(COUNTER)FACTUAL WANT ASCRIPTIONS AND CONDITIONAL BELIEF*

What are the truth conditions of want ascriptions? According to a highly influential and fruitful approach, championed by Heim[1] and von Fintel,[2] the answer is crucially intertwined with the agent's beliefs, specifically, with the set of worlds compatible with her beliefs—her belief set. The approach says, in outline, that ⌜S wants p⌝ is true just if S prefers the p worlds in her belief set to the $\neg p$ worlds in her belief set.[3] (Theorists disagree about just what this preference relation amounts to.)

Originally developed to help account for presupposition projection,[4] the belief-set-based approach to want ascriptions has great the-

[1] Irene Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *Journal of Semantics*, IX, 3 (1992): 183–221.

[2] Kai von Fintel, "NPI Licensing, Strawson Entailment, and Context Dependency," *Journal of Semantics*, XVI, 2 (1999): 97–148.

[3] The symbol 'p' as a variable over syntactic objects that 'want' combines with is suggestive of 'proposition', and in this paper we will sometimes informally refer to the semantic values of those objects as 'propositions'. But nothing crucial hinges on this: all that matters for us is that objects of 'want' pick out sets of possible worlds. Insofar as prototypical want ascriptions in English have infinitival complements, we are thereby committed to the claim that infinitives pick out sets of possible worlds. We also treat objects of 'believe', which in English are prototypically finite clauses, as picking out sets of possible worlds. While there are some interesting semantic differences between infinitives and finite clauses, and accordingly, between objects of want ascriptions and objects of belief ascriptions, both contribute to the truth conditions of the sentences they inhabit in such a way that they can be fruitfully analyzed as picking out sets of possible worlds.

[4] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*; and Bart Geurts, "Presuppositions and Anaphors in Attitude Contexts," *Linguistics and Philosophy*, XXI, 6 (1998): 545–601.

oretical power, and scholars continue to develop ever more sophisti-
cated versions of it. As reviewed recently by Phillips-Brown,[5] the belief-
set approach to want ascriptions has been shown to help explain the
relationship between *want*, *wish*, and *be glad*;[6] the distinction between
so-called 'predictive' and 'advisory' *want*;[7] certain puzzles concerning
wish and *hope*;[8] various issues raised by Crnič;[9] and the interaction be-
tween *want* and conditionals.[10]

Even given these successes, the belief-set approach faces a well-
known problem: it yields the wrong results for ⌜S wants p⌝ whenever
either (i) *S* believes *p* or (ii) *S* believes ¬*p*.[11] Call an ascription in case
(i) a *factual want ascription*: the agent treats *p* as fact. In case (ii), we use
the term *counterfactual want ascription*: the agent treats *p* as contrary to
fact.

(1)   *Example of a Factual Want Ascription (FWA)*
       I want it to rain tomorrow (and I believe it will).[12]

(2)   *Example of a Counterfactual Want Ascription (CFWA)*
        Al wants to be promoted (but believes he won't be).[13]

Let the umbrella term for FWAs and CFWAs be '(counter)factual want ascription', or '(C)FWA'.

   In section I, we will present the problem of (C)FWAs in greater detail; for now, we will just give you a feel for it, using (2) as an example. According to the belief-set approach, (2) is true just if Al prefers the worlds in his belief set where he is promoted to... We need not continue any further with the belief-set-based account, since it has broken down already: there are no worlds in Al's belief set where he is promoted. He believes that he will not be promoted!

   Theorists have noticed this problem before. Indeed, Heim herself saw it—and gave us the following, memorable CFWA, (3), below—when she brought the belief-set-based approach onto the scene.

(3)   I want this weekend to last forever (but of course I know it will be over in a few hours).
        (from Heim[14])

Yet Heim did not venture a solution.[15] To our knowledge, only one theorist has: Rubinstein.[16] But her solution is not satisfactory, as we argue in section II.

   In sections III–IV, we develop a solution of our own—one in which *conditional belief* is integral to the semantics of 'want'. Our account is inspired by a striking parallel between indicative versus counterfactual conditionals on the one hand and non-(C)FWAs versus (C)FWAs on the other. By way of preview, our proposal, stated informally, is that ⌜S wants p⌝ is true iff *S* prefers what she believes will (would) happen if *p* is (were) true to what she believes will (would) happen if ¬*p* is (were) true. As we will show, this approach enjoys all the same

[13] Adapted from Paul Portner and Aynat Rubinstein, "Mood and Contextual Commitment," in *Proceedings from Semantics and Linguistics Theory (SALT) XXII* (Washington, DC: Linguistic Society of America, 2012), pp. 461–87.

[14] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*, p. 199.

[15] Heim also noticed the problem of FWAs, with the sentence '(John hired a babysitter because) he wants to go to the movies tonight' (*ibid.*). She proposed to solve this problem by replacing the belief set with the set of worlds "compatible with everything that [the agent] in [the evaluation world] believes to be the case no matter how he chooses to act." Insofar as John's belief that he will go to the movies tonight is underpinned by his intention to do so, this particular example is no longer a problem. But this solution does not extend to all factual want ascriptions, like (1) above.

[16] Aynat Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," in Ana Arregui, Maria Luisa Rivero, and Andres Salanova, eds., *Modality across Syntactic Categories* (New York: Oxford University Press, 2017), pp. 610–33.

virtues of the belief-set-based approach for non-(C)FWAs while endowing the semantics with just enough flexibility to handle (C)FWAs in a tightly constrained way. After presenting our solution, we turn in sections V–VIII to some further contextualizing considerations and extensions before concluding the paper.

I. THE PROBLEM, FORMALIZED

We will bring the problem of (C)FWAs into clearer view with an instance of the belief-set-based approach to want ascriptions: von Fintel's[17] best-worlds semantics, which is patterned after Kratzer's classic system of modals.[18]

We said that on the belief-set-based view, ⌜S wants p⌝ is true iff S prefers the p worlds in her belief set to the $\neg p$ worlds in her belief set. Von Fintel's semantics exemplifies this view by saying that ⌜S wants p⌝ is true iff p is true in all of the best worlds in S's belief set, as ranked by S's preferences.

More formally, let $\mathrm{Bel}_{S,w,t}$ be S's belief set at a time t and world w, and let $\mathrm{best}_{S,w,t}$ be a function that takes a set of worlds Γ and returns the subset of Γ that is best according to S's preferences in w at t:[19]

(4)   *Von Fintel's Semantics*[20]
        $[\![\mathrm{S\ wants\ p}]\!]^{c,w,t} = 1$ iff $\forall w' \in \mathrm{best}_{S,w,t}(\mathrm{Bel}_{S,w,t})\colon p(w') = 1$.

Absent any caveats, von Fintel's semantics would predict that FWAs are vacuously true: because the agent believes p, there are only p worlds in $\mathrm{Bel}_{S,w,t}$; the best worlds in $\mathrm{Bel}_{S,w,t}$ are thus p worlds. Conversely, CFWAs would be vacuously false: because the agent believes

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[17] Von Fintel, "NPI Licensing, Strawson Entailment, and Context Dependency," *op. cit.*

[18] Angelika Kratzer, "The Notional Category of Modality," in H.-J. Eikmeyer and H. Reiser, eds., *Words, Worlds, and Contexts* (Boston: De Gruyter, 1981), pp. 38–74; and Angelika Kratzer, "Modality," in Armin von Stechow and Dieter Wunderlich, eds., *Semantics: An International Handbook of Contemporary Research* (Boston: De Gruyter, 1991), pp. 639–50.

[19] Let $w'' <_{S,w,t} w'$ mean that w'' is better than w' according to S's preferences in w at t: $\mathrm{best}_{S,w,t}(\Gamma) = \{w' \in \Gamma \mid \neg\exists w'' \in \Gamma\colon w'' <_{S,w,t} w'\}$.

[20] We make an innocuous simplification here: following Heim ("Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*), von Fintel ("NPI Licensing, Strawson Entailment, and Context Dependency," *op. cit.*) does not use $\mathrm{Bel}_{S,w,t}$ as his domain but rather a certain superset of it, $\mathrm{Bel}^*_{S,w,t}$, which screens off S's beliefs grounded in her own intentions: $\mathrm{Bel}^*_{S,w,t} = \{w' \mid w'$ is compatible with what S in w at t believes will happen no matter how she chooses to act}. As discussed in footnote 15, this is to account for a certain species of FWAs in which the agent intends to make it the case that the desired proposition holds. But since not all FWAs are of this species, the problem of FWAs persists, as of course does the problem of CFWAs.

$\neg p$, p worlds are absent from $\text{Bel}_{S,w,t}$ and thereby absent from the best worlds in $\text{Bel}_{S,w,t}$.[21]

In response to this threat of vacuous truth and vacuous falsity, proponents of the belief-set approach, von Fintel included, have hypothesized that (C)FWAs suffer from presupposition failure: $[\![\text{S wants p}]\!]^{c,w,t}$ is undefined whenever S (in w at t) either believes p or believes $\neg p$.[22] But we already know this to be wrong: the (C)FWAs from the introduction to this paper—namely, (1), 'I want it to rain tomorrow (and I believe it will)' and (2), 'Al wants to be promoted (but believes he won't be)'—are intuitively felicitous and contingent want ascriptions.[23]

With or without a presuppositional component, then, von Fintel's semantics goes wrong. Where to go from here? To map a way forward, we propose to see von Fintel's semantics as breaking into three assumptions that jointly entail it. Begin with a basic assumption of the best-worlds semantics, one that is shared by all of the other belief-set-based semantics, and one that we will preserve. The assumption is that 'want' ascriptions are evaluated against some domain of worlds, D, and the agent's preferences are among the worlds in D.

(5)   *Form of a Semantics for 'Want'*
       $[\![\text{S wants p}]\!]^{c,w,t} = 1$ iff S in w at t prefers the p worlds in D to the $\neg p$ worlds in D.

This form requires us to fill in two elements: what it is for S to prefer p to $\neg p$ in D, and what D is. The belief-set-based view says that D is the belief set:

(6)   *Belief-Set Domain*
       $D = \text{Bel}_{S,w,t}$.

