Counterfactual wishing as multiple agreement[1]

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Abstract. Counterfactual (CF) wishes give rise to the wellknown puzzle that CF-marking on a desire predicate leaves the desire intact (von Fintel and Iatridou 2008, 2017). German is one of the languages that exhibits this pattern. This paper takes the desire's intactness in German CF-wishes to speak in favor of viewing said CF-marking as semantically vacuous agreement morphology. All this morphology does is to reflect CF-displacement of a *silent antecedent* (vF&I 2017). The morphological pattern CF-wishes seem subject to might apply to CF-conditionals more generally.

Keywords: counterfactuality, conditionals, desires, presuppositions.

1. Counterfactuality

Counterfactual (CF) conditionals like (1) typically imply their antecedent and their consequent to be false:

(1)   If he were smart, he would be rich.   Iatridou 2000
        ⇝ he is neither smart nor rich

The morphological inventory by means of which counterfactuality is conveyed varies between and even within languages. But it is safe to say that past tense morphology is frequently involved (Iatridou 2000). German CFs also fall under this pattern. What is labeled as CF in (2) is actually a *past* conjunctive (*Konjunktiv 2*).[2]

(2)   Wenn die Sonne schiene,   würden die Kirschen blühen.
        if   the sun   shine-**CF** would   the cherries   bloom
        'If the sun was shining, the cherries would be blooming.'   German

There is a multitude of possible analyses for CF-conditionals, even if the object language is confined to English. It is, for example, far from settled whether counterfactual inferences are implicatures (Iatridou 2000), presuppositions (Schulz 2014) or anti-presuppositions (Leahy 2011, 2018), whether the past-morphology is temporal/'real' (Romero 2014) or modal/'fake'[3] (Iatridou 2000). In presentation slides, von Fintel & Iatridou [henceforth vF&I] (2017) even question the term *counterfactual* itself, at least when applied to the morphological inventory CF-inferences are based on. The present paper leaves such important questions aside, holding the somewhat simplistic view that CF-marking reflects an LF-operator *CF* taking a proposition

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[1]This paper constitutes the core of a chapter in my dissertation, but the analysis slightly deviates, see footnote 27. Among others, I am indebted to Giuliano Armenante, Nadine Bade, Sigrid Beck, Julia Braun, Vera Hohaus, Toshiko Oda, Konstantin Sachs, as well as audiences at SuB 24, CLS 54, and the doctoral colloquium (DoKo) at Tübingen's SFB 833. The paper has benefited from reviews for both SuB and CLS, including Mingya Liu's (SuB), and proofreading done by Lilian Gonzalez, Vera Thomas and SuB student assistants. All remaining inadequacies are, of course, my own. The initial source of inspiration for this paper is a class on the linguistics of desire co-taught by Kai von Fintel and Sabine Iatridou in the fall of 2017, which I had the chance to attend. Funding by the Deutsche Forschungsgemeinschaft (DFG) via XPRAG.de is gratefully acknowledged.

[2]The glossing abbreviations I am using are the following. ASP = aspectual marker, CF = counterfactual morphology [abstracting away from morphological specifics], PAST = past tense, IND = indicative mood, INF = infinitive, NOM = nominative marker.

[3]While Iatridou (2000)'s terminological distinction between *real* and *fake past* is not uncontroversial, it is a very handy tool of referring to the two different interpretations past morphology has the potential to give rise to.

and presupposing its falsity. The question of interest here is whether there is a 1:1-mapping between CF-marking and the CF-implications involved. An option in favor of such a morphosemantic equivalence is given in (3a): CF-marking on both the antecedent p and the consequent q is taken literally, to the effect that p and q each have a CF-operator of their own attached to them at LF. An option disfavoring said equivalence takes only CF-marking on p to be semantically contentful, and q's implied falsity to be a defeasible by-product of what *CF* does to p. As a result, only p, but not also q, has a CF-operator attached to it at LF, (3b). This makes CF-marking on q semantically vacuous, and plausibly subject to agreement.

(3) a. [if [**CF** p]] **CF′** q   option 1
         ⤳ both p and q presupposed to be false
     b. [if [**CF** p]] **∅** q   option 2
         ⤳ only p presupposed to be false

Option 2 is supported by concessive conditionals: Both the antecedent and the consequent are CF-marked, but only the antecedent is implied to be false.[4]

(4)   (Even) if you were mean, I'd still be your friend
        ⤳ you are not mean
        ⤳̸ I am not your friend

This paper takes German CF-wishing, exemplified by (5), to favor option 2 in (3b). This is a refinement of my previous approach to CF-wishes in Wimmer (2019), where I essentially pursued option 1. German CF-wishing gives rise to a crosslinguistically attested puzzle (vF&I 2008, 2017): CF-marking on the desire verb *wünschen* does not deny the desire from holding, as one would expect it to do. What it does deny though is the *attainability* of the desideratum, as vF&I (2017) put it. This will henceforth be referred to as the *disbelief*-implication: The wisher is implied to disbelieve in the reality of her desideratum.[5]

(5)   Ich wünsch-**te**, [ϕ die Sonne schiene   ].
        I   wish-**CF**   [ϕ the sun   shine-**CF**]
        'I wish the sun would shine.'
        ⤳̸ absent preference for ϕ
        ⤳ preference for & **disbelief** in ϕ

In Wimmer (2019), I followed vF&I (2017) in taking (5) to be an implicit CF-conditional, that is, to be preceded by a *silent antecedent* denoting the desideratum's doxastic possibility. While we only see the consequent clause, the silent antecedent is where the disbelief-implication is derived. This paper pushes my previous proposal one step further in that it applies option 2 in (3b) to the CF-conditional underlying (5): On this view, the visible CF-morphology is entirely vacuous, and merely agrees with a CF-operator that is a crucial ingredient to the disbelief-implication. The adequacy of option 2 in the case at hand weakly favors this option to apply to

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[4]The consequent is CF-marked in virtue of containing *would*.

