



MODALITY, WEIGHTS, AND INCONSISTENT PREMISE SETS



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1. TWO PUZZLES ABOUT 'SHOULD'

Treating 'should' as an ordinary necessity modal: 'Should ϕ ' is true iff ' ϕ ' is true at all the $\lesssim_{g(w)}$ best worlds in the modal base, the worlds in the modal base that best approximate the relevant ideal.

$$(1) \llbracket \text{Should } \phi \rrbracket^{c,w} = 1 \text{ iff } \forall w' \in \text{MAX}(\bigcap f(w), \lesssim_{g(w)}) : \llbracket \phi \rrbracket^{c,w'} = 1$$

Prima facie problems:

- 'Should' is sensitive to the strengths or priorities of premises. (§2)
- 'Should' is logically weaker than 'must'/'have to'. (§§3–6)

I argue that, contrary to certain arguments in the literature, the standard Kratzer semantics ([4], [5]) can capture these data while minimizing the semantic differences between 'should' and 'must'. The resulting analysis clarifies what sorts of premises figure in the interpretation of modals, and illuminates previously puzzling and unnoticed semantic and pragmatic properties of 'should' and 'must'.

2. WEIGHTS AND PRIORITIES

WEIGHTED GOALS: Your only goals are to go for a run (now) and to watch a movie (now). You can't do both, but you want to go for a run much more than you want to watch a movie.

- (2) In view of your goals, you should go for a run. True
 (3) In view of your goals, you should watch a movie. False

Problem: If $g(w) = \{ \text{You go for a run, You watch a movie} \}$, (1) predicts they're both false. "[Kratzer's] theory makes no room for one [goal's] being stronger than another" (Lassiter [6: 61])

Solution: We need a more nuanced characterization of $g(w)$. Goals, etc. needn't be blunt Kantian categorical imperatives: *Watch a movie, no matter what!*. They often come with "**applicability conditions**" C , conditions (only) under which they're to be pursued: *Watch a movie unless you want to run more!*. We can encode weights/priorities into premises via these ACs.

$$(4) g^*(w) = \{ \text{You go for a run} \leftrightarrow C = \text{you don't want to do anything else more,} \\ \text{You watch a movie} \leftrightarrow C' = \text{you don't want to do anything else more} \}$$

Since C but not C' is true at all the worlds in $f_{\text{circ}}(w)$, only your goal of going for a run is "in force." This correctly generates that (2) is true and (3) is false: the $\lesssim_{g^*(w)}$ best worlds are *run*-worlds.

SELECTED REFERENCES

- [1] von Fintel (1998), The presupposition of subjunctive conditionals, in *MITWPL* 25.
 [2] von Fintel & Iatridou (2005), What to do if you want to go to Harlem, MS. [3] (2008), How to say *ought* in foreign, in Gueron & Lecarme (eds.) *Time and modality*. [4] Kratzer (1981), The notional category of modality, in Eikmeyer & Rieser (eds.) *Words, worlds, and contexts*. [5] (1991), Modality/conditionals, in von Stechow & Wunderlich (eds.) *Semantics*. [6] Lassiter (2011), *Measurement and modality*, Ph.D. thesis. [7] Rubinstein (2011), Projective signals of weak necessity modals, in ESSLLI 2011 Workshop on projective meaning. [8] (2012), Figuring out what we *ought* to do, poster from PLC 36.

3. WEAK VS. STRONG NECESSITY MODALS

- (5) a. I should help the poor. In fact, I must.
 b. I must help the poor. #In fact, I should.
 (6) a. I should help the poor, but I don't have to.
 b. #I must help the poor, but it's not as if I should.

'Should ϕ ' expresses that ϕ is necessary, but 'should' is weaker than 'must'. I argue that applicability conditions play a crucial role in explaining the weak/strong necessity distinction. (§6)

4. PREVIOUS ANALYSES I

von Fintel & Iatridou ([2], [3]): 'Should' is interpreted wrt a secondary OS $g(w')$ that refines $\lesssim_{g(w)}$.

- 'Must' quantifies over the $\lesssim_{g(w)}$ best worlds.
- 'Should' quantifies over the $\lesssim_{g(w)}$ best worlds that are also best by $g'(w)$.

Unsatisfying: No independent story about what makes a primary OS "primary" and a secondary OS "secondary".