And we can read von Fintel as saying that S prefers the p worlds in D to the $\neg p$ worlds in D just if all of the best worlds in D are p worlds, as ranked by S's preferences. Or, more formally:

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[21] We are assuming that $\text{Bel}_{S,w,t}$, and therefore $\text{best}_{S,w,t}(\text{Bel}_{S,w,t})$, is non-empty. If $\text{Bel}_{S,w,t}$ is instead empty, then counterfactual want ascriptions are vacuously true: all of the best worlds in $\text{Bel}_{S,w,t}$ (there are none!) are vacuously p worlds.

[22] The details of this presuppositional component differ by theorist. See, for example, Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*, p. 198; or von Fintel, "NPI Licensing, Strawson Entailment, and Context Dependency," *op. cit.*, p. 117.

[23] This is not to say that *all* (C)FWAs are impeccable, and indeed we speculate that competition from the explicitly counterfactual 'wish' and the explicitly factual 'be glad (that)' may render (C)FWAs weakly dispreferred under some conditions. See section VIII.

(7)　*Best-Worlds Preference within a Domain*
　　　S in w at t prefers the p worlds in D to $\neg p$ worlds in D iff $\forall w' \in$
　　　$\text{best}_{S,w,t}(D)$: $p(w') = 1$.

Together, (5), (6), and (7) entail von Fintel's semantics. Von Fintel's semantics must be rejected, and so one of these three views must be rejected. Certainly one could reject (5) and instead take a different approach to 'want'. Some have done so.[24] We would like to know if the (C)FWA problem can be solved—and so the theoretical fruits of the belief-set-based approach enjoyed—while holding on to (5), and indeed we believe that it can be, as we will argue in section IV.

So: we must reject either the belief-set domain (that is, (6)) or the best-worlds preference within a domain (that is, (7)). Not necessarily (7). While its adequacy is debated, rejecting it is not a solution to the problem of (C)FWAs. If we were to replace it with something else, like a Heimian notion of preference within a domain (see section V), we would be playing a game of whack-a-mole: the (C)FWA problem would pop up with its replacement. Out with (6), then—the domain for (C)FWAs is not the belief set. So what is it? In the next section we review and argue against Rubinstein's answer to this question; in sections III–IV we develop our own.

II. AGAINST RUBINSTEIN'S DOMAIN

Rubinstein proposes a variant of Heim's[25] semantics for want ascriptions, amended so as to carry out a "relaxed reliance of belief in desire statements."[26] It is important to note at the outset that Rubinstein's framing motivation is not the problem of (C)FWAs, but rather a separate problem for want ascriptions identified by Villalta,[27] which we have our own take on and will discuss in due course in section VI. However, as Rubinstein herself notes, and as we shall see presently, her proposal does have some relevance to (C)FWAs.

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[24] For example, the Content Specification version of the so-called Relational Analysis—an influential semantics in the philosophy literature—quantifies over the agent's *desires* (rather than over some domain of worlds). For an example of the Content Specification version of the Relational Analysis, see Delia Graff Fara, "Specifying Desires," *Noûs*, XLVII, 2 (2013): 250–72. Similarly, Condoravdi and Lauer quantify over the agent's *preferences* (Cleo Condoravdi and Sven Lauer, "Anankastic Conditionals Are Just Conditionals," *Semantics and Pragmatics*, IX, 8 (November 2016): 1–69).

[25] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*

[26] Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*, p. 110.

[27] Elisabeth Villalta, "Mood and Gradability: An Investigation of the Subjunctive Mood in Spanish," *Linguistics and Philosophy*, XXXI, 4 (2008): 467–522.

Rubinstein offers her proposal as a Heim-style[28] re-implementation of Villalta's[29] context-dependent semantics for want ascriptions. In a nutshell, Rubinstein's proposal is that when we evaluate ⌜S wants p⌝, the domain is not S's belief set, but rather a contextually circumscribed domain that is defined only when its intersection with S's belief set is *diverse* with respect to p (in the sense of Condoravdi[30]): that is, (i) its intersection with S's belief set and with p is non-empty and (ii) its intersection with S's belief set and with $\neg p$ is non-empty:

(8)   *Rubinstein's Domain for* $[\![S \text{ wants } p]\!]^{c,w,t}$
       $D \cap \text{Bel}_{S,w,t} \cap p \neq \emptyset$ and $D \cap \text{Bel}_{S,w,t} \cap \neg p \neq \emptyset$
       (where D is contextually circumscribed)[31]

As (8) stands, it will not help with the problem of (C)FWAs, because although it relaxes the relationship between D and $\text{Bel}_{S,w,t}$ by merely requiring them to have a non-empty overlap instead of equating them, it still requires non-empty overlap between $\text{Bel}_{S,w,t}$ and p (dooming CFWAs) and between $\text{Bel}_{S,w,t}$ and $\neg p$ (dooming FWAs). But to give the general idea a fighting chance, it will be instructive to explore two variations on (8) that remove this requirement while leaving much of the rest of the proposal intact.

The first variation, suggested to us by Justin Khoo (pers. comm.), is to revise (8) in such a way that D must be diverse with respect to p and D must have a non-empty overlap with both p and $\neg p$, but there is no requirement imposed directly on the relationship between $\text{Bel}_{S,w,t}$ and p or $\neg p$, as in (9). This allows for (C)FWAs.

(9)   *Variation 1 on Rubinstein's Domain for* $[\![S \text{ wants } p]\!]^{c,w,t}$
       $D \cap \text{Bel}_{S,w,t} \neq \emptyset$
       $D \cap p \neq \emptyset$ and $D \cap \neg p \neq \emptyset$
       (where D is contextually circumscribed)

The second variation is to remove any reference whatsoever to $\text{Bel}_{S,w,t}$. This is suggested by Rubinstein herself: citing Heim's never-ending weekend sentence (see (3) above), Rubinstein says "one might… challenge the very assumption that beliefs semantically restrict desire statements at some level."[32] That would give us (10), which requires

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[28] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*

[29] Villalta, "Mood and Gradability," *op. cit.*

[30] Cleo Condoravdi, "Temporal Interpretation of Modals: Modals for the Present and for the Past," in David I. Beaver et al., eds., *The Construction of Meaning* (Stanford, CA: CSLI Publications, 2002), pp. 59–88.

[31] Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*, p. 117.

[32] *Ibid.*, p. 119.

merely that D be diverse with respect to p:

> (10)   *Variation 2 on Rubinstein's Domain for* $[\![\text{S wants p}]\!]^{c,w,t}$
> $D \cap p \neq \emptyset$ and $D \cap \neg p \neq \emptyset$
> (where D is contextually circumscribed)

In what follows, we will show that (9) goes wrong because the relationship between D and $\text{Bel}_{S,w,t}$ is insufficiently constrained. Since (10) leaves that relationship even more unconstrained (in fact, completely unconstrained), it follows that (10) goes wrong too.

We proceed by first elaborating on what Rubinstein says in prose about the relationship between D and $\text{Bel}_{S,w,t}$. Rubinstein suggests that in general, the relation between D and S's belief set "may be one of inclusion, such that the accessible worlds are a superset of the doxastic alternatives, arrived at by potentially suspending some of the subject's beliefs."[33] This suggestion is quite similar to Heim's reaction to the problem of CFWAs; Heim says, "Maybe for some reason not all the subject's beliefs are taken into account."[34] We believe that there is something importantly right about this idea. Crucially, though, its ultimate success depends on whether we can answer the following question: what are the rules that govern which worlds D contains, beyond those in S's belief set? Stated differently: what are the rules that tell us which of S's beliefs to suspend in arriving at D? Is it really left entirely to context? The only guideline Rubinstein offers is in connection with one particular example she considers (an example from Heim,[35] 'I want to teach Tuesdays and Thursdays next semester'), where she says that the domain consists of "circumstantially accessible worlds in which I teach next semester....Only a proper subset of these are the belief worlds of the subject."[36] Can we then say that, in general, D is the union of S's belief set with some contextually circumscribed subset of circumstantially accessible worlds?

This is not right for the problem of (C)FWAs (nor is it right in general). Imagine, in the promotion case, that Al is eager for new responsibilities. He believes that he would feel invigorated with the

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[33] *Ibid.*, p. 118.

[34] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*, p. 200.

[35] *Ibid.*

[36] Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*, p. 118. Rubinstein makes a similar suggestion in earlier work, where, in connection with Heim's never-ending weekend sentence, she says (emphasis added), "What such examples show is that the possibilities that are relevant for a desire statement may be possibilities that are *circumstantially accessible*, yet doxastically inaccessible." See Aynat Rubinstein, "Roots of Modality," PhD diss., University of Massachusetts, Amherst, 2012, p. 116.

tasks required by the higher position. (2), 'Al wants to be promoted', is true. But you can easily imagine a way of filling out Al's case so that Rubinstein's semantics will erroneously predict that (2) is false. Imagine, for example, a context in which, unbeknownst to Al, there are envious assassins, lying in wait, who will poison Al and his family, should he be promoted. If (2) is to be predicted true, promotion-worlds must be best (most desirable to Al) in D. (That is how the best-worlds semantics works.) For Rubinstein, D is $\mathrm{Bel}_{Al,w,t}$—which does not contain promotion-worlds, since Al believes he will not be promoted— plus contextually circumscribed, circumstantially accessible worlds in which he is promoted. For Rubinstein, as with a best-worlds semantics, ⌜S wants p⌝ is true only if p is true in all of the best worlds in the domain.[37] But these circumstantially accessible worlds in the domain, those that exceed $\mathrm{Bel}_{Al,w,t}$, are not best; they are as bad as can be! In them, Al and his family are poisoned. (2) is (wrongly) predicted false.[38]

In more general terms, because an agent may be entirely wrong about the world he inhabits (as Al is), contextually circumscribed, circumstantially accessible worlds (such as secret-assassin worlds) may be entirely untethered from the agent's beliefs (Al may believe as strongly as he believes anything that there are no secret assassins). Rubinstein's mistake is allowing D to contain worlds so distant from the agent's beliefs, since such worlds are in general irrelevant to what an agent wants.