[5]It doesn't take CF-marking on the complement of *wünschen* for this implication to arise, as it persists under infinitival complementation:

(i)   Ich wünsch-**te**, [ϕ die Sonne scheinen zu sehen   ].
        I   wish-**CF**   [ϕ the sun   shine   to see-**INF**]
        ⤳ preference for & **disbelief** in ϕ   Wimmer (2019)
    This tells us that CF-marking on *wünsch* is in fact the only source of the disbelief-implication.

CF-conditionals more generally.

The paper is structured as follows. Section 2 gives a simple semantics for *wünschen*. A doxastic presupposition ascribed to *wünschen* in section 2 will define the content of the silent antecedent. This presupposition plays a crucial role in section 3, which derives the disbelief-implication along the lines of option 2, and points out the advantages of option 2 over option 1. Section 4 concludes.

2. *wünschen* presupposes doxastic possibility

If *wünschen* appears in the indicative mood, it implies **uncertainty** about the truth of what is being wished for (Wimmer 2019): At least in German, there is no felicitous wishing for something held to be true or false. This can be seen when indicative wishing is put in a context that either verifies or falsifies what is being wished for. (6) is odd if uttered by the speaker (a) at the sight of her cherry tree in bloom (verifying) or (b) under the awareness that her cherry tree has perished for good (falsifying).

(6) Ich wünsch-**e** mir, dass mein Kirschbaum blüht.
     I   wish-**IND** myself that my   cherrytree   bloom
     'I wish for my cherry tree to bloom.'
     ⤳ preference for & **uncertainty** about cherryblooming

The oddity of indicative wishing in a verifying environment is further evidenced by the following variation of Iatridou (2000)'s *I have what I want*:[6]

(7) ?Ich habe, was ich mir   wünsche.
     ?I   have what I   myself wish-IND

Gladness, by contrast, clearly implies speaker-certainty about (or belief in) the desideratum. This holds no less for German *freuen*, literally 'to rejoyce onself', than for English *glad* (Heim 1992).

(8) Ich freue   mich, dass die Kirschen blühen.
     I   rejoice myself that the cherries bloom
     'I am glad that the cherries are blooming.'
     ⤳ preference for & **belief** in cherryblooming

I take this contrast between wishing and gladness to be based on presuppositional competition between *wünschen* and *freuen*: *wünschen* presupposes the desideratum to be doxastically possible, and *anti-presupposes* the speaker to be uncertain about it, capturing the uncertainty-implication in (6). This anti-presupposition (-PSP) arises via competition with *freuen*.[7]

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[6]Mingya Liu puts to discussion the following example's felicity.
(i)   Ich habe alles, was ich mir   wünsche.
      I   have all   what I   myself wish
   A sentence like (i) is allowed for under the analysis of *wünschen* developed below. On that analysis, uncertainty is anti-presupposed, that is, in principle suspendable. The following sounds slightly more natural to me than (i):
(ii) Ich habe alles, was ich mir   nur wünschen kann.
      I   have all   what I   myself only wish   can
   I leave it to future research to investigate how the exclusive particle *only* and the possibility modal *can* add to a relaxation of the uncertainty-constraint indicative wishing typically comes with.
[7]Thinking of *wünschen* as presupposing the desideratum to be possible is another departure from Wimmer (2019),

The conceptual basis of *anti-PSPs* was laid by Heim (1991) and has since been elaborated by Sauerland (2008) and Chemla (2008), to name just a few. An anti-PSP, just like a *scalar implicature* (SI), is drawn if two sentences differ in, and hence *compete* for, propositional strength. But unlike SIs, this difference is based on truthconditional equivalence, and lies at the level of PSP. The guiding principle for an anti-PSP to be drawn is to presuppose as much as the context allows (*Maximize Presupposition!*). If a speaker presupposes something weaker than she could have, she thereby *anti-presupposes* the stronger PSP not to be met. A common illustration of presuppositional competition evokes the contrast between the definite and the indefinite article:[8] The use of the definite in (9) harmonizes with the traditional assumption that people have no more than one father,[9] and this harmony can be ascribed to a uniqueness-PSP triggered by the definite. The use of the indefinite, by contrast, clashes with this assumption, and this can be ascribed to the anti-PSP that the uniqueness-PSP of the definite is unsatisfied, i.e., its use evokes the implausible scenario that the victim has more than one father.

