Contextualist Solutions to Three Puzzles about Practical Conditionals[1]
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Here I discuss three puzzles about practical conditionals and inferences and show how the

contextualist semantic framework for "ought" I develop elsewhere (Dowell (ms_1)) resolves all

three puzzles more satisfactorily than any of three prominent rivals, the relativist account of Niko

Kolodny and John MacFarlane (2010), the wide-scoping account of John Broome (2004), and the

'trying on' account of James Dreier (2009).

The puzzle cases center around the issue of how best to understand indicative conditionals

that contain a bare evaluative or normative modal (BNM) in its consequent. A 'bare' modal is one

that doesn't contain a clause that makes the relativization of the modal explicit (as in "given the

circumstances, the Doctor morally ought to prescribe nothing"). On the semantics for modals

canonical among linguists, bare modals get the values for their relativizations as a function of the

context of utterance. This makes room for the hypothesis that the puzzles arise as a result of some

form of equivocation. This is just what I'll argue below.

The plan of action is as follows: First I'll introduce the puzzle cases and six desiderata for

their solutions, briefly sketch the semantic accounts of 'ought' and 'if' I favor, and then show how

only the contextualist semantics for modals defended here and elsewhere[2] is able to resolve each

while satisfying all six desiderata.

1. The Puzzles

1.1 First Puzzle: Odious Inferences

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[1] A special thanks to Aaron Bronfman, for exceptionally careful comments on an earlier
draft of this paper, and to Jamie Dreier, for extensive discussion. Thanks also to Fabrizio
Cariani for comments on an earlier draft and to John Broome, Matthew Chrisman,
Patricia Greenspan, Alex Silk, David Sobel, and participants in the 7th Annual Madison
Metaethics Workshop for discussion.
[2] See Dowell (ms_1), (ms_2), and (*forthcoming*).

Consider two cases involving practical inferences, the first, unusual and the subject of much philosophical discussion and controversy, the second, completely mundane.

MURDER:

M1. You want to murder messily.

M2. If you want to murder messily, you ought to use a chainsaw.[3]

M3. Therefore, you ought to murder with a chainsaw.

MURDER is puzzling. Many report their inclination to regard both premises as true, but the conclusion false. But, how can that be? The sentences appear to have the structure of ordinary, modus ponens reasoning, so the truth of the premises should suffice for the truth of the conclusion. John Broome has suggested that we explain our acceptance of the premises, but rejection the conclusion in inferences like MURDER by giving the modal in its second premise wide-scope and interpreting the conditional as a material conditional.[4] (Here I'll use "wide-scoping" to describe this strategy of giving the modal wide-scope *and* treating the conditional as the material conditional.) If we do that, the conclusion won't follow from the truth of the premises, since, despite appearances, the argument doesn't in fact have a modus ponens structure. If Broome's proposal is right, the point should generalize; any time we have an inference with the structure of MURDER, detachment is blocked.

Compare MURDER, though, with another, apparently similar, practical inference, in which detachment seems perfectly fine.

HARLEM:

H1. You want to go to Harlem.

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[3] The example is of course similar to Darwall's in his (1983).
[4] See Broome (2004). For a different way of working out the wide-scoping strategy, see Greenspan (1975).

H2. If you want to go to Harlem, you ought to take the A-train.

H3. Therefore, you ought to take the A-train.[5]

We can easily imagine deliberative contexts in which two speakers' assertions may be represented by the premises and conclusion in HARLEM. Here's one: You're visiting your friend in New York. You tell her that you'd like to visit the famous neighborhood in which Langston Hughes once lived and wrote and where Jacob Lawrence created some of his most famous paintings.

> Your friend: "Ah, I see. You want to go to Harlem. Well, if you want to go to Harlem, you ought to take the A-train."

You take out your subway map and point:

> You: "So, I ought to take the A-train?"

> Your friend: "Yes, that's right."

Notice that in this context, HARLEM seems to be a perfectly good way of representing the speakers' exchange and the inference seems sound. But, if Broome is right, HARLEM isn't sound, since 'ought' in H2 takes wide-scope. So, what's the difference between MURDER and HARLEM? There's a difference in desires and the means to their satisfaction. But neither these nor anything else appears to make any semantic or formal difference. So, there should be no difference in the validity between the two.   The wide-scoper owes some non-ad hoc explanation for why detachment seems fine in HARLEM, though it doesn't in MURDER. A first desideratum in any account of the interaction of 'ought's and 'if's, then, is an explanation of our willingness to assert H3, in light of our acceptance of H1 and H2, in HARLEM's context

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[5] The example is adapted from one in von Fintel and Iatridou (ms).

together with our unwillingness to assert the conclusion of MURDER, even when we accept the truth of M1 and M2.[6]

Setting HARLEM aside, there are independent grounds for rejecting wide-scoping as a general account of the semantics of conditional ought sentences. Here's Kratzer's quick argument: Imagine a body of law that explicitly states both

(N) No murder occurs

and

(J) If a murder occurs, the murderer goes to jail.[7]

To fit with our intuitions, wide-scopers need that (N) and (J) together make the following both true (where the 'must' is a legal one).

(NM) There must be no murders

(JM) If there is a murder, then the murderer must go to jail

which the wide-scoper holds really has the structure of

(JM') It must be that, if there is a murder, the murderer goes to jail.

Reading (JM) as (JM'), wide-scoping will make both come out true. (N)'s being part of the law will make (NM) true by making it true that there are no worlds compatible with what the law provides that are worlds in which murders occur. And it will make (JM) true *for the same reason*. The problem is that this means wide-scoping *also* makes the following true *for the same reason*:

(PM) If there is a murder, the murderer must receive a million dollar prize

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[6] Here I'm not arguing that there is no way for the wide-scoper to satisfy this desideratum, only that doing so is a prima facie burden on any wide-scoping account.

[7] (N) and (J) here represent the content of what the law requires. Notice that, although Kratzer's example does treat (N) and (J) as explicit contents, this isn't an essential feature of her example; we might equally well imagine (N) and (J) as judgments in a common law system.

since, according to the wide-scoper, (PM) really has the structure of (PM'):

(PM') It must be that, if there is a murder, the murderer receives a million dollar prize.

But, intuitively, (PM) isn't true, according to a body of law that just contains (N) and (J). So, some part of the wide-scoping package needs to be given up.[8]

1.2 Second Puzzle: A Paradox about 'Ought' and 'If'

Kolodny and MacFarlane (2010) pose the second puzzle I'll consider. To see the problem, imagine that

> "Ten miners are trapped either in shaft A or in shaft B, but we do not know which. [They are equally likely to be in each shaft.] Flood waters threaten to flood the shafts. We have enough sandbags to block one shaft, but not both. If we block one shaft, all the water will go into the other shaft, killing any miners inside it. If we block neither shaft, both shafts will fill halfway with water, and just one miner, the lowest in the shaft, will be killed.
>
> We take it as obvious that the outcome of our deliberation should be
>
> [S] (1) We ought to block neither shaft.
>
> Still, in deliberating about what to do, it seems natural to accept [both]:
>
> [S] (2) If the miners are in shaft A, we ought to block shaft A.
>
> and
>
> [S] (3) If the miners are in shaft B, we ought to block shaft B.
>
> We also accept:
>
> [S] (4) Either the miners are in shaft A or they are in shaft B.
>
> But (2), (3), and (4) seem to entail
>
> [S] (5) Either we ought to block shaft A or we ought to block shaft B.
>
> And this is incompatible with (1). So we have a paradox."

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[8] Kratzer (1991a).

Call this case "MINERS". Kolodny and MacFarlane argue that the only satisfactory response is to give a relativist semantics for 'ought' and give up modus ponens.[9] While it's possible that careful consideration of a variety of cases will force us to give up modus ponens, this is an option of last resort. So, a second desideratum in any account of practical conditionals is that it resolves the puzzles without giving up on modus ponens. Wide-scoping avoids the paradox by blocking the inference to (S5). So, wide-scoping satisfies the second desideratum.[10] But it's not clear how it satisfies the first. Ideally, we'd like a single account that satisfies both.

One final feature of this case needs explaining: Like in HARLEM and unlike in Dreier's BATTLE example below, here we do want to accept (S5) on the basis of (S2)-(S4). Simply rejecting MP or accepting wide-scoping won't by itself explain that. Let explaining these inclinations (to accept all of (S1)-(S5), and (S5) on the basis of (S2)-(S4)) be our third desideratum.

Notice that it's not their relativism[11] that forces Kolodny and MacFarlane to give up modus ponens, but their view that the truth-values of deontic modals are all information-relative (thus, giving (S1) and (S5) the same relativization).[12] This has the effect of blocking appeal to equivocation between (S1) and (S5). This means that MINERS puts pressure on

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[9] Kolodny and MacFarlane (2010).

[10] Although I'm willing to grant this for the sake of argument, it's a bit controversial. Kolodny and MacFarlane argue that there is a related paradoxical inference that wide-scoping can't help with, unless one rejects one or more of some pretty natural assumptions. (For details, see their (2010).)

[11] Relativism about bare modal statements is the view that their truth-values are relative to worlds and bodies of information.

[12] Kolodny and MacFarlane (2010) and (ms).

any account with this feature, such as Stephen Finlay's contextualist account,[13] to likewise give up modus ponens. In contrast, below I show that there is no such pressure on my favored contextualist account.

