpretations (following the informal paraphrases):

(28) a.
$$\llbracket \alpha \text{ wants } \varphi' \rrbracket = \lambda w. \operatorname{Sim}_{w'}(\llbracket \varphi \rrbracket) <_{\alpha,w} \operatorname{Sim}_{w'}(W \setminus \llbracket \varphi \rrbracket), \text{ for every } w' \in \operatorname{Dox}_{\alpha}(w)$$

= $\lambda w. \operatorname{IF}_{w'}^{\operatorname{IND}}(\llbracket \varphi \rrbracket) <_{a,w} \operatorname{IF}_{w'}^{\operatorname{IND}}(W \setminus \llbracket \varphi \rrbracket), \text{ for every } w' \in \operatorname{Dox}_{\alpha}(w)$

b.
$$\llbracket `\alpha \text{ wishes } \varphi` \rrbracket = \lambda w. \begin{cases} w' \in W \setminus \llbracket \varphi \rrbracket \\ \operatorname{Sim}_{w'}(\llbracket \varphi \rrbracket) <_{\alpha,w} w' \end{cases}$$
, for every $w' \in \operatorname{Dox}_{\alpha}(w)$
= $\lambda w. \operatorname{IF}^{\operatorname{SUBJ}}_{w'}(\llbracket \varphi \rrbracket) <_{a,w} \operatorname{BEC}^{\operatorname{IND}}_{w'}(W \setminus \llbracket \varphi \rrbracket)$, for every $w' \in \operatorname{Dox}_{\alpha}(w)$

c.
$$\llbracket \alpha \text{ glad that } \varphi' \rrbracket = \lambda w. \begin{cases} w' \in \llbracket \varphi \rrbracket \\ w' <_{\alpha,w} \operatorname{Sim}_{w'}(W \setminus \llbracket \varphi \rrbracket) \end{cases}$$
, for every $w' \in \operatorname{Dox}_{\alpha}(w)$
= $\lambda w. \operatorname{BEC}_{w'}^{\operatorname{IND}}(\llbracket \varphi \rrbracket) <_{a,w} \operatorname{IF}_{w'}^{\operatorname{SUBJ}}(W \setminus \llbracket \varphi \rrbracket)$, for every $w' \in \operatorname{Dox}_{\alpha}(w)$

The key insight to take away from this decompositional analysis of Heim is that although conditionals are involved in the truth conditions of desire reports, the evaluation of desirability takes place in the actual world.

4.3. Heim's semantics for glad

Heim discusses only the case of *be glad* when combined with a $C_{\emptyset}/that$ -clause. In analogy to her characterization of the main intuition of her analysis, one can characterize her leading intuition for factive *be glad* as follows:

The factivity of the construction is attributed to the hidden factive conditional whose use conditions are relativized to the doxastic alternatives (as embedded presuppositions under 'believe' usually are). In this sense, it reduces one kind of factivity – the factivity of certain emotive factives – to another kind of factivity – the factivity of certain adverbial clauses.¹³

¹³Direct evidence for the principled plausibility of this assumption comes from the fact that there are languages in which the emotive factivity that we find with predicates like *glad* in English, is expressed by combining a predicate with the meaning 'happy' with a causal clause. For example, the adjective *ureshii* ('happy') in Japanese does not only combine with conditional clauses, resulting in an interpretation that corresponds to CFCs, it also allows to express the factive interpretation that corresponds to English *I am glad that it is raining* by a constructions that

Apart from this, I want to highlight again – as discussed above – that on Heim's account *glad* is a desire predicate and doesn't lexically express a result-state of "gladness". The hidden 'because'-clause denotes the object of desire, or more precisely, the target of a desirability comparative.