At this point one might try to salvage Rubinstein's approach by adjusting her proposal to be about worlds that are circumstantially accessible, not relative to the actual world, but rather relative to the agent's beliefs.[39] But this just duplicates the (C)FWA problem: worlds that one does not believe to be possible cannot be ones that one believes

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[37] Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*, p. 117.

[38] An anonymous reviewer points out that there may in fact be a false reading of (2) in this context, falling under what Jerzak (Jerzak, "Two Ways to Want?," *op. cit.*) calls the *advisory* use of 'want' (see footnote 10). One might say to Al, for example, "Believe me, you don't want to be promoted—if you were, assassins would poison your family." In a case like this, Rubinstein's truth conditions for want ascriptions coincide with—or come close to coinciding with—Jerzak's truth conditions for advisory 'want'; see Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.* Plausibly, then, Rubinstein can predict the false, advisory interpretation of (2). However, as we noted in footnote 10, we set advisory 'want' aside in this paper. What concerns us is how to account for the *true* reading that is also available to (2) in the indicated context. It is this reading that Rubinstein cannot predict.

[39] In fact, Rubinstein mentions the possibility of "anchoring the modality to the subject," but does not pursue it. See Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*, p. 117.

are circumstantially accessible—after all, circumstantial accessibility is *realistic* in Kratzer's sense.[40] What we need instead for the domain is something more along the lines of "worlds that the agent believes *would* be circumstantially accessible in certain doxastically counterfactual worlds consistent with the desired proposition." And this moves us in the direction we take below.

III. INTERLUDE: MODELING CONDITIONAL BELIEF

As we mentioned in the introduction, our solution to the problem of (C)FWAs makes key use of the agent's *conditional beliefs.* To get a handle on just what we have in mind, we will first propose a certain way of modeling conditional belief. To be sure, there is a myriad of ways to understand conditional belief other than the one we present here, [41] and we have no aspirations to supplant them nor to advance a full-blown theory. We are merely exploring a certain way of seeing conditional belief that furthers our understanding of the meaning of 'want'.

Our jumping-off point is Stalnaker's system of conditionals, on which a conditional is evaluated relative to a contextually determined *selection function.*[42] The selection function of a context c, f_c, takes a proposition p and world w and returns a "selected" p world.[43] ⌜If p, q⌝ is true at w in c just if q is true at the world f_c selects; more precisely, just if q is true at $f_c(p, w)$. The selection function is often interpreted as being determined by a notion of *closeness* (or *similarity* or *minimal difference*); the truth conditions are in turn interpreted as saying that ⌜if p, q⌝ is true at w in c just if q is true at the p world that is closest to w. We will soon examine just how to interpret the selection function.

When ⌜if p, q⌝ is indicative, you can understand $f_c(p, w)$ as representing what will happen, relative to w, if p is true. Similarly, when ⌜if p, q⌝ is counterfactual, $f_c(p, w)$ represents what *would* happen, relative to w, if p *were* true. To cover both cases, say that $f_c(p, w)$ represents what will (would) happen if p is (were) true.

Understanding f_c in this way facilitates a parallel understanding of conditional belief. For each w' in $\text{Bel}_{S,w,t}$, find the p world se-

lected by the appropriate selection function. (Below, we will discuss just what the appropriate selection function is. For now, this can be understood—stated roughly and in terms of closeness—as: find the p world closest to w'.) Then collect these p worlds into a set, which we will call 'ConBel$_{S,w,t}(p)$', defined just below.[44] Just as each context c has its own selection function f_c, so too will each agent S (at world w and time t) have her own selection function, $f_{S,w,t}$, for reasons we explain below.

$$(11)\quad \text{ConBel}_{S,w,t}(p) =_{df} \{w'' \mid \exists w' \in \text{Bel}_{S,w,t} \colon f_{S,w,t}(p, w') = w''\}$$

We invite you to understand ConBel$_{S,w,t}(p)$ as representing what S believes will (would) happen if p is (were) true.

We turn now to a further development of Stalnaker's theory of conditionals, one that will end up playing a crucial role in our solution to the problem of (C)FWAs. In particular, Stalnaker is concerned with the role of conditionals in conversation—with how conditionals interact with the *context* set of a conversation, the set of worlds compatible with the presuppositions of the conversation's participants. Here is Stalnaker:

> [I]f the conditional is being evaluated at a world in the context set, then the world selected must, if possible, be within the context set as well....The idea is that when a speaker says 'If A', then everything he is presupposing to hold in the actual situation is presupposed to hold in the hypothetical situation in which A is true....it is at least a normal expectation that the selection function should turn first to [the worlds in the context set] before considering *counterfactual* worlds—those presupposed to be non-actual.[45]

There is a very natural functional basis for this idea: ordinarily, conversational participants simply are not interested in worlds outside the context set. Because those worlds are incompatible with what is

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[44] We are grateful to Justin Khoo (pers. comm.) for pointing out to us that ConBel$_{S,w,t}(p)$ is essentially the same as what Lewis would call the "image" of Bel$_{S,w,t}$ on p. See David Lewis, "Probabilities of Conditionals and Conditional Probabilities," *The Philosophical Review*, LXXXV (1976): 297–315. Khoo also notes that Gardenfors generalizes Lewis's notion of imaging in a way that might enable us to carry out our conditional belief account of want ascriptions without relying on Stalnaker's theory of conditionals, though for the sake of concision we do not explore that option here. See Peter Gardenfors, "Imaging and Conditionalization," this JOURNAL, LXXIX (1982): 747–60. For an extensive discussion of imaging in the semantics of 'wish' reports, see Kyle Blumberg, "Wishing, Decision Theory, and Two-Dimensional Content," this JOURNAL (forthcoming).

[45] Robert Stalnaker, "Indicative Conditionals," *Philosophia*, V, 3 (1975): 269–86, at pp. 275–76.

known to be the case, they are irrelevant to conditional reasoning—except, of course, when we are engaged in counterfactual reasoning. You can translate Stalnaker's thought into our formal vocabulary as follows, where C_c is the context set of a context c and f_c is the selection function of c:

(12) *Stalnaker's Context Set Constraint*
      $\forall w' \in C_c, \forall p$: if C_c contains p worlds, then $f_c(p, w') \in C_c$

Stalnaker uses this constraint to help understand indicative versus counterfactual conditionals. The basic idea is as follows.

Take some context c. If ⌜if p, q⌝ is counterfactual, then f_c must reach outside of C_c to find a p world, which according to the constraint, happens only when C_c does not contain p worlds—that is, when the conversational participants treat p as contrary to fact. In contrast, when ⌜if p, q⌝ is indicative, then f_c does *not* reach outside of C_c to find a p world. The constraint dictates that the p world it selects is within C_c, which is to say a p world that the conversational participants do not treat as contrary to fact. There will be such a p world in C_c, since indicative conditionals presuppose that the conversational participants do not treat p as contrary to fact.[46] We can see this presupposition by example:

(13) *Context*: We know it's going to rain tomorrow.
      #If it doesn't rain tomorrow, I'll be happy.

This example illustrates that in a context where it is taken for granted that it is going to rain tomorrow, it is infelicitous to use an indicative conditional whose antecedent is incompatible with that assumption.

Before moving to what all of this means for conditional belief, let us return to the question of how to interpret the formalism of the selection function and, by extension, how to interpret the formalism of Stalnaker's Context Set Constraint. We noted above that the selection function is often interpreted as being determined by some notion like closeness, similarity, or minimal difference. On this interpretation, Stalnaker's Context Set Constraint would entail that, as Stalnaker puts it, "All worlds within the context set are closer to each other than any worlds outside it."[47]

In advocating for Stalnaker's Context Set Constraint, we do not want to interpret the selection function by way of *intuitive* understand-

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[46] Kai von Fintel, "The Presuppositions of Subjunctive Conditionals," in Uli Sauerland and Orin Percus, eds., *The Interpretive Tract* (Cambridge, MA: Department of Linguistics, MIT, 1998), pp. 29–44.

[47] Stalnaker, "Indicative Conditionals," *op. cit.*, p. 275.

ings of closeness, similarity, or minimal difference. This is because various cases tell against such intuitive understandings.[48] (Stalnaker himself[49] has renounced his original interpretation of the selection function.) We give two such cases in a footnote.[50]

Just how, then, do we understand the selection function, if not by way of intuitive understandings of closeness, similarity, or mini-

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[48] See, for example, Kit Fine, "Critical Notice of Lewis, *Counterfactuals*," *Mind*, LXXXIV, 335 (1975): 451–58; David Lewis, "Counterfactual Dependence and Time's Arrow," *Noûs*, XIII (1979): 455–76; Robert Stalnaker, *Inquiry* (Cambridge, MA: MIT Press, 1984), pp. 126–31; Andrew Bacon, "Stalnaker's Thesis in Context," *Review of Symbolic Logic*, VIII, 1 (2015): 131–63; and Cian Dorr and John Hawthorne, *Conditionals* (New York: Oxford University Press, forthcoming).

[49] Stalnaker, *Inquiry, op. cit.*; and Robert Stalnaker, *Context* (New York: Oxford University Press, 2014).

[50] The first case, adapted from a case offered by an anonymous reviewer, concerns indicative conditionals as they relate to Stalnaker's Context Set Constraint. Imagine a scenario where conversational participants know that John is either 170 cm or 180 cm tall. The context set, by definition, then contains worlds where John is 170 cm tall, worlds where he is 180 cm tall, and no worlds where he is of any other height. Now take some world w in the context set where John is 170 cm tall. Other things equal, which kind of world is closer to w: one where John is 171 cm tall, or one where he is 180 cm tall? On an intuitive understanding of "closeness," one would think that the former worlds are closer than the latter worlds (surely 10 cm of difference makes for less closeness than 1 cm of difference!). Yet if Stalnaker's Context Set Constraint is interpreted as making a claim about intuitive closeness, it makes the opposite prediction. On this interpretation, it would tell us that "all worlds within the context set are [intuitively] closer to each other than any worlds outside it"—180-cm-worlds (that are within the context set) would be wrongly predicted to be intuitively closer to w than 171-cm-worlds (that are outside of the context set) are.