1.3 Third Puzzle: Invalid, Apparently Valid, Practical Inferences

James Dreier discusses an interesting, different puzzle about practical inferences, one involving an uncontroversially invalid, but apparently valid, inference. His example is from Shakespeare's King Henry V. The scene takes place just before the Battle of Agincourt, when Henry and his troops know that they are hopelessly outnumbered. One of Henry's soldier's wishes aloud that just a few thousand more soldiers would join them by morning. Henry disagrees. He reasons as follows:

BATTLE:

> B1. Either we will win or we will lose.
>
> B2. If we win, it is better that we have few soldiers than have many.
>
> B3. If we lose, it is better that we have few soldiers than have many.[14]
>
> B4. Therefore, it is better that we have few soldiers than have many.[15]

In Dreier's characterization, Henry's grounds for B2 are that the glory of winning with few is greater than the lack of glory of winning with many. In favor of B3, he cites that the shame of losing with few is lesser than the shame of losing with many.

The inference is clearly invalid. Where does it go wrong? Dreier argues that the mistake is reliance on modus ponens as an inference rule in the context of a larger inference containing or-

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[13] See, for example, his (2009) and, with Gunnar Bjornsson (2010).
[14] In Dreier's example, the second and third premises have the consequent "it is better to have few". In order to bring out the comparative nature of these modals, however, I've put them in their more explicit form.
[15] Dreier (2009:126-7).

elimination. So, he concludes, we should give up on modus ponens as an inference rule.[16] On his positive account, conditional judgments of betterness are made "from the point of view of" some probability or credence function or other. As I understand him, the effect of the antecedent is to alter the probability assignment in play by updating our credences with the assumption of its truth.[17] As he notes, this has the effect of screening off the probabilistic effect of having few versus many on winning versus losing in both B2 and B3. But this also means that no such screening off is in effect in BATTLE'S conclusion. So, the argument is invalid.[18]

Why exactly does the screening off in the premises, but not in the conclusion make the argument invalid, though? Dreier doesn't provide one, but here's a natural explanation that fits with his discussion: When Henry is addressing his argument to his troops, he is trying to persuade them not to wish for more soldiers. So, he is most naturally understood as appealing to their concerns. Glory and shame, he may safely assume, are among those concerns. But we may also safely assume that winning is among those concerns. After all, isn't a desire to win the best explanation for why the soldier wishes aloud for more? This is the source of our immediate unease with Henry's reasoning: He has overlooked the importance to his men of winning and so overlooks the dependence of the outcome on troop numbers. So, while it's true that, holding fixed that we'll win, having few is better and that, holding fixed that we'll lose, having few is better, it's not true that having few is better than having many, because having many makes it more likely we'll win and winning is better than glory.

One advantage of this way of filling out Dreier's reasoning is that it allows his account to explain our rejection of Henry's reasoning in terms of its intuitive source. But notice that what's

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[16] Dreier (2009:128).
[17] This is an approximation of his view, but one that suffices for present purposes.
[18] Dreier (2009).

doing the job of explaining the invalidity of Henry's reasoning is not the rejection of modus ponens, but the claim that the probability assignments needed to assess judgments of comparative goodness shift from the conditional premises to the conclusion. To see this, consider a structurally similar argument that seems intuitively valid. Suppose you're one of those horrid Americans who is clueless about 'what's done' at garden parties. Are you supposed to wear a hat or what? Worse, you're not sure whether the party is before or after luncheon. Does it matter? All you care about is doing whatever local etiquette requires. The local rules stipulate that hats are worn at all daytime garden parties.   A local advises that it's better to wear a hat, reasoning thus:

GARDEN PARTY:

> GP1. Either the garden party is just before luncheon or it's just after.
>
> GP2. If it's just before luncheon, it's better that you wear your hat (than not).
>
> GP3. If it's just after luncheon, it's better that you wear your hat (than not).
>
> GP4. Therefore, it's better that you wear your hat (than not).

If modus ponens is really the culprit, then GP4 doesn't in fact follow from GP1-GP3. But it seems like it does, doesn't it? Dreier could argue that, unlike B1-B4, GP1-GP4 are all true. Their joint truth at the actual world gives rise to an appearance of validity.

The natural explanation of Henry's mistake, however, suggests the possibility of a rival account of BATTLE's failure: Equivocation. The modals in the conditionals B2 and B3, unlike that in the conclusion, B4, do not measure 'betterness' in terms of winning vs. losing. An advantage of an account that traces the problem to equivocation (besides allowing us to keep modus ponens) is that it provides the most straightforward explanation for our intuition that GARDEN PARTY is valid; it seems valid, because it is.

A fourth desideratum in an account of conditional oughts, then, is that it provide a plausible explanation of our willingness to accept GP4 on the basis of GP1-GP3, but our unwillingness to accept B4 on the basis of the apparently structurally similar B1-B3.

There's a final puzzle about Dreier's explanation of BATTLE'S invalidity. The explanation is that modus ponens isn't a genuine inference rule. But then why do the subproofs seem fine on their own, as he accepts?[19] The most straightforward explanation is that they seem fine because they're valid and they're valid, because MP is a genuine inference rule. Giving up modus ponens requires an alternative explanation. Moreover, it's a bit hard to find an explanation in terms of his diagnosis of BATTLE's invalidity. BATTLE is invalid, on his view, because conditionals are to be evaluated "from the point of view of" a probability function shifted by the acceptance of the antecedent. Since BATTLE's conclusion is non-conditional, our evaluation of its plausibility is relative to our original, unshifted probability function. But that will also be true of BATTLE's MP sub-proofs when they are stand-alone arguments. So, if this shifting explains both BATTLE's invalidity and our intuition that it's invalid, shouldn't those stand-alone MP inferences not only be invalid, but also intuitively invalid? But they aren't. A fifth desideratum in an account of conditional oughts, then, is that it explain this difference in our intuitions, that BATTLE is invalid, while both

Modus Ponens (MP-) BATTLE:

MP-B1. We will win.

MP-B2. If we win, it is better that we have few soldiers than have many.

MP-B4. Therefore, it's better that we have few.

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[19] (2009:128).

and

MP-BATTLE'

MP-B1'. We will lose.

MP-B3'. If we lose, it is better that we have few soldiers than have many.

MP-B4'. Therefore, it's better that we have few.

are.

1.4 Summing Up So Far

So far we've got five desiderata and no theory that satisfies them all. First, we want an account to provide an explanation of our willingness to assert H3, in light of our acceptance of H1 and H2, in HARLEM's context, together with our unwillingness to assert the conclusion of MURDER, even when we accept the truth of M1 and M2. Second, we'd like our account to vindicate modus ponens as a genuine rule of inference. Third, we'd like an explanation of our inclinations to accept all of (S1)-(S5), and (S5) on the basis of (S2)-(S4)) in MINERS. Fourth, we'd like a plausible explanation of our willingness to accept GP4 on the basis of GP1-GP3 in GARDEN PARTY, but our unwillingness to accept B4 on the basis of the apparently structurally similar B1-B3 in BATTLE. Finally, we'd like an explanation for why our intuition is that BATTLE is invalid, together with our intuition that each of the MP subproofs it contains are fine as stand-alone arguments.

A sixth desideratum is that an account explains these puzzle cases as arguments stated in English. We may imagine these puzzles stated in a stipulated language, one that we introduce for certain metaethical or normative purposes. It may be possible, for example, that there are good theoretical reasons to introduce a conditional with the wide-scoper's formal semantics. But there are good linguistic reasons to suppose that the wide-scoper's semantics are not the correct

semantics for practical conditionals in English. Given this, we have a set of puzzles, stated in English, for which the wide-scoper can offer no solution. (More on this point in section 2.2.) So, wide-scoping cannot satisfy this sixth desideratum.

Moreover, it's not clear how wide-scoping satisfies the first or third desiderata. Neither the Kolodny/MacFarlane nor the Dreier proposal satisfies the second.   The Kolodny/MacFarlane proposal also fails to satisfy the third, while it isn't clear how either their account or Dreier's account can satisfy either the fourth or fifth.[20] Finally, Dreier's account doesn't satisfy the sixth.

In contrast, the proposal I'll defend satisfies all six desideratum. It fits with the semantics for conditionals and modals favored by linguists and explains all of the puzzle cases with a single, general diagnosis: Each puzzle in some way involves equivocation between claims stemming from different contextually supplied values for modal parameters.

2. Towards Solutions: A Flexibly Contextualist Account of Modal Expressions, Kratzer on Conditionals, Validity, and Modus Ponens

2.1 Flexible Contextualism

It's widely accepted among linguists and philosophers of language that statements containing modal expressions (such as "necessarily", "might", "must", and "ought") are in some way relativized. In some cases, those relativizations are made explicit in the linguistic material, as in

"Given her preferences, Sally may take the turnpike."

"Given what we know, the butler must have done it."

"Given that he promised, Joe ought to be here."

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[20] On the Kolodny/MacFarlane account, the MP-subproofs are not valid, but quasi-valid; i.e. truth-preserving only when the premises are known. (See their (2010) p.139.)