(9)   John has interviewed {the/#a} father of the victim.   Chemla 2008
        a.   +the $\rightsquigarrow$ the victim has exactly one father   PSP
        b.   +a $\rightsquigarrow$ the victim has more than one father   anti-PSP

How does such a competition in presuppositional strength carry over to *wünschen* and *freuen*? A crucial insight in Heim (1992) is that *want*, *glad* and *wish* all share the same bouletic assertion, an attitude holder x's preference for a proposition p (the desideratum) to be true rather than false. The difference between the three predicates lies in their doxastic PSPs. The same can be reasonably assumed for *wünschen* and *freuen*. *freuen*, like Heim (1992)'s *glad*, can be taken to presuppose x's belief in p. *wünschen*, by contrast, arguably presupposes x to hold p possible. This is spelled out in (10) using a diamond-operator $\Diamond_{DOX,x}$ and a box-operator $\Box_{DOX,x}$. Both quantify over an attitude holder x's DOXastic worlds, her belief-worlds. While the former quantifies over *some* of x's doxastic worlds, the latter quantifies over *all* of them. Put differently, *wünschen* presupposes p's doxastic *possibility*, *freuen* its *necessity*.

(10)   {wünschen/freuen}(p)(x) are both true iff x **prefers** p rather than ¬p.
        a.   wünschen(p)(x) is defined iff $\Diamond_{DOX,x}(p)$ x holds p possible
        b.   freuen(p)(x) is defined iff $\Box_{DOX,x}(p)$ x believes that p

There is truthconditional equivalence between *wünschen* and *freuen*,[10] but the latter is pre-

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where I took uncertainty to be presupposed, not anti-presupposed, following Heim (1992)'s account of *want* as presented in Rubinstein (2017). Thanks to an anonymous SuB-reviewer for suggesting this appealing simplification.

[8]This is to ignore that the definite and the indefinite may, but don't have to be equivalent on the level of truth conditions, Heim (2011).

[9]This assumption is of course subject to change in the modern world we live in.

[10]Mingya Liu points out the following contrast between *freuen* and *wünschen*, which I freely varied on in (i). Both sentences bring together two mutually exclusive preferences, a preference for rain and one for the absence of rain.

(i)   a.   Ich freue   mich, wenn es regnet, aber ich freue   mich   auch, wenn es nicht regnet.
             I   rejoice myself if   it rains but I   rejoyce myself also if   it not rains
        b.   #Ich wünsche mir,   dass es regnet, aber ich wünsche mir   auch, dass es nicht regnet.
             #I   wish   myself that it rains but I   wish   myself also that it not rains

   Why does (ib) sound contradictory, while (ia) does not? One may approach such data starting with the conditional form distinctive of (ia). The respective antecedents (*if it rains* and *if it does not rain*) are mutually exclusive themselves. This prevents the two preferences from being ascribed to the same type of situation. No such thing

suppositionally stronger than the former: necessity entails possibility. This allows the two predicates to be ranked differently on a scale of presuppositional strength, with *freuen* being the stronger, *wünschen* the weaker competitor.

(11) $\langle \text{wünschen}_\diamond, \text{freuen}_\square \rangle$

Such a scale permits us to derive the uncertainty-implication observed for *wünschen* in (6) as an anti-PSP: *wünschen* anti-presupposes that the PSP of *freuen*, x's belief in p, is unsatisfied. The inferred result is x's uncertainty about p: x neither believes p to be true nor to be false.[11]

(12)   Via competition with freuen(p)(x), wünschen(p)(x) **anti-presupposes**

$\diamond_{\text{DOX},x}(p) \wedge \neg\square_{\textbf{DOX,x}}(\textbf{p})$ p is possible, not necessary

$\equiv \diamond_{\text{DOX},x}(p) \wedge \diamond_{\textbf{DOX,x}}(\neg\textbf{p})$ p and ¬p are both possible: **uncertainty**

The existential PSP ascribed to *wünschen* in this section is going to be crucial in the next section, which derives the disbelief-implication that CF-wishing comes with. I conclude this section with a possible concern that CF-marked *wünschen* may be too different from its counterpart in the indicative. As an SuB-reviewer points out, indicative and CF-*wünschen* appear in slightly different syntactic environments. The indicative variant combines with a dative reflexive *sich* 'oneself' and wants its clausal complement to be headed by *dass* 'that', the CF-variant allows for both, but doesn't require either.[12]

(13)   a.   Ich wünsche ?(mir),   ?(dass) die Sonne scheint.
              I   wish-**IND** ?(myself) ?(that) the sun   shine-IND
         b.   Ich wünsch-**te** (mir), (dass) die Sonne schiene.
              I   wish-**CF**   (mir) (that) the sun   shine-CF

The existential PSP was argued for on the basis of indicative *wünschen*. Given the differences that surface in (13), would it be misguided to ascribe it to CF-marked *wünschen* as well? An example brought to my attention by Sarah Zobel points towards a negative answer. (14a), a line from a song,[13] conveys a CF-wish by means of CF-marking on *wollen* 'want'. Nothing changes semantically if *wollen* is replaced by *wünschen* (14b).

