I want to, but...

I want to eat pizza, but I don't want heartburn; I want to pass, but I don't want to study; I want to go to the concert, but I don't want to take the long car ride. Too often we can't get one thing that we want without another that we don't, yet this fact can't be captured by any of the prominent semantics for 'want', given two standard contraints. These accounts predict that when two desire ascriptions *conflict*—when the agent wants two things, but believes she can't get both—the two ascriptions can't both be true.

The prominent semantics treat 'want' on the model of deontic modals—'ought', 'must', 'should'.[1,2] I can't show here that each of traditional approaches to deontic modals fails to allow for conflicting desire ascriptions.[3] What I can do is show the general form of the problem with a case study: Kratzer's [1981] and von Fintel's [1999] strategy of using the classic semantics for deontic modals for 'want'. The classic semantics, given two standard metasemantic constraints, can't allow for conflicting desire ascriptions (§1). After showing this, I'll consider the two most natural ways to allow for conflicting desire ascriptions (the only two proposed in the literature): dropping one of the two constraints. Dropping either indeed allows for conflicting desire ascriptions, but at the cost of unacceptable predictions elsewhere (§2, §3). I'll close with a diagnosis of the problem. In short, it is unclear how to capture the way in which what we desire depends on what we belief. If we can't capture the relationship between belief and desire, we won't be able to

[1] In addition to the best-worlds semantics I'll discuss, these semantics include: an "other things equal" semantics [Heim, 1992], a variant of the best-worlds semantics [Portner, 1997], an "absolute preference" semantics [Geurts, 1998], a decision-theoretic semantics [van Rooij, 1999, Levinson, 2003, Lassiter, 2011], a contrastive semantics [Villalta, 2008]. Deontic modal analogs of these views are given by, e.g. Kratzer [1981, 1991] (best-worlds); Goble [1996], Lassiter [2011] (decision-theoretic); Jackson [1985], Cariani [2013] (contrastive).

[2] There's another prominent approach to 'want', traditional in the philosophical literature and recently proposed by Condoravdi and Lauer [2016]. Roughly: ⌜A wants p⌝ is true iff A has a desire that is satisfied in exactly the p-worlds. McDaniel and Bradley [2008] and Fara [2013] criticize the approach; Braun [2015] replies to Fara.

[3] Strictly speaking, what most fail to allow for are *strongly conflicting* desire ascriptions: where ⌜A wants p⌝ and ⌜A wants p⌝ are both true and the agent believes that: p iff $\neg q$. The arguments I give here apply just as well with strongly conflicting desire ascriptions.

give the right semantics for desire ascriptions (§4).

1 The problem, in the classic semantics for deontic modals

The classic semantics for deontic modals has two parts: a modal base and an ordering source. I will elide details that aren't necessary to see the problem: the modal base, as I'll understand it, is a set of worlds, and the ordering source provides a ranking of the worlds in the modal base.

> *Classic semantics.* ⌜A wants p⌝ is true iff *p* obtains in every best world in the modal base, where 'best' means ranked highest by the ordering source.

The right side of the biconditional is an all-purpose semantics for deontic modals (and other modals). To tailor it for 'want', we have to specify which worlds make up the modal base and what the ordering source is. In other words, we have to specify which worlds are relevant to evaluating desire ascriptions, and the basis on which they're ranked.

The modal base

Which worlds are relevant to evaluating ⌜A wants p⌝? More specifically, ⌜A wants p⌝ is true iff *p* obtains in certain worlds—which? Not *all* worlds. Say that I want sushi. There are worlds out there in the total space of worlds where eating sushi carries a lifetime prison sentence, yet these worlds seem irrelevant to my desire. Why? Because they're not possibilities that I take seriously; I believe that there are no laws against eating sushi, so worlds where there are don't figure into my desire for sushi. This suggests that in general, which worlds figure into a desire are somehow constrained by what the agent believes. Along these lines, Stalnaker hypothesizes that

> wanting something is preferring it to certain relevant alternatives, the relevant alternatives being those possibilities that the agent believes will be realized if he does not get what he wants. [Stalnaker, 1984, p. 89]

We can translate this thought into our semantics by identifying the worlds relevant to a evaluating a desire ascription—the modal base—with the worlds compatible with what the agent believes—the agent's *belief set*. This identity has been standardly assumed.[4] We then have the following metasemantic constraint:

[4] E.g. Heim [1992], Geurts [1998], von Fintel [1999], Levinson [2003], and Lassiter [2011] all adopt the belief modal base constraint or a close variant.