"Bare" modal statements are those without explicit relativizations. Among linguists, the canonical view is that modals contain parameters whose values may be made explicit, as in the above examples, or they may be determined as a function of context, as in the case of bare modal statements. This means that, on the canonical view, modal expressions, such as 'ought', are context-sensitive.

To merely say that modal expressions are context-sensitive, though, leaves many issues unsettled. How is the kind of context-sensitivity modals have best understood? How are modal propositions determined as a function of context? I take up these issues in detail elsewhere.[21] Here I'll merely outline the flexibly contextualist semantic proposal I defend there for the purpose of showing how that proposal can provide plausible solutions to the puzzle cases of concern here. Following Kratzer, on the view I advocate, modal expressions function semantically as flexibly[22] context-sensitive[23] quantifiers over possibilities. Their general form is

$$MODAL(B)^{f,g}(\phi)$$

where B is the domain of quantification or modal base and ϕ, the prejacent, is a proposition that gets evaluated at the possibilities in B. MODAL determines (roughly) which or how many of the

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[21] Kratzer herself doesn't address these issues. My proposal can then be understood as fleshing out her basic framework, providing answers to these questions, and making a few revisions needed to handle some of the puzzle cases. For details, see Dowell (ms$_1$) and (*forthcoming*).

[22] To say that a term's context-sensitivity is 'flexible' is to say that which feature of context determines its semantic value is something that itself varies with context. This is to put modals in the same category of context-sensitive expressions as quantifiers over individuals and Kaplan's demonstratives and to contrast them with pure indexicals.

[23] Here I remain neutral with respect to which of the several contending theories of context is best for the purposes of semantic and pragmatic theorizing, though, for the sake of concreteness, I shall at some points adopt Stalnaker's model which represents a context as a set of presupposed propositions, i.e. a set of possible worlds or situations. He calls this set a "context set". (Stalnaker (1999).) For a nice discussion of the advantages and disadvantages of each of the rival theories, see Kratzer (*forthcoming*: chp. 2).

possibilities in B are possibilities in which ϕ must come out true for MODAL(B)^{f,g} (ϕ) to come out true. The value for the *f*-parameter determines the modal base, with the value for *g* ranking the *f*-worlds. An English modal expression, such as 'ought' or 'must', that corresponds in modal logic to '   ', functions as a universal quantifier; roughly, simple sentences that contain them are true just in case all of the most *g*-rific *f*-worlds are ϕ–worlds.[24]

Kratzer's canonical view recognizes only two sources for modal base restrictions (i.e. values for the *f*-parameter), bodies of information and sets of circumstances. To see the difference, consider the following pair of sentences:

(H$_m$): "Hydrangeas might grow here."

(H$_c$): "Hydrangeas can grow here."

These sentences most naturally express different propositions. Kratzer's view provides a nice explanation of the difference; it lies in the different sources of the restriction on the modal base. Best understood, (H$_m$) expresses an epistemic possibility; it's compatible with some body of information that hydrangeas grow in the location of the utterance. (H$_c$), in contrast, is best understood as circumstances-relative; it's compatible with local circumstances (e.g. climate and soil conditions) that hydrangeas grow in the location of the utterance. Kratzer held in her (1991) that deontic or evaluative modals are always circumstances-relative. However, in light of so-called "Jackson cases", this can't be right.[25] Jackson cases arise whenever we have a bare evaluative or normative use of a modal (BNM) that is intuitively true, but false under a circumstantial reading. In other words, Jackson-cases are characterized by a forced epistemic

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[24] For details, see Kratzer (1991a: 644).
[25] For Jackson's original discussion, see his (1991).

reading of a BNM by the context. So, we must slightly modify Kratzer's official view and recognize that BNMs may take either circumstances or information as modal base restrictors.[26]

On my development of the basic, Kratzerian framework, when a bare modal expression is used, its 'flavor', as alethic, bouletic (preference-relative), epistemic, legal, or moral, etc. is determined by a speaker's publicly manifestable parameter (f or g) value-determining intentions in a context of use. Such an intention is a speaker's intention for the addressee to recognize some feature of the context as manifesting her intention to let some property or set of properties determine a restriction (when necessary) and (when necessary) a standard in that context.[27] If we take this general account of how parameter values for modals are determined and apply it to bare evaluative or normative modal statements (BNMs) (i.e. bare modals used evaluatively) in particular, we will get the following hypotheses:

Hypothesis 1: The proposition expressed by the use of a BNM is contextually determined in two ways. First, context determines a domain of quantification by

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[26] For a detailed discussion of how my modified Kratzerian framework treats Jackson cases, see Dowell (ms₁).

[27] This makes the relevant intentions indirect. One reason to suppose this is that a desideratum in an account of what a speaker has said is that it explain how the proposition she's expressed is capable of figuring in an explanation of what information gets communicated to a normal audience member on the basis of a speaker's using the sentence she used when she used it. Relying on some publicly available feature of the context to manifest her intention makes what she's said publicly available to a normal audience in a way that a more direct intention would not be. (This formulation suggests that the relevant intentions are second-order, though it's possible that this isn't necessary. It may suffice for a context to be capable of manifesting a speaker's intention to let some property determine the restriction, even if the speaker did not intend for the feature of the context that does play that role to play that role. Nothing here hangs on which of these two types of intentions plays the needed role, though it now seems to me that second-order intentions at least typically do play that role, at least in the sense that there is typically something speakers would recognize as what they intended to manifest their domain and standard determining intentions.)

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selecting either a body of information or a set of circumstances. (The resulting domain is the set of worlds compatible with the selected information or in which the selected circumstances obtain). Second, the possibilities in that domain are ordered by a contextually determined standard.[28]

Hypothesis 2: Contexts determine domains and standards via speakers' intentions for an audience to recognize a salient feature of the context as manifesting an intention to let a certain property or properties determine both a body of information or set of circumstances and a standard. [29]

Hypothesis 3: A speaker's intentions need not be explicitly formulated to herself at the time of her utterance. Often their contents are discovered empirically, by a speaker's recognizing a property as partly determining the restriction or standard she intends.[30]

Hypothesis 4: There are at least as many different kinds of normative modal proposition as there are publicly manifestable intentions to set each of the relevant parameters.

To this core account, I add the following:

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[28] There's a rigid and a nonrigid way of understanding how domains and standards are determined by intentions together with extra-intentional context. On a rigid reading, the world in a modal's domain and their ordering at a world *w* is always the actual information/circumstances and standard. On the nonrigid reading, they will vary from one world of evaluation to another, depending upon which information/circumstances and standard has the intended properties in that world. On the present account, speaker's intentions may determine either rigid or a non-rigid reading. Evidence for which a speaker intends may be given by her evaluation of appropriate counterfactual statements about what she ought to have done had she possessed more information, had the circumstances been different, or had the laws been different. I would hazard the guess that speakers typically have nonrigid intentions, though nothing here rests on the truth of that hypothesis. (Thanks to Aaron Bronfman and Andy Egan for helpful discussion here.)
[29] See footnote 26 for details and a slightly different possibility.
[30] For an elaboration and defense of this way of understanding the needed intentions, see Dowell (2008) and (*forthcoming*).

Hypothesis 5: So-called 'subjective' "ought" statements have epistemic modal bases and information-sensitive standards.[31]

Hypothesis 6: So-called 'objective' "ought" statements have circumstantial modal bases.

Hypothesis 7: So-called 'rational' "ought" statements have their domains ordered by the requirements of rationality, if there are any.

Hypothesis 8: So-called 'moral' "ought" statements (in their use most typical among normal speakers of English) have their domains ranked by the absolute, moral standard[32], if there is one.[33]

  For brevity, I'll call this package "flexible contextualism about 'ought" or FCO.

2.2 Kratzer on Conditionals

 On Kratzer's account, indicative conditionals function as covertly modalized statements, with their antecedents functioning as modal base restrictors on the consequent's covert necessity modal.[34] To get the basic idea on the table, consider an overly simple illustration:

  (P) If it rains, the picnic will be canceled

is true just in case all of the worlds in which it's raining are worlds in which the picnic is cancelled. More formally,

  (I) [if φ, Ψ] is true at $<c, w>$ iff $(\forall w')$ $w' \in \varphi$: $w' \in \Psi$.

Putting this together with the account above, we can be more precise. Modal statements are context-sensitive; modals function as quantifiers over a domain of possibilities restricted by

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[31] For one plausible way the formal semantics for modals might go, compatible with the need for world rankings to be information-sensitive, see Silk (ms).

[32] By 'absolute' I mean at least unique and universal.

[33] **Hypotheses 1-8** are explained and defended at greater length in Dowell (ms$_1$) and (ms$_2$). To see how this account of BNMs fits with parallel account of epistemic modals, see Dowell (*forthcoming*).