4.4. A reformulation of Heim's semantics for glad

Although Heim herself is silent on the details of the logical form, her account is usually understood in a way that the factivity of the construction of *be glad* with a $C_{\emptyset}/that$ -clause is directly attributed to *be glad* itself; for example (Villalta, 2008: p. 475). The details would look as follows:

(29) Mary is glad_{FACTIVE} [_{CP} that
$$\varphi$$
]st

(30)
$$\llbracket \mathbf{glad}_{\mathsf{FACTIVE}} \rrbracket = \lambda w. \ \lambda p. \ \lambda x. \begin{cases} w' \in p \\ w' <_{x,w} \operatorname{Sim}_{w'}(W \setminus p) \end{cases}, \text{ for every } w' \in \operatorname{Dox}_x(w) \end{cases}$$

I propose a new way to derive Heim's truth conditions compositionally that is in line with the assumption that there is a hidden element in the embedded clause that contributes the factivity: $@_{FACTIVE}$. The operator $@_{FACTIVE}$ is the factive counterpart to the conditional operator **would** of counterfactuals. An informal paraphrase of the truth conditions is given in (31b), where the underlined part corresponds to the meaning contribution of the @-complement.

- (31) a. Mary is glad_{NEUTRAL} [$@_{FACTIVE}$ [CP that φ]st]^{s(st)t}
 - b. 'Mary desires what is the case (given her beliefs) since that φ '

This derives Heim's truth conditions for *be glad*-reports with $C_{\emptyset}/that$ -clauses compositionally if we make the following assumptions about the interpretation of the involved elements:¹⁴

(32) a. $\llbracket [\texttt{that } \varphi] \rrbracket = \llbracket [\texttt{if } \varphi] \rrbracket = \llbracket \varphi \rrbracket$ cf. Pesetsky (1991) b. $\llbracket [@_{FACTIVE} [\texttt{that } \varphi] \rrbracket = \lambda w. \lambda q. \begin{cases} w \in \llbracket \varphi \rrbracket \\ \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q \end{cases}$ cf. Pesetsky (1991) $= \operatorname{BEC^{IND}}(\llbracket \varphi \rrbracket)$

(33)
$$\llbracket \mathbf{glad}_{\mathsf{NEUTRAL}} \rrbracket = \lambda w. \ \lambda Q^{s(st)t}. \ \lambda x. \ Q_{w'} <_{x,w} \operatorname{Sim}_{w'}(W \setminus \mathscr{P}(Q)),$$
for every $w' \in \operatorname{Dox}_x(w)$

 \mathscr{P} is an operator that retrieves the proposition from the conditional antecedent.¹⁵ We therefore get the same interpretation as for (29) with its corresponding lexical entry for factive **glad**_{FACTIVE}.

- rain-NOM fall STAT-CONJ happy
- b. Ame-ga futte iru no de ureshii. rain-NOM fall STAT GEN CONJ happy Both: 'I'm glad that it is raining.'

¹⁴I extend Heim's conventions in the following way: $\mathcal{Q} <_{x,w} \mathcal{Q}'$ is short for $\mathcal{Q}(\lambda w'. \mathcal{Q}'(\lambda w''. w' <_{x,w} w''))$, for $\mathcal{Q}, \mathcal{Q}' \in D_{\langle\langle s,t \rangle,t \rangle}$. As Heim (1992), I allow for a "mixed" notation where the intended interpretation can easily be recovered. As for example: $Q_{w'} <_{x,w} \operatorname{Sim}_{w'}(W \setminus \mathscr{P}(Q))$ is short for: $Q_{w'}(\lambda w''. w'' <_{x,w} \operatorname{Sim}_{w'}(W \setminus \mathscr{P}(Q)))$; which in turn is short for: $Q_{w'}(\lambda w''. \operatorname{Sim}_{w'}(W \setminus \mathscr{P}(Q)) \subseteq \{w''': w'' <_{x,w} w'''\}$).

involves either a *-te*-from that is typically used as a conjunctive/causal sentence connective or a causal nominal *no de*-construction. I would like to thank Ayaka Sugawara for bringing these examples from Japanese to my attention. (i) a. Ame-ga futte i-te ureshii.

