

Four Kinds of Normative Tension and the Semantics of Modals

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This paper proposes a semantics that addresses

- (i) **disagreement between authorities:** preserving agreement, avoiding arbitrariness, allowing mixtures;
- (ii) **conflict between normative systems:** handling conditionals that bracket system-level conflicts;
- (iii) **incomparability within a system:** using partiality to represent only normative incomparability;
- (iv) **gaps within a normative system:** allowing permissions without requirements, and allowing determinate indeterminacy.

I use Kratzer's approach as

1. a foundation—preserving many insights alongside substantive revisions and reinterpretations;
2. a foil—although in tension-free settings my approach reduces to hers;
3. a lingua franca—I welcome transpositions to other frameworks;
4. a possible complement—but not until section (vi).

(i) Disagreement between authorities

CASE 1: Te Miti requires that students stride; Te Kini *requires that students not stride*; both require flying. Kratzer 1977: the premise set $A = \{p, q, \neg p\}$. Kratzer *preserves agreement*: students must fly (q), since “there is ... for every consistent subset of A a consistent extension in A from which q follows logically” (354). Kratzer *avoids arbitrariness*: students may and may not stride, so neither Te Kini's nor Te Miti's judgments prevail.

CASE 2: CASE 1, but *with another disagreement: Te Miti requires rizzing; Te Kini requires not rizzing*. Kratzer *allows mixtures*. Premise set $= A \cup \{r, \neg r\}$. Students may (stride and not rizz), and may (not stride and rizz).

↪ CASES 1 and 2: Kratzerian orthodoxy handles tension (i) with non-negated strong necessity modals. However, in these cases disagreement generates determinate permissions.

CASE 3: Te Miti requires striding; Te Kini *judges it optional, and so permits not striding and permits striding*; both require flying. We want to *preserve agreement*—students must fly—and to *avoid arbitrariness*. In particular, neither Te Miti nor Te Kini should simply prevail as a matter of semantics. Striding should not simply be required, and not striding should not simply be permitted.

↪ CASE 3: It's not obvious how to handle tension (i) with non-negated possibility modals.

Mutatis mutandis for CASES 4 and 5: we want to *preserve agreement* and *avoid arbitrariness* in the face of genuine disagreements. Neither Te Miti nor Te Kini should simply prevail as a matter of semantics.

CASE 4: Te Miti requires striding; Te Kini *says “Students may stride, but shouldn't”*; both require flying.

CASE 5: Te Miti requires striding; Te Kini *says “Students should stride, but don't have to”*; both require flying.

↪ CASES 4 and 5: It's not obvious how to handle tension (i) with weak necessity modals.

CASE 6: Te Miti says “I'm about to run a two-stage lottery. I haven't started yet, but at this point more than half of you may be the class representative.” Te Kini says “Al alone may be the class representative.”

↪ CASE 6: It's not obvious how to handle tension (i) with quantifiers scoped over modals.

↪ CASES 3–6: We should seek a more general approach to tension (i). I like supervaluating.

Prefer Kratzer's predictions for CASES 1 and 2? I discuss hybrid approaches in section (vi).

Each **judgment** $\langle\langle\phi\rangle\rangle$ = the set of (/constraint on) ordering relations on worlds associated with $\lceil\phi\rceil$, where ' ϕ ' ranges over sentences with a wide scope normative modal expression or a quantifier taking widest scope over a normative modal expression. Each **stance** is a non-empty intersection of **salient** judgments; XOR modal expressions like 'optional' make conjunctive permissions salient; wide-scope quantifiers make disjunctions salient. **Largest stances**—maximal such intersections—serve as the **precisifications** for supervaluating.

CASE 2 judgment	Te Miti	Te Kini	Stance 1	Stance 2	Stance 3	Stance 4
$\langle\langle\text{Students must stride.}\rangle\rangle$	✓	✗	✓	✓	✗	✗
$\langle\langle\text{Students must not stride.}\rangle\rangle$	✗	✓	✗	✗	✓	✓
$\langle\langle\text{Students must fly.}\rangle\rangle$	✓	✓	✓	✓	✓	✓
$\langle\langle\text{Students must rizz.}\rangle\rangle$	✓	✗	✓	✗	✓	✗
$\langle\langle\text{Students must not rizz.}\rangle\rangle$	✗	✓	✗	✓	✗	✓

Stance 1 (Te Miti's judgments) = $\langle\langle\text{Students must stride}\rangle\rangle \cap \langle\langle\text{Students must fly}\rangle\rangle \cap \langle\langle\text{Students must rizz}\rangle\rangle$

Stance 2 (a mixture) = $\langle\langle\text{Students must stride}\rangle\rangle \cap \langle\langle\text{Students must fly}\rangle\rangle \cap \langle\langle\text{Students must not rizz}\rangle\rangle$

Preserving agreement. True according to every precisification and so supertrue: 'Students must fly'; 'Students must stride or students must not stride'; 'Students must rizz or students must not rizz.' (Cf. Revelation 3:16.)