[34] Kratzer (1991b: 654 and ff).

either circumstances or information, depending on the context. So, if conditionals are modalized statements, they too will have contextually-restricted domains. The function of the antecedent, then, is to further restrict an already restricted domain. So, somewhat more precisely, (P) is true just in case adding that it rains to the domain-restricting body of information or set of circumstances gets us a set of worlds in each of which the picnic is cancelled. A more precise, general formalization, then, is

(I') [if φ, must Ψ]^{f,g} = [must Ψ]$^{f',g}$ is true at <c, w> iff [(∀w') w' ∈ ∩f(c, w): w' ∈ φ] w'

∈ Ψ = (∀w') w' ∈ ∩f'(c, w): w' ∈ Ψ

where f, as before, serves as a domain-restricting function on the covert modal (here made overt). As the above suggests, f' is the domain-restriction on that covert modal that results in throwing out all of the non-φ, f-worlds. [35]

Accepting this account requires rejecting the view that indicative conditionals in English are material conditionals.[36] Following the linguists, then, requires rejecting wide-scoping as an account of English 'ought's and 'if's. And that means that there's a puzzle, stateable in English, that arises from our acceptance of the premises and rejection of the conclusion in MURDER that cannot be explained by wide-scoping and so that wide-scoping cannot satisfy the sixth desideratum.

2.3 A Contextualist Account of Practical Conditionals

Applying Kratzer's account of indicative conditional to practical conditionals gets us a covert necessity operator scoped over an overt deontic one. Kai von Fintel and Sabine Iatridou

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[35] Kratzer (1991a: 648). For a nice discussion of the linguistic data in support of this semantics for the indicative conditional in English (and other languages), see Kratzer (1991b) and (1981).

[36] This is Kratzer's conclusion. Here I leave open the possibility that "if…then…." in English has a use as a material conditional. For an interesting alternative to her account, see Gillies (ms).

have nicely developed a proposal of this kind.[37] On their account, the function of an antecedent is, as before, to restrict the domain of a covert necessity modal. To assess the truth of the whole conditional, we then assess the truth of the overt deontic modal at each of the worlds w' in that restricted domain.[38] Consider, for example, H2, "if you want to go to Harlem, you ought to take the A-train".   This says, roughly, "in every world w' in which you want to go to Harlem (that is compatible with a contextually determined set of circumstances or information), you ought to take the A-train". The parameter values for 'ought' at each of these worlds w' is determined as a function of w'. For example, if the 'ought' has a circumstantial modal base, it will pick up on the relevant circumstances in w'.   The ordering source for 'ought' at each of w' will also be a function of w'.   H2's ordering source is bouletic, so your preferences in each of w' will determine an ordering source. The antecedent's restriction of the covert necessity modal guarantees that in each of the worlds w' in its modal base, you want to go to Harlem.   So, if for each world w' in that domain, the best (your preference-wise) of the worlds w'' circumstantially like w' are all worlds in which you take the A-train, then H2 comes out true.[39]

2.4 Validity, Testing Inference Rules, and Modus Ponens

The notion of validity presupposed here is:

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[37] von Fintel and Iatridou (ms).

[38] "["If you want to go to Harlem, you have to take the A-train"] is true in *w* iff
    for all worlds w' such that w' is accessible from w and in w' you want to go to Harlem:
    for all worlds w'' among the worlds circumstantially accessible from w' and which are best satisfy your goals in w':
    you take the A-train," (von Fintel and Iatridou (ms:8-9).)

[39] For simplicity, I here gloss over the difference between 'must' and 'have to' on the one side, and 'ought' and 'should', on the other. The treatment I now prefer is also von Fintel's and Iatridou's. For details, see their (ms).

> **VALIDITY**: An argument that has $P_1....P_n$ as its premises and C as its conclusion is valid just in case at each world at which all of $P_1...P_n$ are true, C is also true.

Since I am presupposing a possible worlds account of propositions, this definition has the consequence that we test the validity of inferences by seeing whether each $P_1...P_n$-world is a C-world. And that means that, when any of "P_1"…."P_n" and "C" contains a context-sensitive expression, testing validity requires the stipulation of a context. To illustrate:

NOW

NOW1. "It's raining now."

NOW2. "If it's raining now, then it's wet now."

NOW3. "Therefore, it's wet now."

On the account I'm presupposing, evaluating whether NOW is valid requires identifying the context(s) in which each of NOW1, NOW2, and NOW3 were used. If they are all used in the same context, NOW is valid. But if NOW1 and NOW2 are uttered at a time when it's raining and NOW3, some time later when it isn't, then NOW involves equivocation; the content of the consequent in NOW2 is not the same as the content of NOW3.

Likewise, **VALIDITY** will count as valid certain instances of **TODAY**,

TODAY1. "It is raining today."

TODAY2. "It rained yesterday."

VALIDITY will count **TODAY** as valid just in case the day of the context in which TODAY2 is uttered is the day following the day of the context in which TODAY1 was uttered.

In general, on this view, testing whether we've got a counterexample to an inference rule requires identifying the propositions expressed by the premises and conclusion to see whether or not it can be represented with an appropriate formal structure. There's another way to think of

validity, though. One might require something stronger, e.g. truth-preservation at all context, world pairs.[40] On such a view, **NOW** comes out valid, while **TODAY** does not. The solutions below depend upon presupposing **VALIDITY**, though, so something should be said in its favor. In an absolute sense, neither notion of validity is 'better' than the other; which is preferable depends upon which phenomena we use it to illuminate. Here I'm interested in a notion that can be used to distinguish good and bad arguments as they are made by speakers of natural languages, the arguments speakers use to persuade one another or themselves.[41] Where this is our concern, we want a notion of validity that's tied to what's said by a speaker when she uses a sentence on some occasion. On some views, what's said by a speaker is given by something more fine-grained than a set of worlds. For example, in defending the need for primary intensions to explain communication, Frank Jackson has argued that what's said can be represented by something like a set of context, world pairs.[42] This would be a way of tying the rival notion of validity to what's said. But that view is extremely controversial, widely rejected, in fact.[43] The standard view is that what's said is given by the proposition a speaker expresses in her context of use,[44] a content, in Kaplan's terminology.[45] This is the view I adopt here. This choice means that the notion of validity of greatest use, given present concerns, is **VALIDITY**, above.

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[40] This view is closer than **VALIDITY** to the Kolodny/MacFarlane (2010) account of validity.

[41] These include, for example, the vast majority of deductive, philosophical arguments.

[42] Jackson (2004).

[43] Its only adherent seems to be Frank Jackson; other fans of primary intensions (David Chalmers (2002) and David Braddon-Mitchell (2004)) reject it as a way of cashing out the technical notion of what's said. Opponents of primary intensions include Bigelow and Schroeter (forthcoming), Block and Stalnaker (1999), Byrne and Pryor (2006), Dowell (2008), MacLaughlin (2001), Schroeter (2003), Soames (2005), and Yablo (2002).

[44] Stalnaker (1999), Stanley and Szabo (2000).

[45] Kaplan (1989a).

Finally, how should we understand modus ponens on the present account? The rule appropriate to our interest in what's said will be one that applies only to arguments with both of two features: First, the relevant arguments must contain *sentences* with an appropriate structure, i.e.

1. If p, then q

2. p

3. Therefore, q

(where "p" and "q" throughout represent sameness of *sentence* and *sentential clause*) and, second, those sentences must be used in a context or contexts that provides appropriate, non-equivocal semantic values for those sentences. A counterexample to modus ponens, then, is an argument that exhibits both these features, but in which the truth of the premises does not suffice for the truth of the conclusion.

Putting this together with FCO and the Kratzerian account of conditionals yields an explanation for why modus ponens is a genuine inference rule. The semantic value for the whole conditional, $[\text{if } \varphi, \text{ must } \Psi]^{f,g}$, is the semantic value for $[\text{must } \Psi]^{f',g}$, a proposition that is true just in case Ψ is true in all the worlds that result by updating the contextually determined domain by throwing out all of its non-φ worlds. But which worlds are in the domain that φ's addition updates? What determines which worlds are in that domain? A natural hypothesis, in the spirit of Robert Stalnaker's work, is that the worlds in the original domain are just the worlds in the context set, i.e. those compatible with the presuppositions of a conversation's participants. After all, these presuppositions would seem to be the ones speakers would recognize as implicitly built into a conditional's antecedent. (I'll leave evidence for this primarily as a reader exercise, but to see what such an exercise would involve, imagine two interlocutors, the first of

whom asserts (P), "if it rains, the picnic will be canceled", and the second of whom replies, "what? Even if no one minds eating while carrying an umbrella?!". The oddness of the reply highlights how the propositions conditionals express are generally determined against the background of additional restrictions assumed to be in place, where those restrictions pick up on background conversational assumptions, e.g. that picnic goers generally don't enjoy themselves if they have to carry an umbrella while eating to avoid getting wet. With this sample exercise in place, the reader is invited to consider further cases.)

In Stalnaker's framework, which proposition is expressed by an utterance is a function in part of which worlds are in a conversation's context set. My interest here is in a notion of validity that's tied to what's said. Since a conclusion is understood as the content of a speech act, in this framework, the proposition represented as an argument's conclusion will be a function of the worlds in the context set. In a modus ponens argument, then, the presuppositions that determine the context set have two jobs, the job of supplying a value for the covert modal's f-parameter and of helping to determine the proposition expressed in the conclusion, a subset of the f-worlds.[46]

When we evaluate an argument for validity, on the account of validity presupposed here, we look to see whether it is true at every world in which all of the premises are. "φ" is among those premises. So, checking the conclusion's truth, given the premises, means that we just 'look at' the φ-worlds. What the conditional premise says, roughly, is that Ψ is true at all of the $f+ \varphi$-worlds. Well, if *that's* true, then the conclusion, Ψ, is true throughout all of the worlds in the context set, i.e. the $f+ \varphi$-worlds. This guarantees that, so long as context supplies univocal semantic values for 'p' (i.e. a single proposition) and the f- and g-parameters, the conclusion will

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[46] See Stalnaker (forthcoming).

be true whenever both the premises are. And this makes a counterexample to MP impossible, just as we expect of a genuine inference rule.