(14)   a.   Ich woll-t', ich wär' ein Huhn, …
              I   want-**CF** I   be-CF a   chicken
         b.   Ich wünsch-t', ich wär' ein Huhn, …
              I   wish-**CF**   I   be-CF a   chicken
              ⤳ preference for & **disbelief** in being a chicken

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holds for (ib). Both preferences are ascribed to the actual here and now, leading to inconsistency.

[11]The derivation in (12) glosses over intermediate steps of anti-presuppositional reasoning (Chemla 2008). Such reasoning minimally includes an *epistemic step* that strengthens

(i)   x does not believe the PSP of freuen(p)(x) to be met

   to

(ii)   x believes the PSP of freuen(p)(x) not to be met

   This step follows automatically, see Leahy (2011) for critical discussion of an analogous case: On (10b), *freuen*(p)(x) presupposes x to believe that p. So (i) states x not to believe that she believes that p. One cannot be in doubt about one's beliefs. So the only possible reason for x not to believe that she believes that p is (ii): that she believes not to believe that p.

[12]Thanks to Robin Hörnig for his intuitions on (13b).

[13]*Ich wollt', ich wär' ein Huhn* by the *Comedian Harmonists*.

want plausibly implies *uncertainty* about whether or not the desideratum in question is satisfiable (Heim 1992, Rubinstein 2017). Above I argued that implication to be an indirect reflection of the existential PSP, which I took to compete with the universal PSP of *freuen*. Given the equivalence of both variants in (14), there is reason to ascribe the existential PSP to CF-marked *wünschen* as well.[14]

3. Counterfactual wishing as multiple agreement

We noted German counterfactual (CF) wishing to come with a disbelief-implication regarding the desideratum ϕ, with the desire for ϕ left intact.

(15)   Ich wünsch-**te**, [$_\phi$ die Sonne schiene   ].
         I   wish-**CF**   [$_\phi$ the sun   shine-**CF**]
         $\not\leadsto$ absent preference for ϕ
         $\leadsto$ preference for & **disbelief** in ϕ

This section derives the disbelief-implication in pretty much the same way as I did in Wimmer (2019), where I followed vF&I (2017) in treating a sentence like (15) as an implicit CF-conditional.[15] On their view, (15) is preceded by a silent antecedent, italicized in (16).

(16)   (15) reads: *If I held ϕ possible (which I don't),* I would wish that ϕ[16]

Crucially, the silent antecedent accommodates the presupposition (PSP) triggered by *wünschen* in the overt clause. As vF&I acknowledge, accommodation of presupposed content into a silent CF-antecedent has been observed before. Kasper (1992) deals with examples such as the following:[17]

(17)   [mother talking to her son, who failed an exam:]
         Your brother Peter wouldn't have failed the exam.   Kasper (1992): 309

According to Kasper, (17) is an implicit CF-conditional whose antecedent is a PSP triggered in the overt clause. "Failing an exam presupposes having taken it" (vF&I 2017: slide 47). This PSP is what defines the interpretation of (17).

(18)   Ex. (17) reads: *If your brother Peter had taken the exam,* he wouldn't have failed it.

It seems that CF-wishing triggers such accommodation per default. The corresponding paraphrase in (16) implies a certain analysis, to be spelled out in what follows. In slight deviation from Wimmer (2019), the persistence of the desire under CF-marking is derived assuming *multiple agreement*: All the visible CF-morphology in (15) is treated as semantically vacuous,

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[14]Moreover, the *wünschen*-variant that CF-marking attaches to may appear in IND-settings (as old-fashioned as such sentences may sound), and then has a *want*-like reading. The following quote from Gottfried Keller's 19th century novella *Kleider machen Leute* is a case in point.
(i)   Der Herr wünscht zu speisen?
        the Sir   wishes   to dine
   (i) would be an odd thing to ask if the hearer were eating (verifying scenario) or if it were clear to both interlocutors that there was nothing to eat (falsifying scenario).
[15]To be sure, vF&I's proposal is not about CF-marked *wünschen* in particular, but the latter clearly falls under the phenomenon they investigate.
[16]I owe the italicized addition to Konstantin Sachs.
[17]Thanks to Eva Csipak and Chris Barker for bringing Kasper's paper to my attention.

including the one on the complement clause denoting ϕ. Since it is by assumption a special kind of CF-conditional we are dealing with, there is reason to hope the agreement pattern at work in (15) to apply to CF-conditionals more generally.

3.1. Spelling out von Fintel and Iatridou (2017)

Accepting the premise that (15) is an implicit CF-conditional, a follow-up question is how to analyze it. At the beginning of this paper, we've narrowed down our analytical options to the following two, repeated below. The first one interprets both instances of CF-morphology in a CF-conditional. The second one interprets only the first instance.