The second case concerns counterfactuals. The basic idea of the case comes from John Pollock (as quoted by Donald Nute, *Topics in Conditional Logic* (Dordrecht, the Netherlands: D. Reidel, 1980), p. 105); the details are from Boris Kment, "Counterfactuals and Explanation," *Mind*, CXV, 458 (2006): 261–310, pp. 296–97.

> I forgot my coat in the bar last night. In the course of the night two potential coat thieves passed by the coat, one at ten o'clock, the other at midnight. Each time, there was a non-zero chance that the coat would be stolen. The next morning I find to my relief that the coat is still where I left it. Now consider:
>
>   (a) If the coat had been stolen last night, it would have been stolen at midnight.
>
> There appears to be no reason for thinking that this counterfactual is true. We are inclined to think that, if the coat had been stolen, it might have been stolen at ten o'clock, or it might have been stolen at midnight.

The problem here is that if the selection function were determined by intuitive closeness or similarity, we would wrongly predict that (a) is true: worlds where the coat is stolen at midnight are, it would seem, intuitively more similar to the actual world than worlds where the coat is stolen at ten. Why? Because stolen-at-ten worlds must diverge from the actual world by no later than ten o'clock, while the stolen-at-midnight worlds may diverge from the actual world at a later time (perhaps exactly at midnight, or right before): such latter worlds diverge less from the actual world than the former worlds, and less divergence makes for more intuitive similarity.

mal difference? On this question we remain ecumenical, following Stalnaker in his more recent work.[51] So far as we can tell, we can follow any of a variety of theorists who interpret the selection function in a variety of ways. Lewis, for example, says that similarity *is* at play, just not the kind of similarity that is beholden to certain intuitions;[52] Bacon tells us that for indicative conditionals, the selection function picks at random from within the context set;[53] for Dorr and Hawthorne, the selection function is determined by a notion of closeness that is primitive.[54,55] All this said, we will—for convenience—talk of the selection function in terms of "closeness" throughout the paper.

We adopt Stalnaker's Context Set Constraint for two reasons that have nothing to do with any particular interpretation of the selection function. The first is what the constraint captures about conditionals in conversation, which we noted before: conversational participants have a special interest in worlds that they treat as live possibilities (that is, the worlds in the context set), a special interest that is manifested with indicative conditionals. Stalnaker's Context Set Constraint captures this special interest by making the selection function pick within the context set (whenever possible). That special interest is manifested elsewhere, too. It is apparent, for example, in Stalnaker's influential model of conversation, according to which assertions are proposals to update the context set, or "common ground."[56,57]

[51] Stalnaker, *Context, op. cit.*
[52] Lewis, "Counterfactual Dependence and Time's Arrow," *op. cit.*
[53] Bacon, "Stalnaker's Thesis in Context," *op. cit.*
[54] Dorr and Hawthorne, *Conditionals, op. cit.*
[55] Our purposes are also compatible with a view on which the selection function is closely tied with intuitive similarity, just not completely determined by it. We could say, for example, that whenever the selection function reaches outside the context set, it selects worlds on the basis of intuitive similarity. We could also say that whenever the selection function selects a world within the context set, it always selects on the basis of intuitive similarity: if there are p worlds in the context set, then for any world w in the context set, $f_c(p, w)$ is the world *within the context set* that is intuitively most similar to w. See Daniel Nolan, "Defending a Possible-Worlds Account of Indicative Conditionals," *Philosophical Studies*, CXVI, 3 (2003): 215–69, for an approach to indicative conditionals along these lines.
[56] Robert Stalnaker, "Pragmatic Presuppositions," in Robert Stalnaker, ed., *Context and Content* (New York: Oxford University Press, 1974), pp. 47–62.
[57] An anonymous reviewer points out that Stalnaker's Context Set Constraint, together with Stalnaker's semantics for conditionals, may fail with embedded conditionals. Consider a context c where we know that John has either $5 or $6 in his pocket, and that he just saw a penny on the ground and considered picking it up but did not.

(i)   If John has $5 in his pocket, then if John didn't have $5 in his pocket, he'd have $5.01.

The second reason—to which we now turn—is that we can use Stalnaker's Context Set Constraint to shed light on our proposed model of conditional belief and in turn on the semantics of 'want'.

The belief set, we suggest, is a natural analog of the context set. The context set is the set of worlds compatible with the presuppositions of the conversational participants—in other words, those worlds that the participants treat as live possibilities. Similarly, the belief set is the set of worlds compatible with the beliefs of the agent—in other words, those worlds that the agent treats as live possibilities.

Intuitively, (i) can be judged true in c. Yet it is predicted to be false; since John having \$6 is the only live possibility in c where John does not have \$5, the Context Set Constraint restricts f_c like this: f_c must select a \$6 world whenever it selects a ¬\$5 world. So when evaluating the consequent of the conditional, isolated below in (ii), the ¬\$5 world that f_c selects is not a \$5.01 world, as is required for (i) to be true.

(ii) If John didn't have \$5 in his pocket, he'd have \$5.01.

Our diagnosis of the problem, roughly put, is that when evaluating the consequent of a conditional, one temporarily adjusts the context by supposing one knows that the antecedent of the conditional is true. To evaluate (ii) embedded in (i), we suppose we know that John has \$5 in his pocket; then we entertain a proposition that is counterfactual relative to that supposition, namely, that John does not have \$5 in his pocket. Understood at a high level, Stalnaker's Context Set Constraint restricts the selection function only with propositions that are live; the Constraint does not restrict the selection function with propositions that are entertained as counterfactual. Yet as the previous paragraph shows, the *letter* of the Constraint does restrict it in this way: it restricts which ¬\$5 worlds f_c can select to evaluate (ii).

This diagnosis is captured, and the problem solved, if we index the selection function to the *local context* κ rather than the *(global) context* c, as Boylan and Schultheis do. See David Boylan and Ginger Schultheis, "The Qualitative Thesis," this JOURNAL, CXIX, 4 (2022): 196–229.. Their view is in (iii) and (iv). Let f_κ be κ's selection function and C_κ be κ's local context set:

(iii) *Localized Stalnakerian Semantics*
      $[\![\text{If p, q}]\!]^{\kappa,w} = 1$ iff $f_\kappa([\![\text{p}]\!]^\kappa, w) \in [\![\text{q}]\!]^{\kappa'}$, where $C_{\kappa'} = C_\kappa \cap [\![\text{p}]\!]^\kappa$.

(iv) *Stalnakerian Local Context Set Constraint*
      $\forall w' \in C_\kappa, \forall p$: if C_κ contains p worlds, then $f_\kappa(p, w') \in C_\kappa$.

When a sentence is unembedded, its local context is simply the global context, and so the local context set is simply the global context set. Crucially, though, (iii) says that the local context set for the consequent of a conditional results from taking the local context set for the conditional as a whole and intersecting it with the proposition contributed by the antecedent of the conditional. (Picturesquely: there is a temporary supposition that the antecedent is true.) So, $[\![(i)]\!]^{\kappa,w} = 1$ iff $f_\kappa([\![\text{John has \$5 in his pocket}]\!]^\kappa, w) \in [\![(ii)]\!]^{\kappa'}$, where $C_{\kappa'} = C_\kappa \cap [\![\text{John has \$5 in his pocket}]\!]^\kappa$. Because (ii) is calculated in this local context, κ', the problem is solved: there are no ¬\$5 worlds in $C_{\kappa'}$, so the new Constraint does not restrict which ¬\$5 worlds $f_{\kappa'}$ can select.

Because issues of embedded conditionals are orthogonal to our main aims, we continue to work, for simplicity, with (global) contexts rather than local contexts.

This analogy between belief set and context set is the foundation for a constraint on the belief set that is analogous to Stalnaker's Context Set Constraint. Adapting the passage from Stalnaker:

> When a conditional 'If A' is entertained with respect to the agent's beliefs, everything the agent believes to hold in the actual situation holds in the hypothetical situation in which A is true....it is at least a normal expectation that the selection function should turn first to the worlds in the belief set before considering *counterfactual* worlds—those believed by the agent to be non-actual.
> (us, riffing on Stalnaker)

Formally, we have:

(14) *Stalnakerian Belief Set Constraint*
      $\forall w' \in \text{Bel}_{S,w,t}$, $\forall p$: if $\text{Bel}_{S,w,t}$ contains p worlds, then $f_{S,w,t}(p, w') \in \text{Bel}_{S,w,t}$

We are now in a position to explain something that we said we would explain: why each agent S at each time t and world w needs her own selection function, $f_{S,w,t}$, just as each context c needs its own selection function, f_c. Each context needs its own selection function because in different contexts there are different context sets, and therefore Stalnaker's Context Set Constraint dictates that the selection function behaves differently in different contexts. Analogously, each agent at each time and world needs her own selection function. This is because different agents have different beliefs and the same agent has different beliefs at different worlds and times. The Stalnakerian Belief Set Constraint therefore dictates that the selection function behaves differently for different agents at different worlds at different times.[58]

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[58] In footnote 57, we noted that Stalnaker's Context Set Constraint faces a problem with embedded conditionals; the Stalnakerian Belief Set Constraint faces a parallel problem. We will not go into the details on the latter problem, since we proposed a solution to the former one, and (as noted) issues of embedded conditionals do not bear on our main aims. We will, however, suggest an extension of our solution from footnote 57 that not only solves the latter problem but also unifies constraints on the context set with constraints on the belief set.