3. Contextualist Solutions

3.1 Odious Inferences

According to the present account, conditional oughts contain context-sensitive expressions. So, evaluating odious inferences requires specifying a context of use. For an ordinary, everyday case like HARLEM, doing that is pretty easy. But it's a bit harder for MURDER, at least when we require, as the puzzle's set up does, that the case be one that makes the premises come out true. Intuitively, if we add "morally" to force a moral reading of M2, thus,

M2-M. If you want to murder messily, you [morally] ought to use a chainsaw

it won't come out true.[47]

We can get a true reading, however, if we take M2 at face-value, notice its similarity to H2, and give it a bouletic reading.

M2-B: "If you want to murder messily, then, given your preferences, you ought

to use a chainsaw."

So, seeing what FCO should say about MURDER requires a context that gives M2 the bouletic reading. Here's one: Imagine two mafiosos, Jack and Jill, deliberating about what to do with a newly-discovered snitch. Jill is the more experienced mafioso, wise in the ways of snitch-prevention. Her advice is to make a vivid example of the offender.

"Whatcha wanna do" she says, "is kill 'em real messily."

"What?" asks Jack, "you mean, like with a chainsaw or something?"

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[47] Notice, however, that it will come out true on a wide-scoping account whenever you don't want to murder messily. Intuitively, though, failing to have such a desire does not make M2-M true.

"Yeah", she replies, "You oughtta kill 'em with a chainsaw."

Let MURDER represent their reasoning.

We can now put the above Kratzerian account of conditionals together with FCO to get explanations of both MURDER and HARLEM. First, consider HARLEM. Roughly (suppressing the complexities the covert modal introduces), what's said by "if you want to go to Harlem, you ought to take the A-train" is true just in case the best worlds alike with respect to the actual circumstances (modulo that you want to go to Harlem, if you actually don't and where 'bestness' is measured in part by that desire's satisfaction) are worlds in which you get there by taking the A-train.[48] HARLEM is valid, precisely because the context indicates that the restricted domain over which the modal in the second premise quantifies is the same contextually-restricted domain over which the conclusion does. This restriction of the latter is effected by the introduction of the first premise; it's acceptance into the conversation has the effect that participants just "look" at the worlds in which you want to go to Harlem. So we get just what we want: An explanation for why, given that the premises are true, the conclusion is as well.

So, what about MURDER? What its second premise says is true just in case the best worlds (in terms of Jack's preference satisfaction) in which Jack wants to murder messily are worlds in

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[48] More precisely, R2 is true just in case at every world w' which is alike with respect to the actual circumstances modulo that you want to go to Harlem if you don't, you ought to take the A-train. That's to say that, for each w', all of the best (preference-wise) worlds w'' which are alike with respect the circumstances at w' are worlds in which you take the A-train. If that's true, then what's said by "you ought to take the A-train" in each world in the context set is true, i.e. R3 is true whenever R1 and R2 are. (This is still a bit rough. We will need, for example, the satisfaction of the desire to get to Harlem to play a dominant, but not exclusive, role in determining the ranking of w'' at each w'. For a more careful discussion, see von Fintel and Iatridou (ms).)

which he uses a chainsaw.[49] Given that Jack is a Mafioso, this seems pretty plausible. Let's

suppose it's true. Let's also suppose that Jack does want to murder messily. If we do, we'll

ignore all the possibilities in which he doesn't and we'll treat that preference as helping to

determine what he ought, given his preferences, to do. So, when we get to M3 on the basis of

M1 and M2, we'll have a conclusion that is best understood, given the context, as expressing the

proposition that the best (Jack's preference-wise) worlds in which Jack wants to murder messily

are chainsaw-using worlds. If we're willing to regard both M1 and M2 as true, then, we must

also accept what's said in M3. So, MURDER, on the present account, is valid.

But, why, then, do we feel strongly inclined to reject the conclusion of MURDER, but to

accept the conclusion of HARLEM? There seem to be two reasons. First, when we see just

"you ought to murder with a chainsaw" independently of any context,[50] we give it a default,

moral reading. But it's just false that in all morally ideal worlds, Jack is murdering a snitch with

a chainsaw. In other words, when we hear an utterance of a sentence like M3, we don't hear it as

expressing the proposition that it in fact expresses in the mafiosos' context, but hear a different,

more familiar proposition that would be clearly false.[51] So we reject M3. If we force ourselves

to focus carefully on the context in which the conclusion of MURDER is actually used, we

intuitively hear it at least as less bad than when we look at the inference outside of any context.

But this does not guarantee that all of us will hear M3 as fine, even in its context. It seems

to me that this is not best explained by the hypothesis that what Jill said in her context is false.

An equally plausible explanation of our inclination to reject M3 rests on our commitment not to

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[49] This is again suppressing the complexities introduced by the covert modal.

[50] This is in contrast to "if you want to murder messily, you ought to use a chainsaw".
When we hear it independent of context, the antecedent helps us hear the 'ought' under a
bouletic reading.

[51] If you don't like "falsity", feel free to put the point in terms of rejection.

aid and abet murders. This is manifested in our complete disinclination to advise either mafioso on how best to prevent snitching. In particular, even when we regard it as true, under its M2-B reading, we wouldn't ourselves say what Jill says in the second premise, (M2), to advise Jack, even if we were in a position to give helpful pointers. Since we certainly wouldn't provide such advice, we also wouldn't assert the conclusion of MURDER.[52] This is in contrast to HARLEM. We'd be happy to assert H2. So, (assuming you want to go to Harlem), we'd be happy to assert H3. So, FCO satisfies our first desideratum by explaining our willingness to assert H3, in light of our acceptance of H1 and H2, in HARLEM's context, together with our unwillingness to assert the conclusion of MURDER, even when we accept the truth of M1 and M2.

3.2 A Paradox about 'Ought' and 'If'[53]

In the MINERS paradox, our inclinations are to accept both of the apparently inconsistent (S1) and (S5) and to accept (S5) on the basis of our acceptance of (S2)-(S4).

(S1) We ought to block neither shaft.

(S2) If the miners are in shaft A, we ought to block shaft A.

(S3) If the miners are in shaft B, we ought to block shaft B.

(S4) Either the miners are in shaft A or they are in shaft B.

So,

(S5) Either we ought to block shaft A or we ought to block shaft B.

An adequate response should explain all of these inclinations. Flexible Contextualism does just that, first by noticing what seems to be driving our inclinations to accept each of (S1) and (S5). When we accept (S1), we are thinking in terms of what would be best to do, given our

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[52] Following Darwall (1983), we might instead give the advice "if you want to murder snitches messily, you ought to see a psychiatrist".
[53] Special thanks to Aaron Bronfman for helpful discussion of the material in this section.

limited information, our uncertainty about the miners' location. In other words, we are having

the sort of thoughts that motivate some to recognize a subjectivist 'sense' of "ought". When we

accept (S5), though, we're noticing that it's physically possible for us to do better than saving

nine miners; we could, in that sense, save all ten.   When we focus on that, we think that, given

actual circumstances, that the miners are all in one shaft and that we have enough sandbags to

completely block off whichever one they're in, it would be best if we blocked that shaft. In other

words, we are having the sort of thoughts that motivate some to recognize an objectivist 'sense'

of "ought". With **Hypothesis 5** and **Hypothesis 6,** FCO captures our intuition that there are both

'sense's, but without positing ambiguity, an important advantage over ambiguity theories.[54]

Given the sort of thoughts that lead us to each of (S1) and (S5), a natural hypothesis is that

(S1) has an informational modal base and (S5) a circumstantial one. And this seems highly

plausible. Start with (S1): Contextual clues here include the reasoning that serves as its basis,

which are the probabilities and expected outcomes mentioned in the story. These features of the

context suggest that a speaker of (S1) intends to make a claim about what would be best, given

the information contained in the scenario.

Moreover, when we're hearing (S1) as true, we must be hearing it under an epistemic

reading, since only under an epistemic reading does (S1) come out true.[55] After all, we know

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[54] See Gibbard (2005: 340) for one statement of the standard distinction between
'objective' and 'subjective' 'senses' of "ought". For a different sort of ambiguity theory,
see Schroeder (forthcoming).

[55] This oversimplifies things a bit by suggesting that the only difference between S1 and
S5 on the present view is in the modal base, but, as suggested above in the discussion of
Hypothesis 5 and **Hypothesis 6**, 'subjective' and 'objective' 'ought's also differ in the
kind of value their g-parameters take. In the case of the former, there is at least
sometimes a need for information-sensitivity in the value for the g-parameter. (In
Kolodny and MacFarlane's terms, the value for the g-parameter is "seriously
information-dependent," (2010) p.133.) I don't myself have a view on how best to work

that doing nothing will not be best, given the circumstances. What is best, given the

circumstances, is blocking the shaft all the miners are in, thus saving them all. So, if (S1) had a

circumstantial reading, it would be false. So, when we hear it as true, we can't be hearing (S1)

circumstantially.   When we hear it as true, (S1) must have an epistemic modal base, where the

relevant information is the information contained in the story.[56]

What about (S5)? When we hear (S5) as true, it must be under a circumstantial reading and

for parallel reasons. Given the information built into the scenario, an epistemic reading of each

of (S5)'s disjuncts makes them both come out false. Given that information, it's not the case that

we ought to block A and it's not the case that we ought to block B. But, when each is given a

circumstantial reading (i.e. either, given the circumstances, we ought to block A or, given the

circumstances, we ought to block B) (S5) comes out true. So, when we hear (S5) as true, we

hear it under a circumstantial reading.