(19)   a.   [if [**CF** p]] **CF**′ q   option 1
         b.   [if [**CF** p]] **Ø** q   option 2

In the following, I am going to analyze the example in (15) along option 2: At LF, there is only one CF-operator displacing the antecedent p, all the visible CF-morphology just agrees with that single CF-operator. Notice that p is *silent* in the case at hand; our sentence is not overtly conditionalized after all. It is only later that I will argue option 2 to be preferable to option 1, which I pursued in Wimmer (2019).
Following option 2 in (19b), I propose the sentence in (15) to have an LF like (20). This is only a first basic version, to be refined as we go along. The silent antecedent is a contextual variable C_7, to be interpreted as the doxasic presupposition (PSP) triggered by *wünschen*. Ø stands for an instance of semantically vacuous CF-morphology. The fact that there are two such instances in (20) motivates my choice of the term *multiple* agreement.[18]

(20)   [if [**CF** C_7]] [**Ø** I wish [**Ø** ϕ]]
          LF for (15), first version

The disbelief-implication arises from the interplay between CF and the silent antecedent, i.e., the contextual variable C_7. This variable (its numerical index 7) is assigned the doxastic PSP we ascribed to *wünschen*. More concretely, this is the PSP that *wünschen* triggers in the overt clause: existential quantification over an attitude holder x's belief-worlds, which basically means that x holds ϕ possible. The overt clause's subject is the speaker S, so S replaces x in this case.

(21) $g(7) = \Diamond_{\mathrm{DOX,S}}(\phi)$

The assignment in (21) is a default, if not overridden. This becomes clear when we spell out C_7 as an (unintegrated) CF-antecedent. In line with (21), (22a) paraphrases the doxastic possibility of sunshine. However, such a 'doxastic' antecedent is not a must. (22b) may sound a little contrived, but it works, although the antecedent has nothing to do with the doxastic possibility of sunshine, i.e., 7 is assigned a value that differs from (21).[19]

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[18]I remain vague w.r.t. the exact nature of the agreement mechanism at play, an issue I leave to future syntactic research. Loosely following Schulz (2014), one could take CF and □ to be fused into a complex operator $\boxed{\mathrm{CF}}$. This operator could be assigned an interpretable CF-feature iCF. The visible CF-morphology on *wünschen* and its finite complement would then agree with $\boxed{\mathrm{CF}}$ in virtue of each carrying a matching uninterpretable CF-feature uCF.
(i)   [$\boxed{\mathrm{CF}}_{[\mathrm{iCF}]}$ C_7] [I wish-CF$_{[\mathrm{uCF}]}$ ϕ-CF$_{[\mathrm{uCF}]}$]

[19]With such a choice for the antecedent, the disbelief-implication is lost, and the CF-marking on *wünschen* behaves

(22)   a.   Wenn noch eine Aussicht auf Sonnenschein bestünde: Ich wünschte, die Sonne
              if   still an   outlook on sunshine   obtain-CF I   wish-CF   the sun
              schiene.
              shine-CF
              'If there were still a chance (for sunshine): I'd wish for the sun to shine.'
        b.   Wenn die momentane Dunkelheit nicht so schön wäre: Ich wünschte, die Sonne
              if   the current   darkness   not so nice be-CF I   wish-CF   the sun
              schiene.
              shine-CF
              'If I didn't enjoy the current darkness as much as I do, I'd wish for the sun to
              shine.'

While (21) is the default interpretation of C_7, the ϕ-component of (21) is subject to consider-able variation. This simply depends on what is being wished for. ϕ's resolution may be delayed until the complement denoting ϕ is uttered. But ϕ can be discourse-salient, as in the follow-ing exchange between person A and B. This allows for an immediate resolution of ϕ before the complement denoting ϕ is uttered – if it is uttered at all. In English, the elliptical *I wish!* suffices in such cases.[20]

(23)   a.   A asks B: Do you have time? B replies:
        b.   Ich wünschte, ich hätte   welche.
              I   wish-CF   I   have-CF some
              'I wish.'

As I further argued in Wimmer (2019), CF-wishing combines the *accommodation* with the *de-nial* of the doxastic PSP triggered by *wünschen*. Accommodation means that under the default interpretation of C_7 in (21), the LF in (20) doesn't presuppose $\diamond_{\mathrm{DOX,S}}(\phi)$, which it would in absence of the silent antecedent. The point can be made with the following example from Sauerland (2008):

(24)   If it was raining, John would know that it's raining. $\not\rightsquigarrow$ it's in fact raining

If the main clause weren't preceded by the antecedent in (24), it would presuppose that it is in fact raining, given a PSP commonly ascribed to *know*. The reason that no such PSP arises in (24) is that it is locally *accommodated* (satisfied) by the antecedent.

(25)   John knows that it's raining $\rightsquigarrow$ it's in fact raining

To show what happens in more detail, the LF in (20) needs to be refined, and its ingredients to be defined. On the wellknown Kratzerian view of conditionals, antecedent clauses restrict a universal quantifier over possible worlds, see von Fintel and Heim (2011) for an introductory discussion. This quantifier may figure as a box-operator $\Box$ at LF. So the LF in (20) can be reshaped to (26).

(26)   [$\Box$ [CF C_7]] I wish ϕ
        LF for (15), second version

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as expected: It denies the desire from holding in the actual world. On my intuition, neither example in (22) has an exclamative flavor to it. This contrasts with regular CF-wishes whose antecedent is left silent.

[20]The present analysis carries over to English *wish* under von Fintel and Iatridou (2017)'s view that *wish* is a covertly CF-marked *want*.