(34)
$$[\![(31a)]\!] = \lambda w. \begin{cases} w' \in [\![\varphi]\!] \\ w' <_{\operatorname{Mary},w} \operatorname{Sim}_{w'}(W \setminus [\![\varphi]\!]) \end{cases}, \text{ for every } w' \in \operatorname{Dox}_{\operatorname{Mary}}(w)$$

4.5. Extension to *if*-clauses

What do we gain by this move for an account of complement fulfilling conditionals? The semantic type of *glad* is now such that it can directly combine with an *if*-clause in intension (or more precisely: an *if*-restricted operator). For the counterfactual case, we can simply assume that *be glad* combines with *would if* φ as its semantic argument. Here are the details. As before, an informal paraphrase of the truth-conditions is given in (35b), where the underlined part corresponds to the meaning contribution of the **would**-complement.

(35) a. Mary be glad_{NEUTRAL} [would [if φ]] (to be revised in section 4.6) b. 'Mary desires what would be the case (given her beliefs) if φ '

(36)
$$\llbracket [[would [if \varphi]]] = \lambda w. \ \lambda q. \begin{cases} w \in W \setminus \llbracket \varphi \rrbracket \\ \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q \end{cases} = \operatorname{IF}^{\operatorname{SUBJ}}(\llbracket \varphi \rrbracket)$$

(37)
$$[\![(35a)]\!] = \lambda w. \begin{cases} w' \in W \setminus [\![\varphi]\!] \\ \operatorname{Sim}_{w'}([\![\varphi]\!]) <_{\operatorname{Mary},w} w' \end{cases}, \text{ for every } w' \in \operatorname{Dox}_{\operatorname{Mary}}(w)$$

The resulting truth conditions are the same as of a desire report with *wish*. This is a desirable result as I will argue in section 5.1.

4.6. Assumptions about mood licensing

One of the long-standing puzzles in the literature on desire reports relates to the fact that in many languages desire predicates with the interpretation 'wish' or 'want' are overtly marked with conditional mood. In languages that assign different mood marking to antecedents and consequents the mood marking of the desire predicate is that of the consequent of a conditional, or "conditional mood"; see von Fintel and Iatridou (2017); Wimmer (2020) for recent discussions. The puzzle has do with the fact that although the desire predicate is marked by conditional mood it doesn't seem to have a "shifted" interpretation, i.e., it doesn't seem to be interpreted in the semantic scope of a conditional operator but expresses a wish in the actual world. The same puzzle arises with CFCs. If the conditionals are true arguments and not interpreted in the semantic scope of a conditional operator how then can the conditional mood marking be explained?

Let me first introduce my assumptions about conditionals. I assume that mood is licensed in base position. To make things more transparent, I represent the world pronouns in accordance with the assumptions in Percus (2000). I use [subj] and [cond] to distinguish the mood features in the antecendent and consequent.

(38) a. **Base generated** [Mary be^[eond] rich_(wh)][^[COND] Op^[SUBJ] [if [she won^[subj]_(wh) the lottery]]]

¹⁵Definition: $\mathscr{P}(\mathcal{O}) = \mathcal{O}(w)(\lambda w'. w' = w)$, for $w \in W$, $\mathcal{O} \in D_{\langle s, \langle \langle s,t \rangle,t \rangle \rangle}$. For example: $\mathscr{P}(\lambda w. \lambda q. \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq q) = \{w: \operatorname{Sim}_w(\llbracket \varphi \rrbracket) \subseteq \{w\}\} = \llbracket \varphi \rrbracket$. I assume that the special case $\operatorname{Sim}_w(\llbracket \varphi \rrbracket) = \varnothing$ can be excluded for independent reasons; cf. also von Fintel (1997)'s "Compatibility Presupposition".

b. Logical form

[(wh) λ_1 [[(wh) λ_2 [Mary be rich₂]][Op₁^[SUBJ] [if [(wh) λ_3 [she won₃ the lottery]]]]]]

For CFCs I'm going to assume the following: With respect to the simplifying representation in (3a), here repeated as (39), we can say that the empty slot is actually an argument slot of the right type for the intension of the *if*-clause. We can think of it as a controlled argument position.