This hypothesis not only explains our inclinations to accept both (S1) and (S5), it also

explains both our acceptance of (S2) and (S3) and how (S2)-(S4) may serve as a basis for (S5).

And it does this while saving modus ponens. To see how, first consider the whole proof:

1. (S2) If the miners are in shaft A, we ought to block shaft A.

2. (S3) If the miners are in shaft B, we ought to block shaft B.

3. (S4) Either the miners are in shaft A or they are in shaft B.

4.   *Assume*: The miners are in A.

5.   Therefore, we ought to block shaft A. (1,4: modus ponens)

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out the formal semantics for such a view, but for two interesting proposals, see Charlow
(ms), Silk (ms).
[56] Here I follow the linguistic data in presupposing that circumstantial and informational
modal bases are the only possibilities in play.

6.   Therefore, either we ought to block shaft A or we ought to block shaft B. (5: or-

introduction)

7.   *Assume*: The miners are in B.

8.   Therefore, we ought to block shaft B. (2,7: modus ponens)

9.   Therefore, either we ought to block shaft A or we ought to block shaft B. (8: or-

introduction)

10. (S5) [Therefore] either we ought to block shaft A or we ought to block shaft B. (3, 4-6,

7-9:or-elimination.)

In the scenario, (S4) is most straightforwardly a statement about possible circumstances; either circumstances are such that the miners are all in A or they are such that they are all in B. This helps force a circumstantial reading for both (S2) and (S3).[57] Appreciating what's going on in the proof here requires appeal to the complexities the covert modal introduces to (S2) and (S3). Consider first (S2). To arrive at (S2)'s circumstantial reading, we first go to the set of worlds that are like the actual circumstances in the contextually determined respects. These are worlds in which we have whatever number of sandbags we actually do, in which that number is capable of blocking just one shaft, in which ten miners are all trapped in a single shaft, in which we are in the location we actually are, etc. (Importantly, since they are not among speakers' assumptions, these features to not include the actual location of the miners.) Call these circumstances "N". To that set of circumstances we add the circumstance of the antecedent, i.e. that the miners are in A. Then we ask: for each of the worlds w' in that domain, which worlds w'' that are circumstantially like w' with respect to N plus where the miners are in w' are best

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[57] The present tense also helps force a circumstantial reading. This is in contrast to (B1) "either we will win or we will lose" in BATTLE in which use of the future tense can suggest uncertainty and help allow for an epistemic reading of (B2) and (B3).

(saving miners-wise)? If the answer is: For each of those worlds w', all of the best circumstantially like w' worlds w'' are blocking-A worlds, then (S2) is true. Given the scenario, (S2) *is* true, on this reading, since in each of w', blocking A is the only option that saves all the miners. We get a parallel, circumstantial reading for (S3) on which it too comes out true.   The explanation for why we accept both (S2) and (S3) is then straightforward; we accept them both because they're both true.

In addition, on these readings, (S5) follows from (S2)-(S4). To see this, first look at lines 1, 4, and 5. Line 4 has the effect that line 5 gets evaluated at only miners-in-A worlds. Since "we ought to block A" is true at each w' that is an N + miners-in-A world (making line 1 (S2) true), line 5 is true; the best N + miners-in-A worlds are worlds in which we block A. Reasoning similarly on lines 2, 7, and 8, we get an explanation for why 8 follows from 2 and 7. Moreover, both of these explanations get us that the modal bases for each of "we ought to block shaft A" in line 5 and "we ought to block shaft B" in line 8 are restricted by N + where the miners are (since the modal base for 'ought Ψ' at each w' in the conditional premises will be determined by N + where the miners are in w').   For each of the modals in lines 5 and 8 too, the ranking of worlds is determined by the number of miners saved.   And those are the parameter values for (S5); either, given the N + where the miners are circumstances, we ought to block A or, given the N + where the miners are circumstances, we ought to block B, since either blocking A saves all the miners or blocking B does, given those circumstances.   No equivocation anywhere from (S2)-(S5).

In this way, FCO explains our inclinations to accept (S1)-(S5), and (S5) on the basis of (S2)-(S4), satisfying our third desideratum, while holding onto modus ponens, and so also satisfying the second.

3.3 Invalid, Apparently Valid, Practical Inferences

BATTLE, again, but, filled-in this time (BATTLE-FI), is:

1. (B1) Either we will win or we will lose.

2. (B2) If we win, it is better that we have few soldiers than have many.

3. (B3) If we lose, it is better that we have few soldiers than have many.

4.   Assume: We will win.

5.   Therefore, it is better that we have few soldiers than have many. (2,4: modus ponens)

6.   Assume: We will lose.

7.   Therefore, it is better that we have few soldiers than have many. (3,6: modus ponens)

8. (B4) Therefore, it is better that we have few. (1, 5, 7: or-elimination)

The argument is clearly invalid. The problem is that it seems to rely on no more than a straightforward application of modus ponens and or-elimination. Dreier concludes that modus ponens is the culprit.[58] It would be nice, though, to have an explanation for the invalidity of the argument that, like Dreier's, fits with the intuitive source of the argument's failure, but that doesn't require the rejection of MP. This is just what I'll argue FCO can do.

To see how, first recall that adopting a Kratzerian account of indicative conditionals plus **VALIDITY** means that testing whether an inference provides a counterexample to MP requires first identifying a context so we may identify the propositions expressed by its premises and conclusion.   So, to determine whether BATTLE presents a counterexample to modus ponens, FCO requires its situation in a context.

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[58] Dreier (2009:128).

In that context, recall, Henry is trying to persuade his troops not to wish for more soldiers. So, he is most naturally understood as appealing to their concerns. This feature of the context suggests that the ordering source for "…better that…" is bouletic, where the relevant preferences are the soldiers'. Glory and shame, he reasonably assumes, are among their concerns. As we saw, these are his grounds for B2 and B3. We may also safely assume that winning is among those concerns. After all, isn't a desire to win the best explanation for why the soldier wishes aloud for more? In noting this, we arrive at the intuitive source of the failure of Henry's reasoning: The reason why Henry's argument fails to persuade is that winning is more important than both attaining glory and avoiding shame and having more troops makes it more likely that Britain will win. If we completely set aside the role that the desire to win plays in the soldiers' preference ranking, either by assuming that they'll win or assuming that they'll lose, then attaining glory and avoiding shame are perfectly good grounds for claiming it better to have few. But if we don't ignore the primary importance of winning, we can't conclude that it's better to have few, since having few makes it less likely they will win. (We can test this hypothesis by seeing what happens to our intuition that the conclusion is false when we explicitly set aside the importance of winning. If we do that, we can arguably force a univocal reading of the standard parameter, but it becomes much less clear that the conclusion is false.)

This is the most natural explanation of why Henry's reasoning fails, one that Dreier's explanation relies on insofar as that it relies on noting that Henry overlooks the dependence of the number of troops on winning.[59] What FCO does is allow for a more precise statement of the

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[59] "When I teach my class in Decision Theory, I say what is wrong is that the State (win or lose) depends probabilistically on the Act (whether we have few or many). It is much more likely that we will win given that we have many, than given we have few. I'm sure that's correct." (Dreier (2009:127 and 128).

natural explanation of Henry's failure in a formal, semantic framework plus a description of the context, but without giving up on modus ponens.

What we see in BATTLE is that for or-elimination and MP to work together, the domain restriction an antecedent induces can't make a difference to the ordering source between the two conditionals and the non-conditional (less restricted) conclusion. In BATTLE, it does make a difference, because restricting the domains of the modals in B2 and B3 to only winning worlds and to only losing worlds respectively, eliminates winning as an ordering source, whereas quantifying over both winning and losing worlds reintroduces winning as an ordering source, in fact, the dominant one. So, 'betterness' in lines 5 and 7 is not measured in the same way as 'betterness' in B4 (line 8). This means that BATTLE involves equivocation, not a failure of modus ponens.

To see more carefully why 'betterness' is measured differently in lines 5, 7, and 8, it will be helpful to see what FCO says about the MP subproofs in BATTLE as stand-alone arguments. Dreier rightly notes that when the subproofs are treated as stand-alone arguments, they're intuitively valid.[60]

Modus Ponens (MP-) BATTLE:

MP-B1. We will win.

MP-B2. If we win, it is better that we have few soldiers than have many.

MP-B4. Therefore, it's better that we have few.