The semantics of the necessity modal $\Box$ is the one commonly assumed in a Kratzerian framework. It takes two propositions p and q, and asserts q to be true in all p-worlds that are closest (maximally similar) to a world of evaluation w. This closeness-condition is a further restriction on $\Box$'s quantificational domain, and its purpose is to avoid an undesirable overgeneration of readings, cf. e.g. Heim (1992) and Iatridou (2000) on early work by Robert Stalnaker and David Lewis.[21]

(27) $[\![\Box_w]\!](p)(q) = 1$ iff all p- worlds w* closest to w to are q-worlds.

For ease of exposition, I am going to assume an obviously oversimplified semantics for the CF-operator: being truthconditionally idle, all it does is to trigger the presupposition (PSP) that its prejacent p is false in w, the world of evaluation.[22]

(28) $[\![CF_w]\!](p)$ is defined iff $p(w) = 0$.
        If defined, then $[\![CF_w]\!](p) = 1$ iff $p(w) = 1$.

With these ingredients in place, we arrive at the final LF in (26). The antecedent and the consequent are now considered as intensions, i.e., (characteristic functions of) sets of possible worlds. The subscript @ on $\Box$ and *CF* indicates both of them to have the actual world as their world of evaluation. C_7 has received its default assignment from (21), the proposition that the speaker S holds the desideratum ϕ possible.

(29) $[\, \Box_@\, [\, CF_@\, [\, \lambda w'\, \Diamond_{DOX,S,w'}(\phi)\,]\,]\,]\, [q\, \lambda w\, I\, wish_w\, \phi\,]$
        LF for (15), final version

Given the semantics of *wünschen*, an isolated interpretation of the consequent (q) yields the following. q comes with the doxastic PSP (put between the colon and the period) that ϕ is held possible by the speaker S. On the truthconditional level (following the period), it denotes the proposition that S prefers ϕ to hold rather than not to hold.

(30) $[\![\, q\,]\!] = \lambda w : \Diamond_{DOX,S,w}(\phi)\, .\, S$ prefers ϕ over $\neg\phi$ in w

Given that the antecedent is interpreted as q's PSP, this PSP is accommodated and doesn't project beyond the clause as a whole (31a).[23] But (29) does not only not presuppose the PSP of q, it even presupposes that PSP's negation (31b). This is what follows from the negative PSP ascribed to the CF-operator.

(31) $[\![\, (29)\,]\!]$ is defined iff
    a. $\cancel{\Diamond_{DOX,S,@}(\phi)}$ accommodation
    b. $[\, \lambda w'\, \Diamond_{DOX,S,w'}(\phi)\,](@) = 0$
          $= \neg\Diamond_{DOX,S,@}(\phi)$ **S's disbelief in ϕ**

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[21] $\Box_w(p)$ quantifies over worlds that deviate from w in nothing else than the truth of p in them. Daniel Margulis was the first to bring the need for maximal similarity to my attention.

[22] Thanks to Vera Hohaus for suggesting this simplification. Of course, things are way more subtle than (28) suggests them to be, also in light of the wellknown fact that CF-inferences can be defeasible. Furthermore, they may be doxastic (or epistemic) in nature. In other words, CF(p) can be taken to presuppose something like an attitude holder's disbelief in p. This is an analysis chosen by Grosz (2012).

[23] This is only possible because the single CF-operator taking this PSP as its argument is truthconditionally vacuous. Accommodation precedes the anti-presuppositional inference I ascribed to *wünschen* in section 2, namely speaker-*uncertainty* about ϕ. If uncertainty defined the interpretation of the antecedent, we would run into trouble accounting for the disbelief-implication, as I in fact did in Wimmer (2019).

Being truthconditionally vacuous, the CF-operator does not change the truth conditions of the antecedent, and leaves the ones of the conditional as a whole intact as well: In all closest worlds in which the speaker S holds ϕ possible, she prefers ϕ to hold rather than not to hold.

(32) If defined, $[\![$ (29) $]\!]$ is true iff
      for all closest worlds w* among those in which $\Diamond_{\mathrm{DOX,S}}(\phi)$, S prefers ϕ over $\neg\phi$
      'all closest worlds w* among those in which S holds ϕ possible are such that S prefers ϕ to be true rather than to be false'[24]

These truth conditions say nothing about whether S has an *actual* preference for ϕ. But the sentence they are ascribed to clearly implies such a preference to exist. In other words, it seems too weak that CF-marking on *wünschen* does not deny the desire. vF&I (2017) find an intuitive explanation: What seems to be implied is that "the only missing factor" keeping S from *wishing* that ϕ is ϕ's impossibility (vF&I 2017, slide 62). So while S has no desire for ϕ that qualifies as wishing, she is certain to have a different kind of desire: one that, unlike wishing, is an *unrealistic* one.[25]

The conditionalized preference for ϕ in (32) doesn't have to be *wishing* for ϕ. It can also be *gladness* that ϕ is the case. Our sunshine-sentence from (15) can have a reading where S wishes to be taking a sunbath. In (33), *gerade* 'right now' adverbially supports this reading by creating a strict overlap of the desired state of affairs with the speech time. In the situation S is longing to be in, she is *certain* that the sun is shining, and she is hence *glad* that it is.

(33) Ich wünschte, [$_\phi$ die Sonne schiene   gerade   ]!
      I   wish-CF   [$_\phi$ the sun   shine-CF right-now]

A similar point can be made if ϕ is shifted into the past as in (34). This shift is ensured by the use of the perfect, with CF-inflection on the perfect auxiliary *haben* 'have'. On a plausible reading for (34), S longs to be in a situation in which she correctly remembers the sun to have shone the day before, and she would again be *glad* to find herself in such a situation.