[Mary would be glad][if she won the lottery] (39)

If we assume that the argument slot (of the semantic type: $\langle s, \langle \langle s, t \rangle, t \rangle \rangle$) is filled by PRO (of the appropriate type), we find that the syntactic configurations in the base position of a complement fulfilling conditional are identical to that of a true conditional. The difference plays out only at LF.

(40)**Base generated** a. [Mary be^[cond] glad_(wh) PRO][^[COND] Op^[SUBJ]_(wh) [if [she won^[subj]_(wh) the lottery]]] Logical form b.

> [(wh) λ_1 [[PRO λ_2 [Mary be glad₁ t₂]][(wh) λ_3 [Op₃^[SUBJ] [if [(wh) λ_4 [she won₄ the lottery []]]]]

Although the resulting interpretation with PRO in (40) is quite different from the interpretation of a regular conditional, the licensing and interpretation of mood is identical in both constructions.¹⁶ Similar assumptions may have to be made in case of the construction with a *that*-clause.

The puzzling double nature of CFCs that seem to combine properties of both, arguments and adjuncts, is captured on this analysis by the simultaneity of the similarity between (38a) and (40a) and the difference between (38b) and (40b).

4.7. How it explains the facts

It is easy to see that this proposal avoids the problems of Williams analysis. We don't predict counterfactual desires with respect to facts but actual desires with respect to counterfactual circumstances as their objects since *glad* is not interpreted in the semantic scope of a conditional operator. For the same reason, we don't expect the filtering of presuppositions in the matrix clause. The use conditions of conditionals are relativized to the belief-worlds and don't necessarily project. This is in analogy to the factivity in the case of *glad that* that is attributed to a hidden 'because'-clause.

4.8. Comparison with a proposal in Kaufmann (2017)

Kaufmann (2017) discusses a semantics for *glad* that is very close in spirit:

¹⁶ A parallel explanation given the decompositional account in Heim (1992) that could explain the puzzling Xmarking in desire reports with hidden conditionals is sketched in (i). (i) $\alpha [^{[\text{cond}](\text{projected})} \text{ desire-predicate}^{[\text{cond}]} [^{[\text{COND}]} \text{ Op}^{[\text{SUBJ}]} [\text{ if } t^{[\text{subj}]}]]] \varphi^{[\text{subj}]}$

spelled out: want^[cond]

(41) a. $\llbracket \mathbf{glad} \rrbracket^{c,i}(a)(p) = 1 \text{ iff } \forall j \in \mathrm{DOX}_a(i): \mathrm{SIM}_c(j)(p) <_{a,i} \mathrm{SIM}_c(j)(\neg p)$ b. $j <_{a,i} k \text{ iff } a \text{ in } i \text{ prefers } j \text{ to } k$ c. $X <_{a,i} Y \text{ iff for all } j \in X, k \in Y: j <_{a,i} k$ (42) a. $\llbracket \mathbf{that}_{a,i} \rrbracket^{c,i} = m_i \text{ or } m_i n_i$

(42) a.
$$[[\mathbf{that}_{Fact}]]^{c,i} = \lambda p_{\langle s,t \rangle}$$
: $p(i)$. p
b. $[[\mathbf{if}]]^{c,i} = \lambda p_{\langle s,t \rangle}$. p

The main difference is at the syntax-semantics interface: The semantics considered by Kaufmann severs the factivity from *glad* but it still assumes that the semantic argument of *glad* is a proposition.

There are two advantages of the proposal in this paper over an analysis corresponding to (41) in combination with (42). First, in (41) the quantificational contribution of the conditional is part of the inherent semantics of *glad*. If we wanted to generalize this proposal to predicates such as *good* that not only have modal uses, we would have to assume different lexical entrys for modal and non-modal *good* (as for example Lassiter (2017) suggests). The proposal in this paper can easily be extended to *good* without assuming different lexical entrys for modal and non-modal *good* (is a support of the only additional assumption is a type-flexibility in the arguments of *good*.¹⁷ Secondly, on the proposed account in this paper the interpretive effects and the licensing of subjunctive/conditional mood can be accounted for in a compositional way by referring only to standard assumptions about the licensing and interpretation of mood in conditionals.