> *Belief modal base constraint.* Given an agent A, a world, and a time, there is a single modal base available for evaluating ⌜A wants p⌝. It is A's belief set in that world, at that time.[5]

The ordering source

What about the ordering source—on what basis does it rank the worlds in the modal base? The Stalnaker quote suggests that the basis for the ranking is what the agent prefers, or desires. This much is unanimously agreed upon in the literature. Indeed, it is hard to see how truth conditions for desire ascriptions could depend on a ranking based on anything other than what the agent prefers or desires. There is a further standard assumption: that what's relevant to a desire ascription is not what the agent prefers in some respect or other, but what she prefers *full stop*.

Return now to the classic framework: the ordering source represents what the agent prefers, full stop, by ranking one world higher than another iff the agent prefers the first to the second, full stop.

> *Unique ordering source constraint.* Given an agent A, a world, and a time, there is a single ordering source available for evaluating ⌜A wants p⌝. It represents what A prefers, full stop, in that world at that time.

By combining these metasemantic constraints with the classic semantics, we get:

> *Truth conditions.* ⌜A wants p⌝ is true iff *p* obtains in every best world in A's belief set, where 'best' represents what A prefers most, full stop.

The problem

Now consider a case where these truth conditions go wrong.

> The Who are performing tonight, and Al's parents are deciding whether to take the long drive to the concert. (Al knows he'll see the concert only if he take the drive.) Al's loves The Who, but he gets very car-sick. The drive isn't at all worth it. Al begs his parents to not take the drive.

(1) Al wants to see the concert.

[5] When the agent either believes *p* or believes $\neg p$, we will need to go outside of the belief set [Heim, 1992]. I'll only discuss cases where the agent neither believes *p* nor believes $\neg p$.

(2) Al doesn't want to take the long drive [= Al wants to not take the long drive].

Intuitively, (1) and (2) are both true. But that's not what the truth conditions predict. If (1) and (2) both true, then the truth conditions say that Al both sees the concert and doesn't take the drive in the best worlds in his belief set. But Al believes that he'll see the concert only if he takes the drive: there aren't any concert-no-drive-worlds in his belief set.[6]

In other words, we're predicting that among the worlds Al thinks might come about, he most prefers ones where he sees the concert *and* doesn't take the drive. But a world where he sees the concert without taking the drive is one which Al thinks *can't* come about.

More generally, the classic semantics—in conjunction with the unique ordering source and belief modal base constraints—can't allow for conflicting desire ascriptions. It predicts that ⌜A wants p⌝ and ⌜A wants q⌝ are both true iff among the worlds the A thinks might come about, A most prefers ones where p and q obtain together. But if ⌜A wants p⌝ and ⌜A wants q⌝ conflict, then by definition A believes that p and q can't obtain together.

Every semantics for 'want' should allow for conflicting desire ascriptions. In our specific case, we need to predict that 'Al wants to see the concert' and 'Al doesn't want to take the drive', (1) and (2), both have true readings—even when Al believes that he'll go to the concert only if he takes the drive. We can achieve *this* goal without changing the classic semantics: we just drop either of the unique ordering source or belief modal base constraint. Yet as we'll now see, dropping either comes at the cost of unacceptable predictions elsewhere.

2 Drop the unique ordering source constraint?

Intuitively speaking, what is happening when Al wants to see the concert *and* to avoid the drive? What is happening with an agent who wants two things when she believes that she can't get both? Perhaps in such cases the agent has conflicting preferences. One of Al's preferences is to experience good music. Another is to avoid sickness. When these preferences can't be satisfied together, desire ascriptions conflict. You might base your account of 'want' on this picture of preferences by saying that desire ascriptions are true or false *relative to a preference*. Relative to Al's preference for

[6]For this to result to amount to a contradiction, two further totally plausible conditions must be met: (i) there are worlds in Al's belief set (if there aren't, every desire ascription will be true of her) and (ii) we understand 'best' as 'none better'. Al's belief set will be non-empty whenever Al's beliefs are consistent. We can cash 'none better' out like this: make the limit assumption [Lewis, 1973] and let the set of 'best' worlds in a set worlds of Γ, according to an pre-order $\preceq$, be $\{w \in \Gamma : \neg\exists w' \in \Gamma, w' \prec w\}$.

experiencing good music, (1) is true; relative to his preference for avoiding sickness, (2) is true.