In particular, Boylan and Schultheis—whose local-context-based theory we used to solve the problem for Stalnaker's Context Set Constraint—propose that an attitude predicate shifts the local context of its prejacent: for example, in evaluating ⌜S believes p⌝ in κ at t, w, 'p' is evaluated in a local context κ' whose local context set is $\text{Bel}_{S,w,t}$. See Boylan and Schultheis, "The Qualitative Thesis," *op. cit.* It is then a consequence of

(iii) *Localized Stalnakerian Semantics* (repeated from footnote 57)
      $[\![\text{If p, q}]\!]^{\kappa,w} = 1$ iff $f_\kappa([\![\text{p}]\!]^\kappa, w) \in [\![\text{q}]\!]^{\kappa'}$, where $C_{\kappa'} = C_\kappa \cap [\![\text{p}]\!]^\kappa$

Just as Stalnaker used his constraint to understand indicative and counterfactual conditionals, we will use the Stalnakerian constraint to understand indicative and counterfactual conditional belief. As you know, we represent an agent's conditional beliefs about p with $\text{ConBel}_{S,w,t}(p)$, which abbreviates $\{w'' \mid \exists w' \in \text{Bel}_{S,w,t}: f_{S,w,t}(p, w') = w''\}$.

When S believes $\neg p$, $\text{ConBel}_{S,w,t}(p)$ represents S's *counterfactual conditional beliefs*: what S believes *would* happen if p *were* true. This is because when S believes $\neg p$—that is, when $\text{Bel}_{S,w,t}$ contains no p worlds—$f_{S,w,t}$ must reach outside $\text{Bel}_{S,w,t}$ to find p worlds. In other words, $\text{ConBel}_{S,w,t}(p)$ is constructed only of worlds that S believes are contrary to fact.

Conversely, when S's beliefs are consistent with p, $\text{ConBel}_{S,w,t}(p)$ represents S's *indicative conditional beliefs*: what S believes *will* happen if p *is* true. That is because when S's beliefs are consistent with p—that is, when $\text{Bel}_{S,w,t}$ contains p worlds—the Stalnakerian Belief Set Constraint dictates that $\text{ConBel}_{S,w,t}(p)$ does not extend beyond $\text{Bel}_{S,w,t}$. $\text{ConBel}_{S,w,t}(p)$ contains only worlds in $\text{Bel}_{S,w,t}$, which is to say it does not contain worlds contrary to what S believes is fact.

One note before moving on. We have, following an influential tradition, understood the indicative–counterfactual distinction partly by way of the context set. This characterization tends to be rejected, though, by those who understand counterfactuals in terms of the past tense.[59] Adopting this alternative understanding may lead one to reject our *interpretation* (which uses counterfactuals) of the machinery we use below to construct the domain for 'want'. But we believe that adopting this alternative understanding does not thereby give one reason to reject the domain itself, or the predictions that one gets if one adopts it.

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that when evaluating ⌜S believes: if p, q⌝ in κ at t, w, 'q' is evaluated in a local context whose local context set is $\text{Bel}_{S,w,t}$ intersected with the denotation of 'p' (where the denotation of 'p' is calculated in a local context whose local context set is $\text{Bel}_{S,w,t}$). This consequence is what parallels our solution to the problem for Stalnaker's Context Set Constraint, a solution on which the consequent of a conditional is evaluated in a local context where it is supposed that the antecedent is true.

Assume that this view of attitude predicates is correct and consider a local context κ whose local context set is $\text{Bel}_{S,w,t}$. The Stalnakerian Belief Set Constraint then falls out as an instance of

(iv) *Stalnakerian Local Context Set Constraint* (repeated from footnote 57)
   $\forall w' \in C_\kappa, \forall p$: if C_κ contains p worlds, then $f_\kappa(p, w') \in C_\kappa$

if we replace the $f_{S,w,t}$ of the Stalnakerian Belief Set Constraint with the f_κ of (iv).

[59] For example, Ana Arregui, "When Aspect Matters: The Case of Would-Conditionals," *Natural Language Semantics*, xv, 3 (2007): 221–64; and Michela Ippolito, *Subjunctive Conditionals: A Linguistic Analysis* (Cambridge, MA: MIT Press, 2013).

IV. THE CONDITIONAL-BELIEF DOMAIN: SOLVING THE (C)FWA PROBLEM

Equipped with the approach to conditional belief from section III, we can solve the problem of (C)FWAs. Recall the basic set-up from section I. We have three views that jointly entail von Fintel's best-worlds semantics:

(5)   *Form of a Semantics for 'Want'* (we accept)
       $[\![$S wants p$]\!]^{c,w,t} = 1$ iff S in w at t prefers the p worlds in D to the $\neg p$ worlds in D.

(6)   *Belief Set Domain* (we reject)
       $D = \mathrm{Bel}_{S,w,t}$

(7)   *Best-Worlds Preference in a Domain* (we are ecumenical)
       S in w at t prefers the p worlds in D to the $\neg p$ worlds in D iff $\forall w \in \mathrm{best}_{S,w,t}(D)\colon\ p(w) = 1$.

As we have discussed, the solution to the problem of (C)FWAs lies in replacing the Belief Set Domain. In proposing a replacement below, we presuppose (5). But we are ecumenical on just what preference within a domain is. Our domain is compatible with the best-worlds conception (that is, (7)) and, for example, with Heim's conception (see section V).

Our domain is the union of $\mathrm{ConBel}_{S,w,t}(p)$ and $\mathrm{ConBel}_{S,w,t}(\neg p)$. In other words, the domain represents S's conditional beliefs about p and S's conditional beliefs about $\neg p$.

(15)   *Conditional Belief Domain* (our proposal)
       $D = \mathrm{ConBel}_{S,w,t}(p) \cup \mathrm{ConBel}_{S,w,t}(\neg p)$
       $= \{w'' \mid \exists w' \in \mathrm{Bel}_{S,w,t}\colon f_{S,t}(p, w') = w''\} \cup \{w'' \mid \exists w' \in \mathrm{Bel}_{S,w,t}\colon f_{S,t}(\neg p, w') = w''\}$

This domain works for (C)FWAs and non-(C)FWAs alike. In particular, it makes the same predictions for non-(C)FWAs as the standard semantics for 'want', while correcting the mistakes of that semantics for (C)FWAs. Below, we will examine non-(C)FWAs and (C)FWAs in turn.

IV.1. Non-(C)FWAs. Our truth conditions for non-(C)FWAs turn on the interaction between the agent's preferences and her *indicative* conditional beliefs:

(16)   *Truth Conditions for Non-(C)FWAs, Informally*
       If S believes neither p nor $\neg p$, $\ulcorner$S wants p$\urcorner$ is true iff:
       S prefers what she believes *will* happen if p *is* true to what she believes *will* happen if p *is* false.

For example, suppose that Li is unsure if there are any copies of *War and Peace* available, and therefore unsure if she will be able to read it.

Li neither believes that she will read *War and Peace* nor believes that she will not. And so (17) just below is a non-(C)FWA.

(17)   Li wants to read *War and Peace.*

On our account, (17) is true just if Li prefers what she believes will happen if she does (her friends will think she is an intellectual) to what she believes will happen if she does not (they will think she is boring).

Here is how these informal truth conditions capture the formalism above. Because we are dealing with a non-(C)FWA, Li's beliefs are compatible with her reading *War and Peace* and compatible with her not doing so. Both $\text{ConBel}_{Li,w,t}(War)$ and $\text{ConBel}_{Li,w,t}(\neg War)$—that is, our domain for (17)—are indicative with respect to $\text{Bel}_{Li,w,t}$ (where *War* is the proposition that Li reads *War and Peace*). This is to say that $\text{ConBel}_{Li,w,t}(War)$ and $\text{ConBel}_{Li,w,t}(\neg War)$ respectively represent what Li believes will happen if she reads *War and Peace* and what she believes will happen if she does not.

That is how the agent's beliefs enter the picture. Now consider her preferences. The form of a semantics for 'want' that we endorse, (5), says that $[\![\text{S wants p}]\!]^{c,w,t} = 1$ iff *S* prefers the *p* worlds in *D* to the $\neg p$ worlds in *D*. For us, *D* is the union of $\text{ConBel}_{S,w,t}(p)$ (a set of *p* worlds) and $\text{ConBel}_{S,w,t}(\neg p)$ (a set of $\neg p$ worlds). The form of the semantics then becomes this: $[\![\text{S wants p}]\!]^{c,w,t} = 1$ iff *S* prefers the worlds in $\text{ConBel}_{S,w,t}(p)$ to the worlds in $\text{ConBel}_{S,w,t}(\neg p)$, which is to say that *S* prefers the worlds that represent what she believes will happen if *p* is true to the worlds that represent what she believes will happen if *p* is false. This matches (16).

We have said that with non-(C)FWAs, our view makes the same predictions as the best-set-based view. That is because with non-(C)FWAs, our domain *is* the belief set.

To show this, we will first establish a key fact:

(18)   If $\text{Bel}_{S,w,t}$ contains *p* worlds, then $\text{ConBel}_{S,w,t}$ contains all and only the *p* worlds in $\text{Bel}_{S,w,t}$.

$\text{ConBel}_{S,w,t}(p)$ contains *all* the *p* worlds in $\text{Bel}_{S,w,t}$ because we place the widely accepted *centering* constraint on the selection function: for any proposition *p* and world w', if w' is a *p* world, then $f_{S,w,t}(p, w') = w'$.[60] And so if w' is a *p* world in $\text{Bel}_{S,w,t}$, then w' is in $\text{ConBel}_{S,w,t}(p)$.

$\text{ConBel}_{S,w,t}(p)$ contains *only* the *p* worlds in $\text{Bel}_{S,w,t}$ because of the Stalnakerian Belief Set Constraint. With non-(C)FWAs, there are *p*

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[60] See, for example, Stalnaker, "A Theory of Conditionals," *op. cit.*

worlds in $\text{Bel}_{S,w,t}$. The Stalnakerian Belief Set Constraint then dictates that $f_{S,w,t}$—and therefore $\text{ConBel}_{S,w,t}(p)$—never reaches outside of $\text{Bel}_{S,w,t}$, for all w' in $\text{Bel}_{S,w,t}$. So if w' is a p world in $\text{ConBel}_{S,w,t}(p)$, then w' is in $\text{Bel}_{S,w,t}$.