4.9. Gradability

Villalta (2008) and Lassiter (2011) point out that predicates like *want*, *glad* and other desire predicates are gradable. Here are two examples from (Lassiter, 2011: p. 1/155):

- (43) a. Bill wants to leave as much as Sue wants to stay.
 - b. I want to go to Rome much more than I want to go to Paris.

A discussion of the gradability patterns of *glad* is beyond the scope of this paper. For the moment, I want to simply assume that "plain" *glad* is actually [POS **glad**]. A very simple-minded way to implement this is to assume that POS denotes a threshold world for positive desirability relative to an modal ordering relation and a possible world. Given these assumptions, we can think of *glad* as denoting a relation between modal quantifiers. The assumption that the conditional has a double appearance on both sides of the preference relation wouldn't be necessary anymore. I leave the details for future research.

(44) $\llbracket POS \rrbracket = \lambda w. \ \lambda R^{sst}. \ \lambda p^{st}. \ p(THRESHOLD_w(R))$

(45)
$$[[glad]] = \lambda w. \ \lambda P^{s(sst)(st)t}. \ \lambda Q^{s(st)t}. \ \lambda x. \ Q_{w'} <_{x,w} P_{w'}(<_{x,w}), \text{ for every } w' \in \text{Dox}_x(w)$$

5. Discussion: A unified account of complement fulfilling and hidden conditionals

5.1. In favour of a unified account: Pesetsky's analysis of want

It can easily be seen that the resulting truth conditions for the construction of *glad* with an *if*clause in subjunctive mood as spelled out in (37) are the same as that of reports with the desire predicate *wish* with a simple propositional argument, as given in (28b). This might at first

 $^{^{17}}$ A proposal along these lines for modal *good* can be found in Sode (2018).

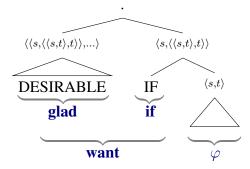
sight seem to be an unwelcome result. But with focus on the core meaning of these predicates at the syntax-semantics interface, this result is in effect welcome. A clear pladoyer in favour of such an analysis is Pesetsky (1991). Pesetsky (1991) proposes an analysis of *want* with \emptyset_{for} -complements that is based on the semantic intuition that *want*-sentences have the same interpretation as *would like*-sentences with a complement fulfilling conditional.¹⁸

(46) Pesetsky (1991)'s Post-LF analysis of *want* (+ \emptyset_{for} -complement) John wants [\emptyset_{for} Mary to know French] \rightarrow John would like [\emptyset_{for} Mary to know French] \rightarrow [*If Copying Rule*; FS] John would like (it) that Mary knows French, *IF* Mary knew French.

With the proposal spelled out in sections 4.5 and 4.6, there is no need anymore for Pesetsky's *If Copying Rule*. The assumption of such a rule was only necessary given the assumption that the corresponding predicates on a factive interpretation take arguments of a propositional type. If we follow Pesetsky's leading idea that *want*-clauses with \emptyset_{for} -complement have to be reanalysed as structures with complement fulfilling conditionals and if we analyse CFCs as proposed in (40), then we arrive at truth conditions that coincide with those in Heim (1992).

The crucial difference in interpretation to the Williams-Pesetsky-Account of CFCs is that the conditional clause is only used to characterize the object of desire on the account proposed here and not to shift the evaluation of the main predicate.

We end up with a unified picture that looks as follows: Desire reports share a common conceptual structure that schematically can be represented as follows.



The generalization is: There is a hidden or overt conditional in every desire report that feeds a hidden or overt modal evaluative with a desire interpretation. In that sense, desire attitudes are not propositional attitudes as far as grammar is concerned: they neither take propositions (directly) as their semantic arguments nor do they take proposition denoting clauses as their syntactic arguments (or at least not in their decompositional analysis – in the case of *want* and *wish*). Instead, they take (overt or hidden) conditional clauses as their syntactic and semantic arguments.