According to FCO, MP-B2 in Henry's context expresses a proposition that is true just in case the winning worlds in which few soldiers fight are ranked more highly (glory-wise) than the winning

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[60] Dreier (2009:128).

worlds in which many fought.[61] Suppose, as follows from Dreier's stipulations about the case, this is true and that we are in a winning world (i.e. that MP-B1 is true). Then MP-B4 is true; our acceptance of MP-B1 has the effect of restricting the set of worlds over which MP-B4 quantifies to winning worlds. Among those worlds, the few-fighting worlds are ranked more highly (glory-wise) than the many-fighting worlds. So, my account explains why MP-BATTLE is valid.

We get a parallel explanation for the validity of MP-BATTLE':

MP-B1'. We will lose.

MP-B3'. If we lose, it is better that we have few soldiers than have many

MP-B4'. Therefore, it's better that we have few.

MP-B3' is true just in case the losing worlds in which few soldiers fight are ranked more highly (shame avoidance-wise) than the worlds in which many do. Given Henry's assumptions about what constitutes betterness in a losing world (avoiding shame), this comes out true. Suppose also that the actual world is one of the worlds in which we lose. In that case, MP-B4' only ranks losing worlds. Among those worlds, the ones in which few fought are ranked more highly (shame avoidance-wise) than the worlds in which many do. Intuitively, since those worlds are better, shame avoidance-wise (given Dreier's stipulations) MP-B4' come out true. So, what FCO holds is said by MP-B4' in this context is true, as we intuitively think. And this means that FCO holds that MP-BATTLE' is valid in Henry's context, as it intuitively is. This explanation for the validity of the two subproofs explains why the 'betterness' measure in lines 5 and 7 isn't

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[61] Here and in both SMOKING and GARDEN PARTY below, I suppress the complexities introduced by the covert modal, though the above discussion should make clear that reintroducing them makes to difference to the main points here. I also here assume for brevity's sake that the context is one in which the antecedent's restrictor is circumstantial, though nothing hangs on this. The argument will go through just as well if the modal base is epistemic.

the same as in lines 8. It also suggests that the source of BATTLE's invalidity isn't a failure of modus ponens.

One might object here that there is an univocal standard throughout, one given simply by the soldiers' preferences or by some other standard that we can force by the inclusion of some explicit, standard-determining phrase throughout, such as "all-things-considered" or "all-things-considered-for the English".[62] One prima facie source of suspicion here is that, intuitively, the premises miss something important, namely, the instrumental value of more troops to winning. This already suggests that we don't hear that value as relevant to determining the ranking in the premises, but do in the conclusion.

In order to determine whether there's a genuine objection here, we need a phrase that clearly picks out the same parameter value throughout such that adding that phrase doesn't alter our intuitions about the truth-values of the premises and conclusion. (We have the intuition that BATTLE is invalid in part because there is a strong, uniform intuition among competent speakers that the premises are true in Henry's context and the conclusion false. For the revised case to be a plausible counterexample to MP, that pattern of intuitions must be maintained.) Consider first the phrases "all-things-considered" and "all-things-considered-for–the-English". Neither of these clearly preserves our intuitions about truth-evaluations. Mightn't it be *all things considered* better for the English to have a few? Well, maybe it is; maybe it would be all things considered better for the English to lose. Mightn't it even be *all things considered for the English* better for the English to have few? Again, maybe it is—who knows what long-term good consequences losing might have? So, we don't yet have a univocal standard that *clearly* preserves the needed intuitions about truth-evaluations.

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[62] Dreier has objected along these lines (pc).

Another suggestion would be to add the phrase "given the soldiers' concerns (or preferences)" or "given the soldiers' war-related concerns" throughout.   The trick here would be to get the concerns relevant for determining an ordering of worlds in the conclusion to be the same as those in the premises. (To see that merely adding the same phrase throughout isn't enough to guarantee an univocal value for the standard parameter, consider a paraphrase of the famous pair, "if you want sugar in your soup, then, given your preferences, you should ask the waiter" and "if you want sugar in your soup, then, given your preferences, you should consult your doctor". Both may be true while said in a single context and relative to a single individual's fixed preferences, but they will each be true relative to different subsets of those preferences. Adding the explicit phrase is not enough to determine a uniform reading.) Does adding "given the soldiers' war-related preferences" throughout determine a single standard in the context of BATTLE? There are independent reasons for thinking it doesn't.

When we're hearing the conclusion as false, relative to the soldiers' concerns, we are treating winning as among the concerns that determines a ranking. This forces the assignment of an at least partly instrumental value to having few versus many. Having few is partially constitutive of glory, which has intrinsic value. But it is also instrumental to losing and so has instrumental disvalue. So, in order for the standard invoked in the premises to be the same as that in the conclusion in a way that preserves all of our intuitions, that standard must be given by a set of concerns that includes a concern for winning and gives having few an instrumental disvalue. There are independent reasons to think no such concern is among those playing a role in either conditional premise. One reason appeals to standard methodology among formal semanticists. When semantic

interpretation requires the assignment of a function with some domain supplying its arguments as a semantic value for some expression, we are given choices. We can select a function that gets the needed mapping of the domain onto value(s) defined on that domain exactly (the so-called "smallest function") or we can pick a function that overlaps with such a function over the restricted domain and add the domain restriction. (An example of such a pair is the function intuitively assigned to "is a son of" and that intuitively assigned to "is a child of", restricted to the domain of male offspring. The former function is 'smaller' than the latter and so is chosen as the 'intended' semantic interpretation for "the son of" in English.) Semantic interpretation requires that we choose between such functions and the standard practice among formal semanticists is to always choose the 'smallest' function. (See, for example, Heim and Kratzer (1998: 34-5).)

What that means in terms of the present case is that, since winning is playing no role in determining a mapping of the modal's base onto an ordering of that base in either of the conditional premises, it's not part of the standard that determines the smallest function, and so isn't part of the semantic value for either modal's g-parameter in Henry's context.

Why might formal semanticists adopt this practice? I haven't seen a defense, but a justification isn't hard to find. Put in terms of identifying values for a modal's parameters, we might say: If a feature of some standard isn't making any contribution to determining a domain's ranking, we have no reason to posit it as a feature of the standard that is determining that ranking. To illustrate this Ockhamist idea somewhat abstractly, but in connection with the conditional premises in Henry's argument, suppose that we've

got a modal whose base contains no worlds with feature X. Suppose also that each world in that base is either Y or Z. Suppose that we know that the modal has a value for its *g*-parameter that ranks every Y-world above any Z-world. Notice that having feature X can't play any role in determining a ranking on such a domain, since no world is an X-world. Nonetheless, there are two candidate standards that might induce the needed ranking on such a domain, one that says "Y-worlds are always better than Z-worlds" and the other, which says "worlds with either Y or X are always better than Z-worlds". Similarly, even when we have a modal such that every world in its domain is an X-world and either Y or Z, there are two different standards that might induce the needed ranking, one that says "Y-worlds are always better than Z-worlds" and the other which says "worlds that are both Y and X are always better than Z-worlds", though having X can make no difference to a world's ranking. What Ockhamist principles tell us is that, if some element in a candidate explanation of some phenomena is idle, doing no explanatory work, then it is not part of the best explanation of that phenomena. In this abstract case, having feature X can do no work in explaining why our domains are ranked as they are, so it can't be a feature of the standards that best explain those rankings. In choosing the "smallest" functions, we choose the simpler standard that says "Y-worlds are always better than any Z-world".

In terms of BATTLE, this suggests that winning is not a feature of the standard that induces a ranking on the worlds in the domains of either of the conditional premises, not even if we add "given the soldiers' war-related concerns". In those premises, the soldiers' concern with winning and the instrumental value of having many to winning has no way of getting expressed. And if it isn't expressed, our Ockhamist principles tell us, it isn't there. But it does get expressed

in the conclusion, at least when we hear it as false, and so the value of having few versus many is shifted at least in part to an instrumental one. And this means that what standard is doing the ranking in the conclusion is not the same as that doing the ranking in the conditional premises.

A nice feature of this explanation of BATTLE's invalidity is its generality; it equally well explains the intuitively parallel **SMOKING**:

D1. Either you'll die early or you won't.

D2. If you die early, it's better to smoke (than not).

D3. If you won't, it's better to smoke (than not).

D4. Therefore, it's better to smoke (than not).

The argument is intuitively invalid. Why? A natural context in which to find SMOKING would be deliberation about whether to continue smoking or give it up. Ignoring the dying late worlds in D2 has the effect of making a preference for longevity irrelevant to the world ranking. So, the worlds are ranked only in terms of the satisfaction of the desire to smoke. Ignoring the dying early worlds has the same effect on D3. So, D2 and D3 come out true. But this doesn't guarantee that a smoker's preferences in all the worlds (compatible with the circumstances or information) are most satisfied in smoking worlds, since it can't generally be presumed that a smoker is indifferent between more and less life. If we assume that the smoker in question isn't indifferent to the length of her life, D4 comes out false, as we intuitively think in that case.

Imagine, though, a smoker who prefers a shorter life of smoking to a longer life of non-smoking. Intuitively, the argument is then valid, as FCO easily explains, since in that case, including both worlds in which the agent has a long life and ones in which she has a short one makes no difference to how her preferences rank those worlds in the conclusion's domain.

These explanations also fit nicely with a contextualist explanation of the validity of the apparently structurally similar, but intuitively valid, **GARDEN PARTY**:

GP1. Either the garden party is just before luncheon or it is just after.