(34) Ich wünschte, [$_\phi$ die Sonne hätte   geschienen]!
      I   wish-CF   [$_\phi$ the sun   have-CF shone   ]

How come that we tend to read something as *gladness* that figures as *wishing* in (33) and (34)? This becomes less surprising in light of the contrastive analysis pursued for *wünschen* and *freuen* 'be glad' in section 2. On this analysis, building on Heim's (1992) treatment of *glad*, *freuen* entails *wünschen* since it presupposes *certainty* about the desideratum, whereas

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[24]The phrasing follows Ogihara (2014).

[25]As far as I can see, the truthconditional indifference as to S's desire in (32) would be lost if the sentence they are ascribed to were subject to matrix exhaustification. If this were so, S's preference for ϕ would be limited to antecedent-worlds. *CF* takes the antecedent and, by the semantics in (28), presupposes the actual world @ not to be an antecedent-world. So S's desire would be indirectly implied not to obtain in @, which is exactly what an analysis of CF-wishes should not predict. This means that an LF like the following, with an exhaustivity operator such as Fox (2007)'s EXH stacked on top, is ruled out for reasons I leave to future investigation.

(i)   (#EXH) [[$\Box$ [CF $\Diamond_{\mathrm{DOX,S}}(\phi)$]]] I wish ϕ]
       $\approx$ [S holds ϕ impossible, and] all (#and only) worlds in which S holds ϕ possible are such that S prefers ϕ to be true rather than false

wünschen more weakly presupposes the desideratum to be *possible*. So if we run into CF-marked *wünschen*, this arguably reads as 'I would *at least* wish for, if not even be *glad* that, ϕ'. If this sounds somewhat unintuitive, we can blame it on the anti-presuppositional inference I argued the use of *wünschen* to give rise to, taking *freuen* to be its stronger competitor: if the inference is drawn, holding ϕ possible is strengthened to holding both ϕ and $\neg\phi$ possible, a reading labeled as *uncertainty* regarding ϕ. This uncertainty-inference simply doesn't seem to be drawn under CF-marking, see also footnote 22.

3.2. Option 2 > option 1

Up to this point, German CF-wishes, taken to be implicit CF-conditionals, were treated along the lines of option 2 in (35b). We could have chosen option 1 (35a), taking CF-marking on *wünschen* literally. This is the line of approach I pursued in Wimmer (2019).

(35)   a.   [if [**CF** p]] **CF**$'$ q   option 1
      b.   [if [**CF** p]] **Ø** q   option 2

Why exactly is option 2 preferable to option 1? This becomes clearer if we treat our initial example repeated in (36) along the lines of option 1.

(36)   Ich wünschte, die Sonne schiene.
      I   wish-CF   the sun   shine-CF

The sketchy LF in (37) radicalizes option 1 and treats CF-marking on the complement ϕ as semantically contentful as well, just as we took it to be vacuous in our previous pursuit of option 2. Option 1 is neutral w.r.t. this option, but somewhat suggests it. Option 1 has a CF-operator above the silent antecedent, so it derives the disbelief-implication as well, (37a). This is desirable. However, it is less clear that we need the remaining PSPs triggered by the two additional CF-operators, CF$'$ and CF$''$. The second operator CF$'$ sits right above the consequent containing *wünschen*. On our simple analysis for the CF-operator, this means: S is presupposed to have no actual desire for ϕ. This is what we want to avoid: The puzzling persistence of the desire remains unexplained, making CF$'$ problematic.

(37)   [□ [**CF** $\diamond_{\mathrm{DOX,S}}(\phi)$]] [**CF**$'$ I wish [**CF**$''$ ϕ]]
      presupposed:
      a. $\neg\diamond_{\mathrm{DOX,S}}(\phi)$ (still) disbelief, via CF
      b.   S does **not** prefer ϕ over $\neg\phi$ #absent speaker-desire, via CF$'$
      c. $\neg\phi$ ϕ is false, via CF$''$

The presence of CF$''$ is objectionable on different grounds. It doesn't do any harm for sure. It presupposes ϕ to be false, (37c), which is in line with the disbelief-implication contributed by the first CF in (37a). But it also doesn't seem to add anything new to it, so its presence might be ruled out based on considerations of structural economy. In the previous subsection, CF-marking on ϕ was treated as semantically vacuous as well. This view is supported by the ungrammatical absence of CF-marking on ϕ when the embedding *wünschen* is CF-marked:[26]

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[26]In English, such vacuous CF-morphology is even attested in clauses embedded inside the complement of *wish*:
(i)   a.   I just wish [I knew [what **went** on inside that little head of his]]. *Mindhunter*, season 1, episode 6
         ↝̸ there is something that doesn't go on inside his head
      b.   I wish [you were playing [when I **was** visiting]].   Lilian Gonzalez, p.c.