With (18) established, return to our domain, $\text{ConBel}_{S,w,t}(p) \cup \text{ConBel}_{S,w,t}(\neg p)$. With a non-(C)FWA, there are p worlds in $\text{Bel}_{S,w,t}$, so $\text{ConBel}_{S,w,t}(p)$ contains all and only the p worlds in $\text{Bel}_{S,w,t}$; with a non-(C)FWA, there are $\neg p$ worlds in $\text{Bel}_{S,w,t}$, so $\text{ConBel}_{S,w,t}(\neg p)$ contains all and only the $\neg p$ worlds in $\text{Bel}_{S,w,t}$. Put these two facts together and $\text{ConBel}_{S,w,t}(p) \cup \text{ConBel}_{S,w,t}(\neg p)$ contains all and only the worlds in $\text{Bel}_{S,w,t}$; in other words, our domain for non-(C)FWAs is $\text{Bel}_{S,w,t}$.

IV.2. (C)FWAs. While non-(C)FWAs operate entirely with the agent's indicative conditional beliefs, (C)FWAs operate half with the agent's indicative conditional beliefs and half with her counterfactual conditional beliefs.

Begin with CFWAs.

(19)   *Truth Conditions for CFWAs, Informally*
        If S believes $\neg p$, ⌜S wants p⌝ is true iff:
        S prefers what she believes *would* happen if p *were* true to what she believes *will* happen given that $\neg p$ *is* true.

Take, for instance, our CFWA from before, (2), repeated below:

(2)   Al wants to be promoted (but he believes he won't be).

(2) is true just if he prefers what he believes would happen if he were to be promoted (this is the counterfactual element) to what he believes will happen given that he will not be promoted (this is the indicative element[61]).

These informal truth conditions capture the above formalism as follows. $\text{ConBel}_{Al,w,t}(Promoted)$ is *counterfactual* with respect to Al's beliefs because he believes that he will not be promoted: $\text{ConBel}_{Al,w,t}(Promoted)$ represents what Al believes would happen if he were to be promoted. And $\text{ConBel}_{Al,w,t}(\neg Promoted)$ is *indicative* with respect to Al's beliefs because his beliefs are compatible with the possibility that—in fact, entail that—he will not be promoted: $\text{ConBel}_{Al,w,t}(\neg Promoted)$ represents what Al believes will happen given that he will not be promoted.

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[61] We informally paraphrase the indicative element as "*given that* he will not be promoted" rather than "*if* he is not promoted," because the latter tends to lead to the inference that the agent considers it to be possible that he will be promoted, which is not the case since this is a CFWA. Here and in what follows, we use "given that p" in situations where p is entailed by the agent's belief set.

Put another way, $\mathrm{ConBel}_{Al,w,t}(Promoted) \cup \mathrm{ConBel}_{Al,w,t}(\neg Promoted)$ consists of (i) the worlds where Al is promoted that are maximally close to worlds in $\mathrm{Bel}_{Al,w,t}$ and (ii) $\mathrm{ConBel}_{Al,w,t}$ itself. (i) holds because there are no *Promoted* worlds in $\mathrm{Bel}_{Al,w,t}$, so the $f_{S,w,t}$ function must reach outside of $\mathrm{Bel}_{Al,w,t}$ to find *Promoted* worlds; (ii) holds because of (18) and the fact that $\mathrm{Bel}_{Al,w,t}$ contains only ¬*Promoted*-worlds.

The domain for CFWAs, more generally, comprises (i) the *p* worlds maximally close to worlds in $\mathrm{Bel}_{S,w,t}$ and (ii) $\mathrm{Bel}_{S,w,t}$ itself. By adopting this domain, and an analogous one for FWAs (see just below), our domain embodies—in a highly constrained way—Heim's[62] and Rubinstein's[63] idea that want ascriptions are sometimes evaluated against a superset of the agent's belief set.

Turn now to FWAs, whose truth conditions are the mirror image of those for CFWAs:

(20)   *Truth Conditions for CFWAs, Informally*
       If *S* believes *p*, ⌜S wants p⌝ is true iff:
       S prefers what she believes *will* happen given that *p is* true to what
       she believes *would* happen if ¬*p were* true.

Take our FWA from above, repeated here:

(1)   I want it to rain tomorrow (and I believe it will).

On our view, (1) is true just if I prefer what I believe *will* happen given that it will rain tomorrow (the boring company picnic will be canceled) to what I believe *would* if it did not rain tomorrow (I would have to go to the picnic).

To see why these are the truth conditions, run the mirror of the reasoning we ran for CFWAs. What you will conclude is this: While the domain in general for CFWAs is $\mathrm{Bel}_{S,w,t}$ plus the *p* worlds maximally close to $\mathrm{Bel}_{S,w,t}$ ($\mathrm{Bel}_{S,w,t}$ is counterfactual with respect to *S*'s beliefs), the domain for FWAs is $\mathrm{Bel}_{S,w,t}$ plus the ¬*p* worlds maximally close to $\mathrm{Bel}_{S,w,t}$ ($\mathrm{Bel}_{S,w,t}$ is factual with respect to *p*).

IV.3. Summing Up. Let us zoom out. Our proposed domain is $\mathrm{ConBel}_{S,w,t}(p) \cup \mathrm{ConBel}_{S,w,t}(\neg p)$. The makeup of this set differs among non-(C)FWAs, CFWAs, and FWAs. Specifically, the domain takes the following forms, as we saw in sections IV.1 and IV.2:

[62] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*
[63] Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*

Ascription Type	Our Domain
Non-(C)FWA	$\text{Bel}_{S,w,t}$
FWA	$\text{Bel}_{S,w,t}$ and $\neg p$ worlds maximally close to $\text{Bel}_{S,w,t}$
(C)FWA	$\text{Bel}_{S,w,t}$ and $\ \ p$ worlds maximally close to $\text{Bel}_{S,w,t}$

The differences between these domains lie in the differences in whether p and $\neg p$ are respectively indicative or counterfactual with respect to the agent's beliefs. In all three of the cases, the agent's conditional beliefs form the core of the truth conditions, which we summarize in (21). (Recall that for any proposition q, $\text{ConBel}_{S,w,t}(q)$ represents what S believes will (would) happen if q is (were) true.)

(21) *Truth Conditions for 'Want', Informally*
⌜S wants p⌝ is true iff:
S prefers what she believes will (would) happen if p is (were) true to what she believes will (would) happen if $\neg p$ is (were) true.

While this fulfills our core goal of solving the problem of (C)FWAs, we would like, before closing, to address a few issues that will help to better contextualize our proposal with respect to other ideas, problems, and facts found in the literature. In particular, we will clarify the relationship between the role that conditionals play in our semantics versus the role they play in Heim's (section v); comment on another problem for the belief-set-based approach to want ascriptions first pointed out by Villalta[64] (section VI); note how our view might be generalized to account for want ascriptions involving contextual alternatives as identified by Villalta[65] and Lassiter[66] (section VII); and say a few words about some ramifications that our proposal has for the broader landscape of desire predicates, beyond just 'want' (section VIII).

V. CONDITIONALS IN HEIM'S SEMANTICS

It is a familiar thought that conditionals are intertwined with the semantics of 'want'. Indeed, the thought is central to Heim's approach to 'want'. She writes:

The analysis of desire verbs I want to pursue here is sketched in Stalnaker (1984, p. 89): "wanting something is preferring it to certain relevant alternatives, the relevant alternatives being those possibilities that the

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[64] Villalta, "Mood and Gradability," *op. cit.*
[65] *Ibid.*
[66] Lassiter, "Measurement and Modality," *op. cit.*

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.[67] (emphasis ours)

We, of course, agree that there are hidden conditionals within 'want' reports; indeed, Heim's intuition is our major inspiration. To better understand how Heim's view relates to ours, it will help to locate the "hidden conditional" within her semantics.

Heim states her semantics in a dynamic framework. Stated in a static framework, and with our nomenclature, the semantics is this. As before, $w' <_{S,w,t} w''$ means that S in w at t prefers w' to w'':

(22)   *Heim's Semantics*[68]
$[\![\text{S wants p}]\!]^{c,w,t} = 1$ iff $\forall w' \in \text{Bel}_{S,w,t}$:
$f_{S,w,t}(\text{Bel}_{S,w,t} \cap p, w') <_{S,w,t} f_{S,w,t}(\text{Bel}_{S,w,t} \cap \neg p, w')$.

Put into words: ⌜S wants p⌝ is true just if, for every world w in S's belief set, S prefers the closest world in her belief set where p is true to the closest world in her belief set where $\neg p$ is true.

Now, let us identify just where the "hidden conditional" lies within this semantics. We can, as we did with von Fintel's semantics, factor Heim's semantics into three parts:

(5)   *Form of a Semantics for 'Want'*
$[\![\text{S wants p}]\!]^{c,w,t} = 1$ iff S in w at t prefers the p worlds in D to the $\neg p$ worlds in D.

(6)   *Belief Set Domain*
$D = \text{Bel}_{S,w,t}$.

(7)   *Heimian Preference in a Domain*
S in w at t prefers the p worlds in D to the $\neg p$ worlds in D iff $\forall w' \in D$:
$f_{S,w,t}(D \cap p, w') <_{S,w,t} f_{S,w,t}(D \cap \neg p, w')$.

On this way of viewing Heim's semantics, the "hidden conditional" is *in the notion of preference within a domain*. We, in contrast, propose a conditional *in the construction of the domain*. And our view is compatible

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[67] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*, p. 39.
[68] Heim's selection function returns multiple worlds rather than just one (see footnote 43), and she uses not the agent's belief set but rather a superset of it that screens off intention-grounded beliefs (see footnote 15). These differences are not relevant here.

with the Heimian preference within a domain (just as it is compatible with a best-worlds notion of preference in a domain).[69]

VI. VILLALTA'S PROBLEM

Although we have solved the (C)FWA problem, one that vexed the belief-set approach, we inherit, and do not solve, another problem that the belief-set approach faces. This other problem, identified by Villalta, is that the belief-set approach validates the following inference:[70]

(23) a. *S* wants *p*.
    b. *S* believes that *p* iff *q*.
    c. ⇒ *S* wants *q*.