GP2. If it's before luncheon, it's better that you wear your hat (than not).

GP3. If it's after luncheon, it's better that you wear your hat (than not).

GP4. Therefore, it's better that you wear your hat (than not).[63]

In the scenario, the rules governing hat-wearing are strict and indifferent to when a daytime garden party is held. Whether you do wear your hat or not does not alter the rules in this matter, nor does it effect the time of the luncheon. So, the less restrictive conclusion, GP4, ranks possibilities in the same way that both GP2 and GP3 do and MP and or-elimination are able to work together without equivocation.[64]

4. Conclusion

We've got a number of features we'd like a semantic theory of practical conditionals to exhibit and several puzzles we'd like it to solve. Some of those features involve being able to explain our intuitions, some of which seem to be in tension with one another. If we could explain those intuitions while dissolving the apparent tensions, that would be a good thing.

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[63] It may look here as if there is equivocation in the values for the f-parameter between GP2, GP3, and GP4. However, the restriction in each case is determined by N + when the party is in w', where "N" is the relevant circumstances at w' and each of w', a world in the modal base for the covert modal (in the conditional premises) and the modal, in GP4.

[64] As Aaron Bronfman has pointed out to me, there's a second way of explaining the difference between GARDEN PARTY and BATTLE in terms of FCO. On that way of thinking about things, we've got equivocation in both BATTLE and GARDEN PARTY because of a difference in domain restrictors between lines 5,7, and 8. On this strategy, GARDEN PARTY also comes out invalid, but we appeal to the differential applicability of Savage's Sure Thing Principle to explain the intuitive acceptability of GP4 on the basis of (GP1)-(GP4) and non-acceptability of (B4) on the basis of (B1)-(B4). For a discussion of Savage's principle, see Joyce (1999) p.85.

We'd also like to be able to hold onto modus ponens as a genuine rule of inference that can help us evaluate the cogency of arguments as they are given by speakers in their natural language. Maybe, at the end of the day, modus ponens has to be given up. But, it's a significant advantage in a puzzle's solution that it doesn't require giving up that intuitively obvious rule.

Appeal to equivocation is a natural strategy to try to accomplish both these tasks. And a contextualist semantics is just the sort of theory to be able to explain how equivocation can arise. But not any old contextualist semantics will do. As we've seen, it's not clear how a contextualist semantics like Bjornsson's and Finlay's will be capable of explaining MINERS without giving up modus ponens. But FCO explains our intuitions in all of the puzzle cases without giving up modus ponens. Moreover, unlike wide-scoping or Dreier's proposal, it does this in a way that fits with our best linguistic theories of modal expressions (including conditionals) generally.[65] If forced to choose among the contenders, then, I suggest we adopt it.

References

Bigelow, John and Laura Schroeter (forthcoming) "Jackson's Classical Model of Meaning," Ian Ravenscroft (editor), *Minds, Worlds, and Conditionals: Themes from Frank Jackson*, Oxford: Oxford University Press.

Bjornsson, Gunnar, and Finlay, Stephen (2010) "Metaethical Contextualism Defended." *Ethics* 121: 7-36.

Block, Ned, and Stalnaker, Robert (1999) "Conceptual Analysis and the Explanatory Gap", *Philosophical Review* 108: 1-46.

Bradden-Mitchell, David (2004) "Masters of Our Meanings", *Philosophical Studies* 118: 133-152.

Broome, John (2004) "Reasons." In R.J. Wallace, P. Pettit, S. Scheffler, and M. Smith,

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[65] The basic flexible, contextualism about modal defended here can also be deployed to resolve several recently discussed puzzles about epistemic modals. For discussion and defense of this claim, see Dowell (*forthcoming*).

eds., Reason and Value: Themes from the Moral Philosophy of Joseph Raz. Oxford: Oxford University Press, 28-55.

Byrne, Alex, and Pryor, Jim (2006) "Bad Intensions." In *Two-Dimensional Semantics*, eds. Manuel Garcia-Carpintero and Josep Macia (Editors), Oxford: Oxford University Press.

Chalmers, David (2002) "On Sense and Intension", *Philosophical Perspectives* 16: Mind and Language.

Charlow, Nate (Ms) "What We Know and What to Do." (http://www.natecharlow.com/work/wwkwtd_extended.pdf.)

Darwall, Stephen (1983) *Impartial Reason*. Ithaca: Cornell University Press.

Dowell, J.L. (Ms$_1$) "Flexible Contextualism about 'Ought'."

Dowell, J.L. (Ms$_2$) "A Defense of Metaethical Contextualism Reconsidered."

Dowell, J. L. (*forthcoming*) "A Flexibly Contextualist Account of Epistemic Modals." *Philosopher's Imprint*.

Dowell, J. L. (2008) "Empirical Metaphysics: The Role of Intuitions about Possible Cases in Philosophy." *Philosophical Studies*, BSPC 2007 volume, July 2008, Volume 140, Issue 1,19-46.

Dreier, James (2009) "Practical Conditionals." In *Reasons for Action* eds. David Sobel and Steven Wall, 116-133. Cambridge: Cambridge University Press.

Finlay, Stephen (2008) "The Error in Error Theory." *Australasian Journal of Philosophy* 86(3), 347-369.

Finlay, Stephen (2009) "Oughts and Ends". *Philosophical Studies*, 143: 315-340.

von Fintel, Kai, and Iatridou, Sabine (Ms) "What to Do If You Want to Go to Harlem: Anakastic Conditionals and Related Matters."

Gibbard, Allan (2005) "Truth and Correct Belief." *Philosophical Issues*, 15: 338-350.

Greenspan, Patricia (1975) "Conditional Oughts and Hypothetical Imperatives," *The Journal of Philosophy*, 72: 259-276.

Jackson, Frank (1991) "Decision-Theoretic Consequentialism and the Nearest and Dearest Objection." *Ethics*.

--- (2004) "Why We Need A-intentions." *Philosophical Studies*, 118: 257-277.

Joyce, James (1999) The Foundations of Causal Decision Theory. Cambridge: Cambridge University Press.

Joyce, Richard (2001) *The Myth of Morality*. Cambridge: Cambridge University Press.

Kaplan, David (1989a) "Demonstratives. An Essay on the Semantics, Logic, Metaphysics, and Epistemology of Demonstratives and Other Indexicals." In *Themes from Kaplan*, ed. J. Almog, J. Perry, and H. Wettstein, 481–563. Oxford: Oxford University Press.

---1989b "Afterthoughts." In *Themes from Kaplan*, ed. J. Almog, J. Perry, and H. Wettstein, 565–614. Oxford: Oxford University Press.

Kolodny, Niko and John MacFarlane Ms. "Ought: Between Subjective and Objective."

--- (2010) "Ifs and Oughts." *Journal of Philosophy* 107: 115-143.

Kratzer, Angelika (1977) "What Must and Can must and can mean." *Linguistics and Philosophy* 1: 337-355.

---(1981a) "The notional category of modality." In *Words, Worlds, and Contexts: New Approaches in Word Semantics*, ed. H. J. Eikmeyer and H. Rieser, 38-74. Berlin: de Gruyter.

---(1981b) "Blurred Conditionals." In *Crossing the Boundaries in Linguistics*, eds. W. Klein and W. Levelt, 201-209. Dordrecht: Reidel.

---(1991a) "Modality." In *Semantics: An International Handbook of Contemporary Research*, ed. A. von Stechow and D. Wunderlich, 639-650. Berlin: de Gruyter.

---(1991b) "Conditionals." In *Semantics: An International Handbook of Contemporary Research*, ed. A. von Stechow and D. Wunderlich, 651-656. Berlin: de Gruyter.

---(Ms) *Modals and Conditionals Again*.

McLaughlin, Brian (2001) "In Defense of New Wave Materialism" in *Physicalism and Its Discontents*, eds. Carl Gillett and Barry Loewer, 319-330**.** Cambridge: Cambridge University Press.

Schroeder, Mark. Forthcoming. "*Oughts*, Agents, and Actions." *Philosophical Review*.

Schroeter, Laura. 2003. "Gruesome Diagonals." *Philosophers' Imprint* 3: 1-25.

Silk, Alex. Ms. "Evidence-sensitivity in Deontic Modals." (http://www-personal.umich.edu/~asilk/Alex_Silk/home_files/silk%20evidence-sensitivity.pdf.)

Soames, Scott. (2005) *Reference and Description: The Case Against Two-Dimensionalism*, Princeton: Princeton.

Stalnaker, Robert (forthcoming) "Conditional Propositions and Conditional Assertions." In *Epistemic Modality*, eds. B. Weatherson and A. Egan. Oxford. Oxford University Press.

---(1999) "On the Representation of Context." In *Context and Content*, Robert Stalnaker, 96-113. Oxford: Oxford University Press.

Stanley, Jason, and Szabo, Zoltan (2000) "On Quantifier Domain Restriction." *Mind and Language* 15(2), 219–261.

Thompson, Judith Jarvis (1990) *The Realm of Rights*. Cambridge: Harvard University Press.

Yablo, Steve (2002) "Coulda, Woulda, Shoulda" in *Conceivability and Possibility*, ed. Tamar Gendler and John Hawthorne, (Oxford: Oxford University Press, 2002).