Avoiding arbitrariness. True according to some but not all precisifications and so indeterminate: 'Students must/must not/may/may not stride.' Mutatis mutandis for 'rizz.' Again: I say disagreement does not always generate permissibility, although permissibility may often be a reasonable inference.

Allowing mixtures. Stances 2 and 3 combine Te Miti's judgments with Te Kini's. Supertrue: 'If students must choose at most one, then they must stride and refrain from rizzing or must refrain from striding and rizz.'

CASE 3 judgment	Te Miti / Stance 1	Te Kini / Stance 2	Prediction
$\langle\langle\text{Students must stride.}\rangle\rangle$	✓	✗	Indeterminate
$\langle\langle\text{Students may stride.}\rangle\rangle$	$\Rightarrow^1$	✓	Supertrue
$\langle\langle\text{Students may (not stride).}\rangle\rangle$	✗	✓	Indeterminate

CASE 5 judgment	Te Miti / Stance 1	Te Kini / Stance 2	Prediction
$\langle\langle\text{Students must stride.}\rangle\rangle$	✓	✗	Indeterminate
$\langle\langle\text{Students should stride.}\rangle\rangle$	$\Rightarrow^2$	✓	Supertrue
$\langle\langle\text{Students don't have to stride.}\rangle\rangle$	✗	✓	Indeterminate

CASE 6 judgment	Te Miti			Te Kini	Prediction
	Stance 1	Stance 2	Stance 3	Stance 4	
$\langle\langle\text{Al may be the class representative.}\rangle\rangle$	✗	✓	✓	✓	Indeterminate
$\langle\langle\text{Bo may be the class representative.}\rangle\rangle$	✓	✗	✓	✗	Indeterminate
$\langle\langle\text{Cam may be the class representative.}\rangle\rangle$	✓	✓	✗	✗	Indeterminate

In CASE 6, the individual de re permissions are all indeterminate.

'If neither Bo nor Cam may be the class representative, then Al may be the class representative' is supertrue. We evaluate the consequent relative to the stances compatible with the antecedent, eliminating Stance 1. Stances 2 and 3 agree with Stance 4 that 'Al may be the class representative' is true.

'If neither Bo nor Cam may be the class representative, then Bo may be the class representative' is *superfalse*.
 $\rightsquigarrow$ *Antecedents can interact with precisifications (Hinterwimmer 2010) and worldly matters at the same time.*

¹Entailed by Te Miti's 'must' judgment.

Suppose Te Miti says: “The more hops the better.” Te Miti’s judgments: “One hop is not as good as two; which is not as good as three; which is not as good as four; . . .”. This is a failure of an analogue of the limit assumption: we have countably many judgments, and continuum many stances, but no *largest* stances.

Ordering supertruth turns on what’s agreed on by all precisifications at least as good (according to the relevant order) as some element in a cutset of that order (Swanson 2012, 2014). All precisifications at least as good as some element in a cutset agree that “One must hop at least 10,000 times” is true. We don’t need to ask about every precisification, or about the ‘best’ precisifications. In effect we do variably strict supervalueation.

(ii) Conflict between normative systems

CASE 7: Tara is torn between a pacifist moral system which enjoins neither pushing nor prodding in response to a hitting and a non-pacifist moral system which allows either. She says ‘If I may push, then I may prod.’

CASE 8: Tonya is torn between a pacifist moral system which enjoins neither pushing nor prodding in response to a hitting and a non-pacifist moral system which enjoins both. She says ‘If I may push, then I must prod.’

CASE 8 judgment	Pacifist system	Non-pacifist system	Prediction
«Must not push.»	✓	✗	Indeterminate
«Must not prod.»	✓	✗	Indeterminate
«Must push.»	✗	✓	Indeterminate
«Must prod.»	✗	✓	Indeterminate
«May push.»	✗	✓	Indeterminate

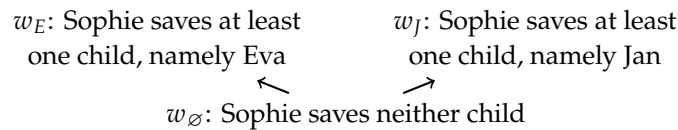
↪ Resolutions of conflict between normative systems often involve exactly one of the systems being right. They generally do not display tension (i)’s combinatorial flexibility.

↪ The precisifications for a supervalueational treatment of relevant cases aren’t *stances* but *systems themselves*.