The inference in (23) runs counter to intuition. The following instance of (23), for example, is not good reasoning:

(24) a. Johnson wants to eat pizza.
    b. Johnson believes that he'll get heartburn iff he eats pizza.
    c. ⇒ Johnson wants to have heartburn.

If the want ascriptions in question are non-(C)FWAs, then our semantics faces the problem: it incorrectly validates the invalid inferences. This is because with non-(C)FWAs, our semantics is exactly the same as the belief-set-based semantics. In other words, the domain is the belief set.

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[69] How to adjudicate between best-worlds preference and Heimian preference? One consideration comes from a (purported) counterexample to the best-worlds approach, due to Kyle Blumberg, "A Problem for the Ideal Worlds Account of Desire," *Analysis*, LXXXII, 1 (2022): 7–15. Another is that the two approaches make different predictions about the monotonicity of want ascriptions. Questions about monotonicity are well beyond the scope of this paper (see Crnič, "Getting *Even*," *op. cit.*, for discussion), and we do not want to take an official stance on this thorny issue. We can, however, point out one connection that our proposal bears to the debate. Von Fintel argues that apparent cases of non-monotonicity in desire ascriptions are monotonic after all, once we take into account how the domain of a desire ascription shifts with the context (Von Fintel, "NPI Licensing, Strawson Entailment, and Context Dependency," *op. cit.*). One way in which this can happen is when the agent's beliefs change: on the belief-set-based approach, this has a concomitant effect on the domain of the desire ascription. But not all apparent cases of non-monotonicity in desire ascriptions are attributable to changes in belief, and some such cases are argued by von Fintel (*ibid.*), building on prior work by Linebarger (Marcia C. Linebarger, "Negative Polarity and Grammatical Representation," *Linguistics and Philosophy*, X (1987): 325–87, to involve implicit conditionalization. Our conditional-belief domain, when coupled with best-worlds preference, can be viewed as a continuation in this vein, fleshing out one way in which the domain can shift from one desire ascription to the next: moving from a (C)FWA to a non-(C)FWA or vice versa, even as the agent's belief set is held constant.

[70] Villalta, "Mood and Gradability," *op. cit.*

Suppose, for example, that (24-a) and (24-c) are non-(C)FWAs. (Imagine that Johnson will eat pizza if it is available, but he is unsure if it is available, and so unsure if he will eat it.) On our view, the domain for a non-(C)FWA is the agent's belief set. So, by (24-a), pizza worlds are best in Johnson's belief set; by (24-b), the pizza worlds in Johnson's belief set are heartburn worlds; so, heartburn worlds are best in Johnson's belief set, which is to say that (24-c) is true.

Happily, there are various solutions to this problem that can be combined with our view: the semantics of Crnič,[71] Phillips-Brown,[72] and Dandelet.[73,74] Each of these semantics says that the domain contains not possible worlds, but rather entities of some different kind: *situations* (see, for example, Kratzer[75]), *possibilities* (see, for example, Humberstone[76]), or *propositions*, depending on which of the authors you ask. We will not go into the details, but one may use our basic, conditional-belief recipe for constructing the domain with any of these views, substituting worlds (from our view) with any of these other types of entities.

VII. CONTEXTUAL ALTERNATIVES: HOW TO GENERALIZE OUR VIEW

Our domain for ⌜S wants p⌝ is generated simply by the prejacent and its negation: it represents *S*'s conditional beliefs about *p* and about ¬*p*. Data from Villalta[77] and Lassiter,[78] however, suggest the connection between the prejacent and its negation (on the one hand) and the domain (on the other) may not be quite so simple. In this section, we present Villalta's data and propose a generalization of our view that can accommodate it.

Here is a case structurally analogous to one of Villalta's.[79] Poe is the Secretary of State, and he prefers diplomacy to violence. The Presi-

[71] Crnič, "Getting *Even*," *op. cit.*

[72] Milo Phillips-Brown, "I Want To, But. . .," in Robert Truswell et al., eds., *Proceedings of Sinn und Bedeutung 21* (2018), pp. 951–68; and Phillips-Brown, "Some-Things-Considered Desire," *op. cit.*

[73] Sophie Dandelet, "Partial Desires, Blinkered Beliefs," unpublished manuscript.

[74] As mentioned in section II, Rubinstein also offers a solution to Villalta's problem, one that involves giving want ascriptions an underspecified, context-dependent domain (Rubinstein, "Straddling the Line between Attitude Verbs and Necessity Modals," *op. cit.*). For the reasons articulated in that section, however, we do not adopt this solution.

[75] Angelika Kratzer, "Situations in Natural Language Semantics," in Edward N. Zalta, ed., *The Stanford Encyclopedia of Philosophy* (Winter 2021 Edition), https://plato.stanford.edu/archives/win2021/entries/situations-semantics/.

[76] I. L. Humberstone, "From Worlds to Possibilities," *Journal of Philosophical Logic*, x, 3 (1981): 313–39.

[77] Villalta, "Mood and Gradability," *op. cit.*

[78] Lassiter, "Measurement and Modality," *op. cit.*

[79] Villalta, "Mood and Gradability," *op. cit.*, p. 469.

dent, however, is a hawk. The country faces two enemies: the pretty bad guys and the really bad guys. Poe had proposed to the President three options, which in descending order of Poe's preference are: negotiate with the really bad guys, bomb the really bad guys, bomb the pretty bad guys. The President immediately dismisses the idea of negotiating with the really bad guys and says she will soon decide between the remaining two options, where all caps indicates emphasis:

(25)   Poe wants to bomb the REALLY BAD GUYS.
(26)   Poe wants to BOMB the really bad guys.

One can hear (25) as true and (26) as false. The reason for this is fairly intuitive: in (25), emphasis on *really bad guys* evokes a comparison to bombing the *pretty bad guys*, whereas in (26), emphasis on *bomb* evokes a comparison to *negotiating* with the really bad guys. Spelling this out a bit more, (25) is true because Poe prefers what he believes will happen if he bombs the *really bad guys* (loss of life) to a certain contextual alternative—what he believes will happen if he bombs the *pretty bad guys* (loss of life, but more gratuitous because the pretty bad guys are only pretty bad, rather than really bad). In contrast, (26) is false, one feels, because Poe *dis*prefers what he believes will happen if he *bombs* the really bad guys (loss of life) to a different contextual alternative than before—in this case, the alternative is what he believes will happen if he *negotiates* with the really bad guys (no loss of life).

Our blueprint for constructing the domain cannot straightforwardly account for this type of sensitivity to contextual alternatives. Our domain simply compares p to $\neg p$; there is no room for the type of shift in alternatives that Poe's case suggests. Fortunately, there is a straightforward way to generalize our blueprint that can account for this, a generalization that preserves our core insight that conditional belief is central to constructing the domain. We postulate—as Villalta,[80] Lassiter,[81] and Anand and Hacquard[82] do—a contextually determined set of propositions, A_c, against which ⌜S wants p⌝ is evaluated in a context c. The domain need not represent S's conditional beliefs about p and $\neg p$ in every context, but rather her conditional beliefs about each member of A_c (which in certain contexts may well include only p and $\neg p$). Specifically, where D_c is the domain in c:

(27)   *Generalized Conditional Belief Domain*
        $D_c = \bigcup\{\mathrm{ConBel}_{S,w,t}(q) \mid q \in A_c\}$

[80] Villalta, "Mood and Gradability," *op. cit.*
[81] Lassiter, "Measurement and Modality," *op. cit.*
[82] Pranav Anand and Valentine Hacquard, "Epistemics and Attitudes," *Semantics and Pragmatics*, VI, 8 (2013): 1–59.

This account can capture the intuitive diagnosis of Poe's case. In the context c where (25) is true, A_c is {*bomb the really bad guys, bomb the pretty bad guys*}, and so D_c is $\bigcup$ {ConBel$_{Poe,w,t}$(*bomb the really bad guys*), ConBel$_{Poe,w,t}$(*bomb the pretty bad guys*)}. This is to say that the domain represents what Poe believes will happen if he bombs the really bad guys and what he believes will happen if he bombs the pretty bad guys—exactly what we were looking for. In the context c' where (26) is false, $A_{c'}$ is {*bomb the really bad guys, negotiate with the pretty bad guys*}, and so $D_{c'}$ is $\bigcup$ {ConBel$_{Poe,w,t}$(*bomb the really bad guys*), ConBel$_{Poe,w,t}$(*negotiate with the really bad guys*)}. In other words, the domain represents what Poe believes will happen if he bombs the really bad guys and what he believes will happen if he negotiates with them—again, exactly what we were looking for.[83]

This is how we can account for Villalta's alternative-sensitive data (and Lassiter's too, although we will not go into that here). We can account for all of the data we have encountered previously, too, because when $A_c = \{p, \neg p\}$, the new, generalized domain, $\bigcup$ {ConBel$_{S,w,t}$(p), ConBel$_{S,w,t}$(¬p)}, is exactly the same set as our previous domain, ConBel$_{S,w,t}$(p) $\cup$ ConBel$_{S,w,t}$(¬p). We would like to tentatively propose—following Anand and Hacquard,[84] whose semantics is alternative-sensitive, albeit within a different framework—that the default for A_c is $\{p, \neg p\}$, and so the default domain is our previous domain.

In the next sections we will, for ease of exposition, return to discussing the previous domain, but what we say applies just as well to this generalized domain.

VIII. THE LANDSCAPE OF DESIRE PREDICATES

What is the analytical relationship between 'want' and its cousins 'wish', 'be glad (that)', and 'hope'? Our proposal enables the view that all four of these predicates share the same core semantics, including the conditional belief domain:

(28)   *Form of a Semantics for 'Wants'/'Hopes'/'Wishes'/'Is Glad That'*
   ⟦S {wants/hopes/wishes/is glad that} p⟧ = 1 iff S prefers the p worlds in D to the $\neg p$ worlds in D.