To implement preference relativity, we need to drop the unique ordering source constraint, which says that the preferences relevant to evaluating ⌜A wants p⌝ are what the agent prefers, full stop. This is what Levinson [2003] and Crnič [2011] propose.[7]

> *Multiple relevant preferences.* Given an agent A, a world, and a time, there may be multiple ordering sources available for evaluating ⌜A wants p⌝. Each represents some part of the A's preferences in that world, at that time.

We need to give both (1) and (2) true readings. What does that take? A given desire ascription has a true reading iff it is true *relative to an ordering source* that is *available* for evaluating that desire ascription (in a given conversation). According to the multiple preference view, there are at least two ordering sources available for evaluating (1) and (2). One, g_1, represents Al's preference for good music; another, g_2, represents his preference for avoiding sickness. In the g_1-best worlds, Al sees the concert, giving (1) a true reading; in the g_2-best worlds, Al doesn't take the drive, giving (2) a true reading.

The crux of the variable ordering source view is: extra ordering sources, extra readings. Before at most one of two conflicting desire ascriptions could have a true readings, but now both can. However, along with these extra readings that we want, we get others that we don't.

The problem with the multiple relevant preferences view: overgeneration

Recall that Al is begging his parents to not go. If it were up to him, he wouldn't take the drive. Intuitively,

(3) Al wants to take the drive.

has no true reading here. But the variable ordering source view has just said that there's an available ordering source, g_1, which gives (3) a true reading. Because g_1 makes (1) true, it ranks concert-worlds best in Al's belief set. All of the concert-worlds are drive-world in his belief set, so g_1 ranks drive-worlds best in Al's belief set: (3) is true relative to g_1. We've overgenerated.

[7] Two things to note. First, neither Levinson nor Crnič give a best-worlds semantics (Levinson's semantics is decision-theoretic; Crnič is noncommittal between the standard semantics), but the objection I give to the multiple relevant preferences view applies just as well to the other standard semantics. Second, Condoravdi and Lauer [2016] propose an analog of the variable ordering source constraint for a non-deontic modal-style semantics for 'want', as do **?** and **?** for 'ought'.

(Note that if the concert were enjoyable enough to be worth the drive, we could get a true reading of (3): Al might well say to his parents that he wants to take the drive in trying to convince them to take him. This is not the case as we've set it up, though.)

Trying, and failing, to save the multiple relevant preferences view

We shouldn't immediately conclude that the variable ordering source constraint is inadequate. Because it posits variability in a contextual parameter, it is flexible. Maybe it can tell a story on which g_1 is *not* available for evaluating (3) even though it is available for evaluating (1). If such a story succeeded, then we wouldn't overgenerate. I'll now suggest two such stories—going beyond what Levinson and Crnič said—although in the end, neither will succeed.

Expressing truths. There is pragmatic pressure to interpret a sentence so that it expresses a true proposition. Some think that this can be pressure to alter contextual parameters, like the ordering source, so that the sentence expresses a true proposition.[8] So, could it be that g_1 is unavailable for evaluating (3) for this reason? No. As we've said, g_1-best worlds in Al's belief set are drive-worlds, so (3) *does* express a truth.

Prejacent effect. Perhaps the prejacent of a desire ascription can affect which ordering source is selected for its evaluation.[9] So, something about the prejacent, 'Al takes the drive', makes g_1 unavailable for evaluating 'Al wants that Al takes the drive', (3). What would this something be? Here's one possibility: an ordering source is unavailable for evaluating a desire ascription when there is a *subject matter mismatch* between what the ordering source represents, and what the prejacent of the sentence is is about.[10] Plausibly, a sentence's prejacent influences which ordering source is *by default* available. For example,

(4) Al wants to clip his fingernails.

might not by default be evaluated relative to an ordering source that represents his value of hearing good music. The variable ordering source constraint needs something stronger, though. It needs that a certain prejacent doesn't just make certain ordering sources default available; it forces others to be *un*available.

This subject matter-based story can't explain why ordering sources would

[8] For example, Wilson and Sperber [1981], Levinson [2000], Carston [2002].

[9] Jackson [1985] and Mandelkern et al. [forthcoming] both give stories (for 'ought' and 'can' respectively) on which the prejacent of a modal affects how a given contextual parameter is set.