5.2. The Williams-Pesetsky-Class

Williams points out that CFCs distinguish two classes of modal evaluatives. On the one hand, we have modal evaluatives like *unlikely* and *convinced* that combine with a *that*-clause on a

¹⁸In another section, Pesetsky points out the "fact that the string *would be happy if* can mean something like *want*" if the *if*-clause is "complement fulfilling".

non-factive interpretation and disallow CFCs, (47); on the other hand, we have modal evaluatives like *nice* and *glad* that have a factive interpretation when combined with a *that*-clause and allow CFCs.¹⁹

	Class 1: likely, convinced,	Class 2: nice, glad, happy,
that	non-factive	factive
allow CFCs	*	\checkmark

(47)	a.	It would be unlikely if Bob left.	(Williams, 1974: p. 158)
	b.	I would be unconvinced if Bob left.	(Williams, 1974: p. 158)

If we add the predicates discussed by Pesetsky, the class of predicates that license CFCs, i.e., that take conditionals as true arguments, can be characterized in a first attempt as follows:

(48) Williams-Pesetsky-Class

- a. Prioriety-oriented modal evaluatives: good, glad, happy, ...
- b. Desire verbs: *want*, *wish*, *like*, *love*, ...

Notice that all these predicates allow for a factive interpretation when construed with a *that*clause or are reanalysed/decomposed as predicates that can have a factive interpretation, both, on Pesetsky's and Heim's account. A more detailed empirical investigation is necessary to determine which other predicates belong in this class.

5.3. Factivity

In the context of his discussion of *glad*, Williams writes: "We see [...] that *if*, in the required sense, is permitted in the modal environment [of a conditional in subjunctive mood; FS] just in case a *that* is allowed in a nonmodal environment, and *that* is factive." Similarly, Pesetsky attributes the factivity directly to the *that*-clause in his *If Copying Rule*. For Pesetsky, even non-factive or counterfactual desire verbs like *want* and *wish* combine with a factive clause on some level of syntactic representation (see his *If Copying Rule* and the post-LF analysis of *want* in (46)).

The analysis I'm pursuing here also doesn't assume that the underlying desire predicates are factive by themselves. This is inherited from my reading of Heim's account. The difference to Williams/Pesetsky is that for them only *that*-clauses can be true arguments of the corresponding predicates, the *if*-clauses may "provide" a corresponding *that*-clause but *if*-clauses remain adjunct clauses that cannot fill an argument slot. So there is an asymmetry between *that*- and *if*-clauses. On the proposal here, *that*- and *if*-clauses are treated symmetrically, i.e., they both can fill the argument slot of the corresponding predicates. It's the type associated with the *if*-clause that is generalized. This is the main shift in point of view.

¹⁹There are many other interesting observations in Williams (1974) relating to this distinction. One such observation is that predicates in class 2 like *nice* with an indefinite DP in subject position when marked by subjunctive mood can have an interpretation as in (ib) that corresponds to a complement fulfilling conditional.

⁽i) a. A fire $\{ *was / would be \}$ nice.

⁽Williams, 1974: p. 152)

b. It would be nice to have a fire / if there was a fire.

This shift in point of view is accompanied by a new perspective on the factivity and counterfactuality in the realm of desire reports. It can be summarized by the following quote from Heim (1992) that indicates what the difference is between the different kinds of factive ('glad that'), conditional ('want') and counterfactual ('wish') desire reports: "[T]he differences are in the choice of indicative vs. subjunctive mood and of *if* vs. *because* [of the hidden conditionals; FS]." Heim draws a connection between the factivity and counterfactuality of desire reports and the factivity and counterfactuality of adverbial clauses. In this sense, as I mentioned already above, it reduces one kind of factivity – the factivity of certain emotive factives – to another kind of factivity – the factivity of certain adverbial clauses. The same holds for the counterfactuality. The counterfactuality and facctivity in the adverbial domain can in turn be traced back to differences in mood and complementizer choice. Let me elaborate a little bit on this point.