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[83] Ultimately, a comprehensive treatment would need to show how $A_c/A_{c'}$ is determined not just by the discourse context but also by the intonational emphasis in the want ascription being evaluated. We do not undertake this here, because it would take us too far afield, but the point to be stressed is that the kind of pattern we see here instantiates a much broader linguistic phenomenon known as focus sensitivity. For discussion and references, see Villalta, "Mood and Gradability," *op. cit.* So what we are suggesting here recycles technology independently needed elsewhere in the grammar.

[84] Anand and Hacquard, "Epistemics and Attitudes," *op. cit.*

(29) *Conditional Belief Domain for 'Wants'/'Hopes'/'Wishes'/'Is Glad That'*
$D = \mathrm{ConBel}_{S,w,t}(p) \cup \mathrm{ConBel}_{S,w,t}(\neg p)$
$= \{w'' \mid \exists w' \in \mathrm{Bel}_{S,w,t}\colon f_{S,w,t}(p, w') = w''\} \cup \{w'' \mid \exists w' \in \mathrm{Bel}_{S,w,t}\colon f_{S,w,t}(\neg p, w') = w''\}$

(30) *Best-Worlds Preference in a Domain for 'Wants'/'Hopes'/'Wishes'/'Is Glad That'*
S in *w* at *t* prefers the *p* worlds in *D* to the ¬*p* worlds in *D* iff
$\forall w \in \mathrm{best}_{S,w,t}(D)\colon\ p(w) = 1.$

What distinguishes these four desire predicates from each other (or at least, one crucial dimension along which they are distinguished) are the presuppositions that they impose on the relationship between *p* and *S*'s belief set. 'Want' has no such presupposition, whereas—in line with much previous literature—'wish' presupposes that *S* does not believe *p*, 'be glad' presupposes that *S* does believe *p*, and 'hope' presupposes that *S* neither believes *p* nor believes ¬*p*:

(31) *Doxastic Presuppositions of Desire Predicates*

'want'	none	
'wish'	*S* believes ¬*p*	$\mathrm{Bel}_{S,w,t} \subseteq \neg p$
'be glad'	*S* believes *p*	$\mathrm{Bel}_{S,w,t} \subseteq p$
'hope'	*S* neither believes *p* nor ¬*p*	$\mathrm{Bel}_{S,w,t} \nsubseteq p \wedge \mathrm{Bel}_{S,w,t} \nsubseteq \neg p$

These doxastic presuppositions interact with our uniform Conditional Belief Domain to ensure that the domain for 'hope' ends up simply being *S*'s belief set, while the domain for 'wish' ends up being *S*'s belief set expanded to include maximally close *p* worlds, and the domain for 'be glad' ends up being *S*'s belief set expanded to include maximally close ¬*p* worlds.

That the domain for 'hope', unlike 'want', is *S*'s belief set and that 'hope' but not 'want' requires the subject to believe the desired proposition to be possible finds support in such previous work.[85] Compare, for example, Heim's (3), repeated below, and a variant with 'hope' in place of 'want':

(3)   I *want* this weekend to last forever (but of course I know it will be over in a few hours).

[85] Paul Portner, "Situation Theory and the Semantics of Propositional Expressions," PhD diss., University of Massachusetts, Amherst, 1992; Portner and Rubinstein, "Mood and Contextual Commitment," *op. cit.*; Anand and Hacquard, "Epistemics and Attitudes," *op. cit.*; Alex Silk, "Commitment and States of Mind with Mood and Modality," *Natural Language Semantics*, XXVI (2018): 125–66; and Blumberg, "Beliefs, Desires and Descriptions," *op. cit.*

(32)   ??I *hope* this weekend will last forever (but of course I know it will
          be over in a few hours).

As we know, (3) does *not* to commit the speaker to belief in the
possibility of a never-ending weekend; she believes that the weekend
will soon be over. In contrast, (32) is infelicitous exactly because the
'hope' ascription *does* seem to commit the speaker to the possibility of
a never-ending weekend, which is what she disavows in the parenthetical.

Moreover, our domains for 'wish' and 'be glad' end up being essentially the same as what Heim proposes for these two predicates,[86]
though we improve on her approach in that we derive these domains
from the interaction between their doxastic presuppositions and a
uniform domain rather than stipulating these domains lexically for
each predicate.

Our rethinking of the boundaries between these four desire predicates does raise an important question. It is well documented that
when two lexical items differ only in such a way that one is presuppositionally stronger, the presuppositionally weaker member typically comes across as infelicitous in contexts where the stronger presupposition is satisfied—this is Heim's Maximize Presupposition constraint.[87] Observe, for example, the following sentences. In each case,
choosing the first word in the disjunct sounds odd because there is
an alternative word that better satisfies uncontroversial background
assumptions (that there is only one sun, that I have exactly two eyes,
and that 2+2=4, respectively).

(33)   *Examples of Maximize Presupposition*
          a. {??*A*/ *The*} sun is shining.
          b. {??*All*/ *Both*} of my eyes are closed.
          c. John {??*believes*/ *knows*} that 2+2=4.

Why, then, is 'want' possible even in contexts where the presuppositions of 'wish', 'be glad', or 'hope' would be satisfied? We begin by
noting that under some conditions, it may be possible to detect a kind
of weak Maximize Presupposition effect. Blumberg, for example, says
that it would be odd to say, "Bill knows that Mary has a terminal illness. He *wants* her to get better." (Compare: ". . . He *wishes* she could
get better.") Blumberg even invokes Maximize Presupposition to ex-

[86] Heim, "Presupposition Projection and the Semantics of Attitude Verbs," *op. cit.*
[87] Irene Heim, "Artikel und definitheit," in Arnim von Stechow and Dieter Wunderlich, eds., *Semantik: Ein internationales Handbuch der zeitgenössischen Forschung* (Berlin: De Gruyter, 1991), pp. 487–535.

plain why it is odd.[88] But the effect, if there is one, is rather weak, and we suspect that it may reflect a stylistic preference (think of a careful writer wanting to choose the most appropriate, most precise word) rather than being the business of grammar. And we further-more suspect that the reason for this is that there are additional se-mantic differences distinguishing 'want' from its presuppositionally stronger counterparts that prevent genuine Maximize Presupposition competition.

While it will be beyond the scope of this paper to explore these se-mantic differences in detail, we can offer some suggestive data that illustrate some of them. As for 'want' versus 'hope', Portner and Ru-binstein note, for example, the contrast in acceptability between the two predicates in the following:

(34) He doesn't fully realize it yet, but Ron *wants/??hopes* to date Hermione.[89]

The contrast persists even on the assumption that Ron believes dating Hermione to be a possibility.[90] Portner and Rubinstein's own proposal is that 'hope' but not 'want' involves the agent's contextual commit-ment to a preference, one requirement of which is the agent's own awareness of the preference. Regardless of whether we adopt this par-ticular approach, though, the crucial point is that 'want' differs from 'hope' in ways that prevent Maximize Presupposition competition.

As for 'want' versus 'be glad', we note the following FWA due to Iatridou:

(35) I live in Bolivia because I *want* to live in Bolivia.[91]

Observe that its 'be glad' counterpart sounds quite odd:

(36) ??I live in Bolivia because I *am glad* that I live in Bolivia.

The same contrast is apparent in comparing Heim's (1992) FWA (see footnote 15 above) with its 'be glad' variant:

(37) John hired a babysitter because he {*wants* to go/??*is glad* that he'll go} to the movies tonight.

For reasons that are not entirely clear to us, it appears that states of wanting can be used in *because*-clauses to explain certain kinds of be-

[88] Blumberg, "Beliefs, Desires and Descriptions," *op. cit.*
[89] Portner and Rubinstein, "Mood and Contextual Commitment," *op. cit.*, p. 471.
[90] *Ibid.*
[91] Sabine Iatridou, "The Grammatical Ingredients of Counterfactuality," *Linguistic Inquiry*, XXXI, 2 (2000): 231–70, at p. 243.

havior (living in Bolivia, hiring a babysitter) in ways that states of being glad cannot. Whatever the reason is, it points to some semantic difference between 'want' and 'be glad'—beyond what they presuppose or not about the agent's belief set—that plausibly blocks Maximize Presupposition competition.

Finally, what about 'want' versus 'wish'? We are not aware of any CFWA that cannot be felicitously paraphrased with a wish ascription. Take, for example, (38), just below, which can be felicitously paraphrased by its 'wish' counterpart, (39):

(38)   I *want* this weekend to last forever.
(39)   I *wish* this weekend would last forever.

But in general the reverse is not true. Specifically, wish ascriptions can be used for preferences about past counterfactual scenarios, for example:

(40)   I *wish* I had been there yesterday.

Here in (40), a want paraphrase sounds rather awkward:

(41)   ??I *want* to have been there yesterday.

This suggests that 'want' but not 'wish' comes with the requirement that the desired proposition must be temporally simultaneous or future-oriented with respect to the time of the desire. And we suggest that this difference—or whatever more fundamental difference might be responsible for it—may account for the lack of Maximize Presupposition competition between 'want' and 'wish'.

IX. CONCLUSION

The goal of this paper was to revise the belief-set approach to want ascriptions in a way that solves the well-known problem of (C)FWAs, while doing as little damage as possible to all of the virtues of the belief-set approach. Indeed, the persistence of the belief-set approach in spite of its well-known shortcoming is a testament to the many results that it does get right, and we offer the proposal in this paper as one among many contributions leading to a more sophisticated, more accurate version of the belief-set approach.

In carrying out our goal, we have shown that conditional belief—and more specifically a model of conditional belief inspired by Stalnaker's approach to conditional sentences—offers an elegant way of unifying non-(C)FWAs, CFWAs, and FWAs under a single semantics that strikes the right balance between rigidity and flexibility in characterizing the domain.

Finally, we have reflected on the consequences of our proposal for rethinking the boundary between 'want' in relation to its cousins 'hope', 'wish', and 'be glad', in ways that contribute to increasingly fine-grained and accurate lexical semantics for desire predicates.

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