As in CASE 6, we evaluate the consequent of ‘If I may push, then I must prod’ relative to the precisifications compatible with the antecedent, eliminating the pacifist precisification, making it (super)true.

(iii) Incomparability within a system

CASE 9 (SOPHIE’S CHOICE): ‘It’s better to save one child than to save none. In fact, I must save at least one of my children, and—practically speaking—can only save one. I should save Eva, *and also* I should save Jan.’



Partiality here *exclusively* represents tension (iii).

Lemmon 1962: conflicting ‘ought’s ↪ weak necessity modals existentially quantify over maximal chains (totally preordered subsets) of a partial preorder (van van Fraassen 1973, Swanson 2011): $\{w_\emptyset, w_E\}$ and $\{w_\emptyset, w_J\}$.

Sloman 1970: “*ought* says what is best, or better than all alternatives.” “[O]ught to/should say that all worlds in the modal base where the goal is achieved *and which are optimal by an additional measure* are worlds where the prejacent is true.” (von Fintel and Iatridou 2008, pp. 118, 119).

Hybrid: weak necessity modals existentially quantify over salient ($\pm$ maximal) chains of salient preorders.

(i)–(iii) ↪ My approach looks to aspects of Kratzer’s partial order innovation in two different places.

1. Ordering supervaluationism uses a (heavily tweaked) analogue for tensions (i) and (ii).
2. The semantics for modal expressions uses a (heavily tweaked) version for tension (iii).

(iv) Gaps within a normative system

CASE 10: ‘You *may* refrain from emailing staff on the weekend—*of course*. But as for whether you *should* . . .’

CASE 11: ‘You *may* refrain from emailing staff on the weekend—*of course*. But as for whether you *must* . . .’

CASE 12: ‘You *should* apologize for online ghosting—*of course*. But as for whether you *have to* . . .’

CASE 13: ‘(1) You *can* apologize for online ghosting. But as for whether (2) you *have to*, or even (3) *should* . . .’

One way to take CASES 10–13: there is ‘no normative fact of the matter.’

Another way: there is a ‘normative fact of the matter.’ There’s just a gap. (*Full stop.*)

CASE 14: ‘You can excuse a student from the first 15 minutes of every class for religious reasons.’ (*Full stop.*)

I suggest: the relevant preorders (type $\langle \sigma t, t \rangle$) govern states of affairs (σ), treated as sets of possible worlds. It’s **determinately true/false** that ϕ at $\sigma =_{df} \forall w \in \sigma : \llbracket \phi \rrbracket(w) = 1(0)$; **indeterminate** otherwise.

The clauses below ignore modal bases ($\langle f' \rangle$); $\langle g' \rangle$ ranges over (contingent) premise sets; $\langle c' \rangle$ over maximal chains.

$$\llbracket \text{may} \rrbracket^w = \lambda f. \lambda g_{\langle s, \langle \sigma t, t \rangle \rangle}. \lambda q_{\langle s, t \rangle}. \begin{cases} \text{true if } \exists c_{\langle \sigma t, t \rangle} \subseteq g(w). \exists \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 1 \\ \text{false if } \forall c_{\langle \sigma t, t \rangle} \subseteq g(w). \forall \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 0 \\ \text{indeterminate otherwise.} \end{cases}$$

$$\llbracket \text{must} \rrbracket^w = \lambda f. \lambda g_{\langle s, \langle \sigma t, t \rangle \rangle}. \lambda q_{\langle s, t \rangle}. \begin{cases} \text{true if } \forall c_{\langle \sigma t, t \rangle} \subseteq g(w). \forall \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 1 \\ \text{false if } \exists c_{\langle \sigma t, t \rangle} \subseteq g(w). \exists \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 0 \\ \text{indeterminate otherwise.} \end{cases}$$

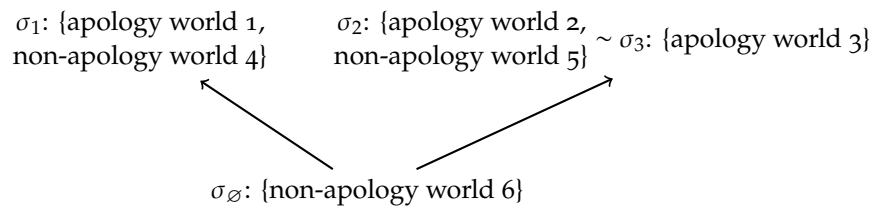
$$\llbracket \text{should} \rrbracket^w = \lambda f. \lambda g_{\langle s, \langle \sigma t, t \rangle \rangle}. \lambda q_{\langle s, t \rangle}. \begin{cases} \text{true if } \exists c_{\langle \sigma t, t \rangle} \subseteq g(w). \forall \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 1 \\ \text{false if } \forall c_{\langle \sigma t, t \rangle} \subseteq g(w). \exists \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 0 \\ \text{indeterminate otherwise.} \end{cases}$$