[10] For this story to work, we'd need to say something about what 'aboutness' means. Yablo [2014] could help.

be unavailable. Whether you want one thing can depend on whether you believe it's necessary to bring about what you value. Even if there isn't a general connection between what the prejacent is about and what an ordering source represents, the prejacent could nevertheless be necessary to bring about the value that the ordering source represents. If for some reason Al thought that clipping his fingernails were necessary for going to the concert, then g_1 could not only be available for evaluating (4), but *required* to give the sentence a true reading.

Neither story prevents overgeneration. Of course, this doesn't mean that no story could. But given that no other stories have been offered, we can tentatively conclude that there's no way to explain why the ordering source would be forced to shift, and so no good way to prevent the variable ordering source view from overgenerating.

3 Drop the belief modal base constraint?

We're trying to allow for conflicting desire ascriptions. We know that we can't do so with the classic semantics, in combination with the belief modal modal base constraint and the unique ordering source constraint. As we just saw, we *can* do so if we drop the unique ordering source constraint, but at the unacceptable cost of validating bad inferences. What we'll now see is that if we instead drop the belief modal base constraint, we'll again allow conflicting desire ascriptions. But again, we'll do so at an unacceptable cost. This time, we'll make wrong predictions in conflict cases and non-conflict cases alike.

Recall that the belief modal base constraint says that the modal base is the belief set. We could instead say:

> *Beyond-belief modal base.* Given an agent A, a world, and a time, there may be modal bases available for evaluating ⌜A wants p⌝ that contain worlds outside of A's belief set, in that world, at that time.

This view has only been developed by Villalta [2008].[11,12] Below I'll consider three ways of filling the view out, Villalta's included. All make incorrect predictions.

[11] I should again emphasize that I am concerned in this paper with cases where desire ascriptions ⌜A wants p⌝ are evaluated when the agent neither believes p or believes $\neg p$. As I note in footnote 5, the modal base cannot be the belief set in other cases.

[12] Rubinstein [2017] also adopts something like the beyond-belief modal base view, but she doesn't say *which* worlds are in these non-belief set modal bases. We need to know what these new modal bases are like to evaluate the view.

A simple approach

Recall that within Al's belief set, every concert-world is a drive-world. This posed a problem: if the modal base were the belief set, the best worlds in the modal base can't be both concert-worlds *and* no-drive-worlds, and so 'Al wants to see the concert' and 'Al doesn't want to take the drive', (1) and (2), couldn't both be true. If the modal base can contain worlds that are not in the belief set, then the problem goes away.

There's a simple solution. Just take Al's belief set and add some worlds where he *both* sees the concert *and* doesn't take the drive. Call this new set f. Of course, Al most prefers seeing the concert without taking the drive, so the best worlds in f are these concert-no-drive-worlds. So, (1) and (2) are both true relative to f. If we say that f is available for evaluating both (1) and (2), then both have true readings—like we wanted. By letting in worlds outside of the belief set, we have allowed for conflicting desire ascriptions.

Now for the bad news. Here is a different case.

> Jo is ill. Her doctors may give her antibiotics—whether she wants them or not. Jo herself wouldn't choose to take them; she believes that she can't be cured.

In this case,

(5) Jo wants to take the antibiotics.

has no true reading. Yet consider that we can again build a modal base that is not the agent's belief set. Take Jo's belief set and add worlds where she takes the antibiotics *and* is cured. Call this set f'. Of course, Jo prefers being cured to not, so these *antibiotics*-cured-worlds are best in f'. If f' is an available modal base for evaluating (5), then (5) is wrongly predicted to have a true reading.

Why would f be available for evaluating (1) and (2), but f' unavailable for (5)? We need to constrain, in a principled way, which modal bases are available for which sentences. Below are two principled constraints. Each brings incorrect predictions.

Villalta's constraint

Within a contrastive framework, Villalta gives principled constraints on modal base availability, but they make it too hard for desire ascriptions to be true.

Translating her view into the classic framework, (1) is evaluated against a modal base f'', which comprises *every* world where Al sees the concert,

plus *every* world where Al doesn't see the concert.[13] It just can't be, though, that the best worlds in f'' are *all* concert-worlds. The possible ways for Al to not see the concert are simply too varied. In some worlds where he doesn't see the concert, The Who perform in his living room; in others, all of the The Beatles are still alive (and reunited) and *they* perform in his living room. Given that some of the best worlds aren't concert-worlds, (1) comes out false.