5. PREVIOUS ANALYSES II

Rubinstein ([7], [8]):

- 'Should'/'must' are both given the truth-conditions in (1).
- 'Should', unlike 'must', carries a **conventional signal**, SigW, that the modal is interpreted wrt non-common-ground assumptions, i.e., supersets of $f_{cg}(w), g_{cg}(w)$. SigW is argued to be a type of non-truth-conditional conventional meaning that's projective, not-at-issue, and antibackgrounded.

- (7) a. Me: Traveling quickly would be nice.
 You: Sounds good. You should (?must) take the A train.
 b. Me: Traveling quickly is most important, more important than safety or anything else.
 You: Sounds good. You must (?should) take the A train.

(Non-)CG assumption: that my preference for speed takes priority.

Problems:

- SigW can be canceled.
 (8) We should open an ice cream shop, as we can all agree.
- More generally, 'should' can appear in contexts where Rubinstein predicts only 'must' can appear, and vice versa.

- (5a) I should help the poor. In fact, I must.
 (9) Alice, the rest of the group has voted and decided that you have the best tech skills. So you have to start working on the website right away. And, as we settled yesterday, because Bert is most creative, he should focus on creating our logo.

6. POSITIVE PROPOSAL

Contrary to initial appearances ([7: 141,146], [8]), the putative non-CG assumption that the truth of (7a) relies on doesn't figure in the OS. In both (7a) and (7b), $g_{cg}(w)$ might be the same:

$$(10) g_{cg}(w) = \{ I \text{ go to Harlem; } I \text{ travel quickly iff I don't have any relevant stronger countervailing goals} \}$$

Rather, the relevant non-CG assumption figures in the *modal base*. Whereas the applicability condition for my goal of traveling quickly is satisfied throughout $\bigcap f_{cg}(w)$ in (7b), it isn't in (7a). I suggest that this feature generalizes to explain the weak/strong distinction.

ANALYSIS: 'Must' presupposes that the ACs of certain relevant goals, etc. in $g(w)$ are satisfied, whereas 'should' makes a subjunctive claim about what *would* be necessary in the relevant sense *were* those applicability conditions to be satisfied. 'Should ϕ ' is true iff 'Must ϕ ' would be true were it to turn out that the relevant applicability conditions are satisfied. For any modal flavor:

ACTUAL STRONG

$$\llbracket \text{Must } \phi \rrbracket^{c,w} = 1 \text{ iff } \forall w' \in D(\bigcap f(w), \lesssim_{g(w)}) : \llbracket \phi \rrbracket^{c,w'} = 1$$

SUBJUNCTIVE WEAK

$$\llbracket \text{Should } \phi \rrbracket^{c,w} = 1 \text{ iff } \forall w' \in D(\bigcap (f(w) \cup \mathcal{C}_{g(w)}), \lesssim_{g(w)}) : \llbracket \phi \rrbracket^{c,w'} = 1$$

Advantages. This analysis helps capture:

- how 'Must ϕ ' asymmetrically entails 'Should ϕ ': The weak/strong distinction is partly a truth-conditional difference in strength.
- the relative felicity of 'should' and 'must': For example:
 - (7b): Since your 'must' claim is felicitous and true, using the weaker 'should' would violate a Gricean quantity maxim.
 - (7a): Your 'must'-claim would be false since it isn't CG that the AC of my goal of traveling quickly is satisfied. So, whether 'must' is felicitous depends on whether you have the authority in the conversation to make this proposition CG by your utterance (i.e., to make me accommodate).
- the cross-linguistic phenomenon of expressing weak necessity through CF-morphology on a strong modal ([3]): The CF element is built into the analysis of weak necessity modals.
- the surprising datum that, for deontic as well as epistemic readings, 'Should ϕ but $\neg\phi$ ' is consistent but 'Must ϕ but $\neg\phi$ ' isn't:
 - Generalizing a claim by von Fintel [1] regarding indicative and subjunctive conditionals: There's a default presupposition that a modal's domain of quantification is a subset of the CG. The subjunctive signals that this default fails to hold.
 - Given ACTUAL STRONG, 'must' is consistent with this default; hence the set of best worlds must be included in the CG; hence it can't be that ' $\neg\phi$ ' is true throughout the CG.
 - Given SUBJUNCTIVE WEAK, 'should' isn't consistent with the default; hence the set of best worlds might not be included in the CG; if it isn't, ' $\neg\phi$ ' might be true throughout the CG.