Or, one version of the hybrid account of weak necessity modals from (iii):

$$\llbracket \text{should}^* \rrbracket^w = \lambda f. \lambda G_{\langle \langle s, \langle \sigma t, t \rangle \rangle, t \rangle}. \lambda q_{\langle s, t \rangle}. \begin{cases} \text{true if } \exists g \in G. \exists c_{\langle \sigma t, t \rangle} \subseteq g(w). \forall \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 1 \\ \text{false if } \forall g \in G. \forall c_{\langle \sigma t, t \rangle} \subseteq g(w). \exists \sigma \in \text{Max}_{g(w)} c. \forall w' \in \sigma : q(w') = 0 \\ \text{indeterminate otherwise.} \end{cases}$$

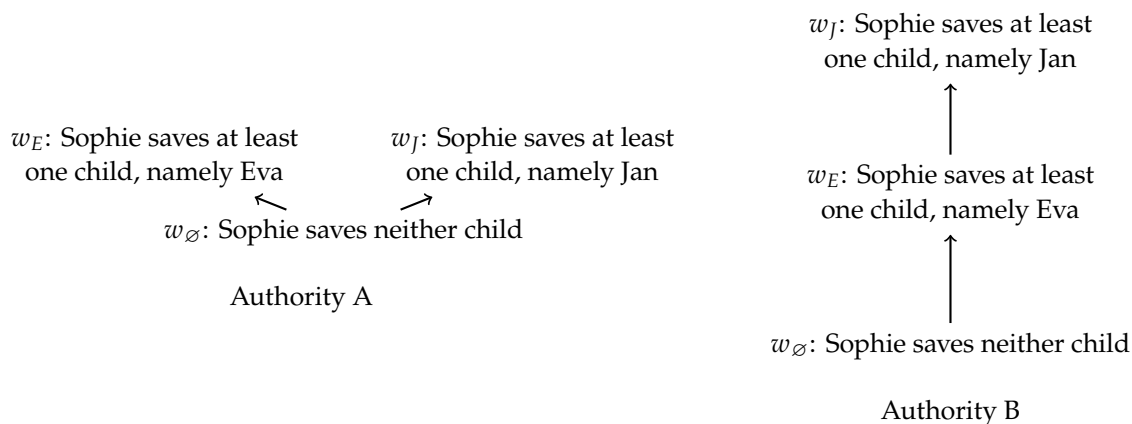
Given the ordering for CASE 13 below:

- (1) is true: it’s determinately true that you apologize at a best state of affairs (σ_3).
- (2) is indeterminate: some chain has a best state of affairs at which it’s indeterminate whether you apologize.
- (3) is indeterminate: every chain has a best state of affairs at which it’s indeterminate whether you apologize.



(v) Interactions

CASE 15: Authorities disagree (tension (i)) about incomparability (tension (iii)).



Judgment	Authority A	Authority B	Prediction
«Sophie must save at least one child.»	✓	✓	Supertrue
«Sophie must save exactly Eva.»	✗	✗	Superfalse
«Sophie must save exactly Jan.»	✗	✓	Indeterminate
«Sophie should save exactly Eva.»	✓	✗	Indeterminate
«Sophie should save exactly Jan.»	✓	✓	Supertrue

CASE 16: Authorities disagree (tension (i)) about gaps (tension (iv)). Authority A says “You may apologize for ghosting that person online—of course. But as for whether you should or must . . . well, those are things we just haven’t nailed down yet.” Authority B says “You may apologize, and you should apologize—it’s the right thing to do. But you’re not strictly required to.”

Judgment	Authority A	Authority B	Prediction
«You may apologize.»	✓	✓	Supertrue
«You should apologize.»	—	✓	Indeterminate
«You must apologize.»	—	✗	Indeterminate

(vi) Hybrids

I’m really not sure what Kratzer would say about CASES 3–8 and CASES 10–16. I’m not 100% sure about CASE 9.

Friend of Kratzer? I haven’t argued against Kratzerian orthodoxy for CASES 1 and 2, at least.

Friend of determinacy? (1) There might be metaprinciples governing conflict between normative orderings, or their dynamics. E.g. there might be a metaprinciple favoring permission in the face of conflict. (2) In some cases permissions might be reasonable inferences for pragmatic reasons. But NB: it’s not that plausible that conflict over whether nudity is permitted in the sauna, or at the beach, should just default to permission.

Foe of indeterminacy? Rejecting indeterminacy for tensions (i), (ii), and (iv) seems like underfitting: missing systematic patterns that my approach can capture.

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