What is certain at this point is that, first, the factivity cannot be attributed to *glad* if anything about the bigger Heimian picture is correct. Second, the factivity shouldn't be attributed to the complementizer *that*. The reason for this is that *that*-clauses with predicates in the Williams-Pesetsky-Class don't always have a factive interpretation. Take for example (49) on a meliorative interpretation:

(49) It is better $\{ if / that \}$ you leave.

Here the complementizers *if* and *that* seem to be interchangable without a difference in meaning.²⁰ The interpretation seems to be conditional and not factive.

Another argument not to attribute the factivity to the complementizer itself comes from the fact that we do find *that*-clauses in what Williams call "a modal environment":²¹

(50) Would it be better that people didn't care at all?

Here the *that*-clause clearly has a non-factive interpretation and *if* could have been used instead of *that*. So the factivity cannot be attributed to *that* directly.

Third: In the formal account, I hardwire the factivity in the semantics of the @-operator. This is mainly for convenience of exposition. The semantic type resembles semantic types found in the nominal domain (compare the type of intensional objects: $\langle s, \langle \langle e, t \rangle, t \rangle \rangle$). The interpretation, on the other hand, is more like that of a universal quantifier with a index-sensitive singularity presupposition than a nominal construction with the meaning 'the fact that', i.e., the factivity is not attributed to a hidden noun with the meaning "fact". Second, I'm not certain if the factivity should be hardwired there at all – or for that matter, if there are even two different conditional operators. Here are some reasons: First, predicates like *good*, *happy* and *glad* that license CFCs also license infinitivals. Depending on the matrix mood, the embedded predicates, the context

²¹We find the same kind of data in German:

Wäre es denn besser, dass das Stadium abgerissen würde?
 Be.SUBJ it PART better that the stadion torn down will.SUBJ
 'Would it be better if the stadion were to be torn down?'

Grosz (2012) observes that some optatives combine a dass ('that')-complementizer with subjunctive mood:

(ii) Dass er (doch) nur rechtzeitig gekommen wäre! that he doch only in.time come be.SUBJ 'If only he das come in time!'

(Grosz, 2012: p. 67)

²⁰Similar observation have been made by Frank (1998) for German.

of use and sometimes even the speech act intentions of the speaker, these infinitivals can be paraphrased with factive *that*-clauses and CFCs in indicative and subjunctive mood.²²

(51)	a.	It is good to be in Paris.
		\sim can mean: 'It is good that I am/we are in Paris.' (factive)
	b.	It would be good to be in Paris.
		\sim can mean: 'It would be good if I/we were in Paris.' (counterfactual)
	c.	It is better to be in Paris.
		\sim can mean: 'It is usually better if one is in Paris.' (generic)
(52)	a.	I am glad to be in Paris.
		\sim can mean: 'I am glad that I am in Paris.' (factive)
	b.	I would be glad to be in Paris.

 \sim can mean: 'I would be glad if I was in Paris.' (counterfactual)

The choice of tense, mood and aspect in the embedded clause (and possibly its interaction with tense, mood and aspect in the matrix clause) also plays a crucial role. For example in (53a), we have a meliorative use with a conditional interpretation for the embedded clause but *if* is excluded due to the use if (non-conditional) subjunctive mood. In (53b), we don't have a meliorative use of the construction with *better* and the *that*-clause seems to have a factive interpretation most likely due to the fact that the event referred to took place before the time of utterance.

- (53) a. It is better $\{ \text{ that } / \text{*if } \}$ you be on time.
 - b. It is better that you were in Paris at that time.

So the factivity in these constructions is really related to the choice of complementizers, tense, mood and aspect and illocutionary/contextual use conditions and shouldn't be attributed to an operator with a factive presupposition.²³ The same may be true for the counterfactuality in the counterfactual case.

While there doesn't seem to be a single marker of factivity in these constructions, both, subjunctive mood and the complementizer *if* (at least in CFCs; not necessarily in conditionals in general) are by themselves sufficient to mark non-factivity. This suggests that factive interpretations arise in the "unmarked" case when the overall grammatical and contextual circumstances are favourable. It is possible that these remarks on factivity only apply to the restricted class of factive predicates that license CFCs.