(38)   Ich wünsch-**te**, [$_\phi$ die Sonne *scheint   ].
     I   wish-**CF**   [$_\phi$ the sun   *shine-**IND**]

Summing up, there is reason to treat both instances of CF-marking in (36) as semantically vacuous. This speaks in disfavor of option 1 (35a), which takes CF-marking on a conditional consequent literally, and in favor of option 2 (35b), which treats it as vacuous. It should be noted though that option 2 does not entail the vacuity of CF-marking on ϕ. The analysis pursued in the previous subsection was to push option 2 one step further.[27]

4. Outlook

In this paper, I treated counterfactual (CF) marking on German *wünschen* as semantically vacuous. On the analysis proposed, all it does is to reflect CF-displacement of a silent antecedent denoting the doxastic possibility of what is being wished for (vF&I 2017). In analyzing CF-wishes as implicit CF-conditionals, I followed the semantic pattern below. On this pattern, the antecedent p is counterfactually displaced, but the consequent q, despite the CF-morphology it carries, is not.

(39)   [if [CF p]] q

Desiderata to be addressed by future research are manyfold. One puzzle pertains to the different behavior of German *hoffen* 'hope' and *wünschen* under CF-marking. While it is natural to form a CF-wish by CF-marking *wünschen*, one cannot form a CF-wish by CF-marking *hoffen*:[28]

(40)   Ich {wünsch-te / ??hoff-te},   mein Kirschbaum blüh-te!
     I   {wish-CF   / ??hope-CF} my   cherrytree   bloom-CF

What subtle differences between *wünschen* and *hoffen* might account for this difference? In terms of the implications of interest in the present paper, *wünschen* and *hoffen* pattern pretty much alike: The attitude holder is implied to be uncertain about what she has a desire for.

(41)   Ich {wünsche mir   / hoffe},   dass mein Kirschbaum blüht.
     I   {wish-IND myself / hope-IND} that my   cherrytree   bloom
     'I hope for my cherry tree to bloom.'
     ⤳ preference for & **uncertainty** about cherryblooming

Another perspective pertains to the different forms CF-wishes can take. The conditional pattern in (39) of course does not apply to CF-wishes across the board. There is variation at least w.r.t.

       ⇸ I'm not visiting

  I am not sure this fully carries over to German:
(ii)   a.   Ich wünschte, ich wüsste,   was in seinem Kopf vor sich geht/?ginge.
        I   wish-CF   I   know-CF what in his   head vor itself go-IND/?-CF
      b.   Ich wünschte, du   spieltest, wenn ich da   bin/?wäre.
        I   wish-CF   you play-CF when I   there be-IND/?-CF

[27]See Wimmer (2019) for a nonvacuous treatment of CF-marking on ϕ. I returned to this view in a chapter of my dissertation that otherwise contains the analysis pursued in the present paper.
[28]This was brought to my attention, in some way or other, by Valentine Hacquard at CLS 54, and by Thomas Ede Zimmermann at SuB 24.

the structural location of the desideratum ϕ. To clarify this, I specify (39) for CF-wishes. Round brackets surround parts of the LF that are not spelled out.

(42)   (if [CF [$_p$ $\diamond\phi$]]) [$_q$ preference for ϕ]
        pattern for German CF-wishes

On (42), ϕ figures in both the consequent q and the silent antecedent p. The latter denotes $\diamond\phi$, ϕ's (doxastic) possibility. In deviation from (42), Japanese and Chinese share a type of CF-wishes that has ϕ as its overt antecedent. This is exemplified by the Japanese example in (43a)[29] and the Chinese one in (43b). ϕ is the proposition that the rain ends. The consequent is reduced to an evaluative predicate such as *good*. The Japanese variant crucially has the regret-particle *noni* attached to the consequent (Ogihara 2014).

(43)   a.   [Ame-ga   yan-dara] ii-noni.
              [rain-NOM stop-if   ] good-noni
        b.   [Yu   ting xia] jiu hao   le!
              [rain stop fall] jiu good ASP
        $\rightsquigarrow$ preference for the rain to end, but no end in sight

In partial conformity with the pattern in (42), the consequent clauses in (43) can be taken to express a preference for ϕ if we follow Sode (2018) in thinking of *good* as an evaluative *predicate of worlds*. The implied preference for ϕ would then be derived from a preference for worlds in which ϕ holds over those in which it does not. In clear deviance from (42), however, the antecedent is spelled out, even though it lacks overt CF-marking. The resulting pattern is this:[30]

(44)   [if [(CF) ϕ]] [$_q$ preference (for ϕ)]
        pattern for (43)

These crosslinguistic similarities and differences present a strong incentive for future research.

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[29] I owe this example to Toshiko Oda.

[30] As it turns out, there is no need to stray far from English or German to find a similar pattern for CF-wishes as exhibited by (43). On the surface, optative CF-wishes (Grosz (2012)) are bare CF-antecedents denoting the desideratum:

(i)   a.   Wenn es nur   aufhören würde zu regnen!
             if   it only stop   would to rain
       b.   If only the rain would stop!
       $\rightsquigarrow$ preference for the rain to end, but no end in sight

Still, these sentences deviate from their Sino-Japanese counterparts in (43) in the following respects: First, their antecedents contain *only* as an optative marker. Second, they CF-mark their antecedent *overtly*. Third, they leave their consequent implicit, while their counterparts spell it out.

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