More generally, Villalta will say that a modal base available for evaluating ⌜A wants p⌝ will contain *every* p-world and *every* $\neg p$-world. Once we concern ourselves with every way that a proposition, and its negation, can come about, we can't expect that every best world will be all p worlds; the ways that any given proposition, and its negation, can come about are too varied. This means, of course, that we can't expect many desire ascriptions—conflicting or not—to be true.

Villalta's constraint fails because worlds where The Who perform in Al's living room are irrelevant to Al's desire to go to the concert. They're irrelevant because they're not possibilities that Al takes seriously. (Recall that we motivated the belief modal base constraint with a similar case: worlds where I am imprisoned for eating sushi are irrelevant to my desire to eat sushi.)

A partly belief-based constraint

We just learned from Villalta's failure that if we're going to drop the belief modal base constraint, we're can't go too far beyond the agent's beliefs. But that doesn't mean we can't use the agent's beliefs to constraint *how far*.

A partly belief-based constraint: modal bases with worlds similar enough to the agent's beliefs are available; all others are not. This won't work, though. We got true readings of (1) and (2) with a modal base that contained concert-no-drive-worlds, but Al may not just believe, but believe with his fullest possible conviction, that he cannot see the concert without taking the drive. Indeed, we could be imagine that Al would more surprised be to learn that he could be see the concert without taking the drive than Jo would be to learn that antibiotics could cure her. In other words, worlds where Al is sees the concert without taking the drive are further from Al's beliefs than worlds where Jo is cured with antibiotics are to Jo's beliefs. But we were trying to get the opposite result, that cured-antibiotics worlds are further from Jo's belief set than concert-no-drive-worlds are to Al's. The partly belief-based constraint isn't right.

[13] Because Villalta's semantics is contrastive, there usually won't be a single modal base available for evaluating a given desire ascription, even fixing an agent, world, and time. The available modal bases will depend on which contrast classes are salient. However, the argument I'm running applies just as well even with other contrast classes.

Recap

By dropping the belief modal base constraint, we let modal bases contain worlds not in the agent's belief set. As we saw in the illness case, not just any modal base should be available—we need to constrain modal base availability in a principled way. We just canvased two principled constraints. They both failed because they don't capture how what we desire depends on what we believe. There is no way in sight stop overgenerating: dropping the belief modal base constraint brings unacceptable predictions.

4 Diagnosis

I am not the first to note that conflicting desire ascriptions pose a problem for the semantics of 'want'.[14] Much less am I the first in the philosophical literature to note that desires can conflict.[15] Yet, even though conflicting desires and conflicting desire ascriptions have been recognized, none of the prominent, deontic modal-style semantics for 'want'—in combination with standard metasemantic constraints—can allow for conflicting desire ascriptions. There were two natural ways forward, but both are dead ends: we tried dropping the metasemantic constraints on the two components of the semantics, ordering source and modal base, but that lead to unacceptable results. What now?

Note that when we dropped the unique ordering source constraint, we *held on to the belief modal base constraint*. The belief modal base enables the following chain of reasoning, which we already saw when discussing the multiple ordering source view. By the setup of the case, Al believes that he will see the concert only if he takes the drive; in other words, every concert-world in her belief set is a drive-world. From the belief modal base constraint it follows that every concert-world in the modal base is a drive-world. So, when we say that concert-worlds are best in the modal base, we are *thereby* saying that drive-worlds are best in the modal base. This is why, given Al's beliefs, any ordering source that gives 'Al wants to see the concert' a true reading also wrongly gives 'Al wants to take the drive' a true reading. The upshot is that *once we restrict ourselves to Al's beliefs*, ordering sources cannot distinguish the concert from the drive: if the concert is best, then so is the drive. This suggests that the agent's beliefs are at bottom responsible for the problems we are having.

The natural next move is to not restrict ourselves to the agent's beliefs. This is of course what we did when we dropped the belief modal base con-

[14] E.g., Davis [1984], Levinson [2003], Villalta [2008], Fara [2013], Condoravdi and Lauer [2011], Rubinstein [2017], Dandelet [ms].

[15] E.g. Anscombe [1957], Davidson [1978], Locke [1982].

straint. Here too we had a problem. If the semantics takes account of worlds that the agent thinks will not obtain—i.e. if the modal base contains worlds outside of the agent's belief set—we are bound to go wrong. Worlds where I am imprisoned for eating sushi simply have nothing to do with my desire to eat sushi; worlds where Jo is given antibiotics that cure her have nothing to do with her desire to not be administered antibiotics (given her belief that antibiotics can't cure here). *Of course* we won't give the right truth conditions for desire ascriptions if those conditions include possibilities that are irrelevant to our desires.