 $^{^{22}}$ As already mentioned in the context of the discussion of example (11), I assume that these infinitivals (a) only have a desire object reading; and (b) can be adequately paraphrased with a *that*- or *if*-clause. It is therefore desirable, I think, to give a unified account that can explain these facts. Another reason to think that a unified account is desirable is the fact that – at least in German – infinitivals as well as *if*- and *that*-clauses can be used independently as optatives or exclamatives; cf. also Grosz (2012) for remarks on the similarities between CFCs and optatives. If it should turn out to be the case that infinitivals stand in a similar relation to the corresponding predicates as the finite *if*- and *that*-clauses on a desire object reading, this would be (a) additional evidence against any account of CFCs that predicts a conditional fact reading; and (b) additional evidence for a symmetric treatment of the clause types that allow factive and counterfactual interpretations when combined with these predicates, in particular, *that*-clauses with a factive interpretation and *if*-clauses with a counterfactual interpretation.

 $^{^{23}}$ The view that factivity is a phenomenon that is dependent on many factors is of course not new; see for example Abrusan (2011); Simons et al. (2017) for discussions.

5.4. Tense, Mood, Aspect

The unified picture suggests that the factivity and counterfactuality of these constructions may be reducable to the factivity and counterfactuality in the adverbial domain. But it also invites to relate or possibly reduce the temporal and aspectual properties of the corresponding complement clauses to the temporal and aspectual properties of the corresponding conditional clauses depending on the hidden operators involved. As for an example: In Heim's informal paraphrase of the meaning of desire reports with *want*, there is a "will" ("... will be in a more desirable world ...") that doesn't appear in her formal spell-out. Given the decompositional structure discussed above, the semantic structure should actually look as follows, if we stay closer to her informal paraphrase:

(54) WILL_{w'}($\llbracket \varphi \rrbracket$) <_{α,w} WILL_{w'}($W \setminus \llbracket \varphi \rrbracket$), for every $w' \in Dox_{\alpha}(w)$, where WILL is a future-oriented conditional modal

This suggests that the future-orientation of so-called "irrealis" complements with *want* can actually be traced back to the future-orientation of an operator in the semantics of the hidden conditional and doesn't have to be attributed to a hidden modal in the complement clause.

5.5. Desiderata

An aspect that I cannot address in any detail in this paper are the arguments against Heim's account of hidden conditionals. Villalta (2008) presents arguments against hidden conditionals while she holds on to the idea of a comparison between possible worlds. Levinson (2003) and Lassiter (2011, 2017) more generally present arguments against any account that is based on a comparison between possible worlds, i.e., the classical approach to graded modality.

An aspect of the proposals in Villalta (2008), Levinson (2003) and Lassiter (2011, 2017) relevant to the discussion in this paper is that they all assume that modal evaluatives generally involve measure functions of propositions, i.e., they treat *likely*, *probably* and *good*, *glad* on a par when it comes to the syntax-semantics-interface. Against the background of Williams' observations, this assumption is questionable. Still, a thorough re-evaluation of the arguments given in Villalta (2008), Levinson (2003) and Lassiter (2011, 2017) against the background of the arguments given here is a desideratum.

6. Conclusion

Williams argues that *if*-clauses in a construction with *glad* have an interpretation as "complement fulfilling". His analysis of CFCs predicts conditional fact readings. The semantic evidence suggests that *would be glad if*-constructions only have desire object readings. I presented an alternative account based on ideas by Heim that treats conditionals as true arguments. I showed that this account makes the right predictions. Looking back at Williams' analysis from here, we find that it was based on a mistaken premise: *Glad* doesn't take a proposition as its semantic argument. I showed that we don't have to give up the – generally accepted – Heimian truth conditions for *glad*-sentences with *that*-clauses to account for this. A slight shift in interpretation was necessary, following an implicit idea in Heim (1992) that there is a hidden 'because'-clause (=factive conditionals) in every factive desire report. The resulting picture allows for a unified account of complement fulfilling and hidden conditionals in desire reports.

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