We are stuck: if we stay within the agent's belief set, our semantics can't distinguish the concert from the drive; if we go beyond the agent's belief set, our semantics takes account of possibilities that are irrelevant to the agent's desires.

References

G. E. M. Anscombe. *Intention*. Harvard University Press, 1957.

D. Braun. Desiring, desires, and desire ascriptions. *Philosophical Studies*, 172(1):141–162, 2015.

F. Cariani. 'ought' and resolution semantics. *Noûs*, 47(3):534–558, 2013.

R. Carston. *Thoughts and Utterances: the Pragmatics of Explicit Communication*. Blackwell, 2002.

C. Condoravdi and S. Lauer. Performative verbs and performative acts. *Sinn und Bedeutung 15*, pages 149–164, 2011.

C. Condoravdi and S. Lauer. Anankastic conditionals are just conditionals. *Semantics & Pragmatics*, 9(8):1–2, 2016.

L. Crnič. *Getting* even. PhD thesis, Massachusetts Institute of Technology, 2011.

S. Dandelet. Partial desires, blinkered beliefs. Unpublished manuscript, ms.

D. Davidson. Intending. *Philosophy of History and Action*, 11:41–60, 1978.

W. Davis. The two senses of desire. *Philosophical Studies*, 45(2):181–195, 1984.

D. G. Fara. Specifying desires. *Noûs*, 47(2):250–272, 2013.

K. von Fintel. Npi licensing, strawson entailment, and context dependency. *Journal of Semantics*, 16(2):97–148, 1999.

B. Geurts. Presuppositions and anaphors in attitude contexts. *Linguistics and Philosophy*, 21(6):545–601, 1998.

L. Goble. Utilitarian deontic logic. *Philosophical Studies*, 82(3):317–357, 1996.

I. Heim. Presupposition projection and the semantics of attitude verbs. *Journal of Semantics*, 9(3):183–221, 1992.

F. Jackson. On the semantics and logic of obligation. *Mind*, 94(374):177–195, 1985.

A. Kratzer. The notional category of modality. In H.-J. Eikmeyer and H. Reiser, editors, *Words, Worlds, and Contexts*, pages 38–74. de Gruyter, 1981.

A. Kratzer. Modality. In A. von Stechow and D. Wunderlich, editors, *Semantics: An international handbook of contemporary research*, pages 639–650. de Gruyter, 1991.

D. Lassiter. *Measurement and Modality: the Scalar Basis of Modal Semantics*. PhD thesis, New York University, 2011.

D. Levinson. Probablistic model-theoretic semantics for *want*. *Semantics and Linguistics Theory (SALT) 13*, pages 222–239, 2003.

S. Levinson. *Presumptive Meanings: The Theory of the Generalized Conversational Implicature*. MIT Press, 2000.

D. Lewis. *Counterfactuals*. Blackwell, 1973.

D. Locke. Beliefs, desires and reasons for action. *American Philosophical Quarterly*, 19(3):241–249, 1982.

M. Mandelkern, G. Schultheis, and D. Boylan. Agentive modals. *Philosophical Review*, forthcoming.

K. McDaniel and B. Bradley. Desires. *Mind*, 117(466):267–302, 2008.

P. Portner. The semantics of mood, complementation, and conversational force. *Natural Language Semantics*, 5(2):167–212, 1997.

R. van Rooij. Some analyses of pro-attitudes. In H. de Swart, editor, *Logic, Game Theory and Social Choice*, pages 534–548. Tilburg University Press, 1999.

A. Rubinstein. Straddling the line between attitude verbs and necessity modals. In M. L. R. A. Arregui and A. P. Salanova, editors, *Modality Across Syntactic Categories*, pages 610–633. Oxford University Press, 2017.

R. Stalnaker. *Inquiry*. Cambridge University Press, 1984.

E. Villalta. Mood and gradability: An investigation of the subjunctive mood in spanish. *Linguistics and Philosophy*, 31(4):467–522, 2008.

D. Wilson and D. Sperber. On grice's theory of conversation. In P. Werth, editor, *Conversation and Discourse*, pages 155–178. Croom Helm, 1981.

S. Yablo. *Aboutness*. Princeton University Press, 2014.