Williamson Cases

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Plan

1. Strengthening
2. Context dependence
3. Conditional Modality
   - Strict and variably strict theories of conditionals
4. Condition Dependence
   - Two Trains
   - Predictions on the standard and conditionals theories
5. *Ought* and *should*
6. Independence Inferences
7. Outstanding problems
   - The domain of permission statements vs conditionals
   - When flattening goes too far
8. Conclusion

Plan

Alice's car is in need of fuel and she is in need of a cigarette.
She pulls into a station and pulls out a match.

Alice is not allowed to strike the match.

Alice's car is in need of fuel and she is in need of a cigarette.
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She pulls into a station and pulls out a match.

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She is allowed to leave the leave the petrol station, go to another station, dip the match in water and strike it.

If Alice stuck the match, the rules would be broken.

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Alice leaves the station, goes to another station, dips the match in water and strikes it.

$\Rightarrow$ Alice leaves the station, goes to another station and strikes the match.

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Inheritance If A entails B and A is permitted, B is permitted too.

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By contraposition,

Alice doesn't strike the match.

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By inheritance,

Alice is not allowed to strike the match.
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It's Wednesday. A driver pulls over beside the sign.

PARKING ATTENDANT:

You're not allowed to park here.

But parking here on Sunday is allowed.

But parking here on Sunday during roadworks is not allowed.

But parking an emergency vehicle here on Sunday during roadworks is allowed.

It's Wednesday. A driver parks beside the sign.

PARKING ATTENDANT:

If you parked here, you'd be breaking the rules.

If you parked here on Sunday, you wouldn't be breaking the rules.

If you parked here on Sunday during roadworks, you'd be breaking the rules

If you parked an emergency vehicle here on Sunday during roadworks, you wouldn't be breaking the rules.

We seem to be dealing with two very similar phenomena:

1. Failures of inheritance
   $\Diamond(A \wedge B) \not\Rightarrow \Diamond A$
2. Failure of antecedent strengthening
   if A, would C $\not\Rightarrow$ *if* $A \wedge B$, *would C*

Are these really two separate phenomena?

Similar behaviour among modals and conditionals

(1) Alice is allowed to strike the match, provided she leaves the petrol station first.

(2) If Alice struck the match, the rules would be met, provided she leaves the petrol station first.

Smodal sequences for epistemic modals

(3)
A: Where is Alice?
B: She must be in her office.
[We look into Alice's office and don't find her.]
A: She must not be in her office.
B: Well, she might be hiding under the desk.
A: That's true, so she might be in her office after all.

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Compare:

(4) Alice may not dance, but she may leave the library and dance.

(5) #Alice must not be in her office, but she might be in her office but hiding under her desk.

Plan

Two theories of conditionals

Variably strict

e.g. Stalnaker 1968, Lewis 1973, Kratzer 1981a

Lewis: 'if A, would C' says every closest A-world is a C world

$f(A, w) \subseteq \mathrm{C}$

Invalidate antecedent strengthening

Strict

e.g. Lewis 1912, von Fintel 2001, Gillies 2007

von Fintel: 'if A, would C' says every A-world in the modal horizon is a C-world

$mh \cap \mathrm{A} \subseteq \mathrm{C}$

Validate antecedent strengthening

How the modal horizon responds to conditional antecedents

- Entertainability presupposition:
  'if *A*, *C*' presupposes that the modal horizon contain an *A*-world.
- When it *is* empty, the modal horizon updates in response to conditional information, such as similarity.
- For von Fintel, when we hear a conditional 'if *A*, would *C*', we add to the modal horizon the worlds that are as close to the actual world as every *A*-world

$$mh^{\phi}(w) \quad = \quad mh(w) \cup \{w' : w' \leq_w w'' \textit{ for every A-world } w''\}$$

(von Fintel 2001, p. 138)

Conditional versus non-conditional update

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- The interpretation of conditionals is sensitive to meaning components (such as similarity, intervention, ...) that are not contributed by the general resources of context dependence
- They involve a *conditional*, rather than a purely *contextual* update of the set of relevant worlds

A theory no one accepts

Strict conditional with a non-conditional update

When we interpret a conditional antecedent, the modal horizon updates via general mechanisms of context dependence.

The update operation does not involve any specifically 'conditional' components, such as similarity.

A central problem

(6) If you struck this match, it would light.

When we interpret (6), which worlds should we add to the modal horizon?

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Which worlds we add is sensitive to the conditional selection function

Williamson on failures of inheritance

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No dancing in the library!

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Context dependence

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> such examples pose no threat to the validity of [Inheritance]. For that means only that if the premise is true as uttered in a given context, the conclusions are true as uttered in the *same* context. When we originally considered [(7)], we held Alexandria's location in the library fixed—it was not being questioned. When we went on to consider [(8)], we no longer held her location in the library fixed, for it was explicitly at issue.
>
> (Williamson 2020, p. 104)

Do modals use a conditional update?

Permission statements can change which worlds are contextually relevant.

Given a permission statement, which worlds become relevant?

Does the choice of worlds involve the same mechanism we use to select worlds given a conditional antecedent?

(7) It is permissible for Alexandria to dance.

(8) It is permissible for Alexandria to leave the library and dance.

> Once we have accepted [(8)], it is natural for us to change our answer to the original question 'Is it permissible for Alexandria to dance?', saying 'Yes', though perhaps adding by way of explanation 'but first she must leave the library'. [...] Situations in which she left the library were implicitly excluded as irrelevant in the original context, but not in the later context. In any context in which [(8)] is true, [(7)] is also true. Standard semantic accounts of modals allow for just such context-sensitivity: the *relevant* possible worlds or situations are those in the contextually determined *modal base*, to use Kratzer's terminology.
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> (Williamson 2020, p. 104)

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(8) presupposes that the modal base contains a world where Alexandria leaves the library and dances.

$\Diamond(A \wedge B)$, after accommodating its presuppositions, entails $\Diamond A$.

Inheritance is Strawson-valid
(in the terminology of von Fintel 1999)

Criticism of the Diversity Condition

Examples from Majdič (2024):

(9) In 1 hour, 60 minutes will have passed.

(10) Context: Al won an Olympic medal last year.

a. Al: I have already won one Olympic medal. And I hope to win one more this year.

b. Bo: In any case, at the end of your life you will have won at least one Olympic medal. So that's already very impressive.

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- When we interpret (8), the modal base does contain worlds where Alexandria leaves the library.

A problem: Smodal sequences

Alice is not allowed to strike the match.

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An natural answer:
do not admit gratuitous departures from actuality.

Plan

May I open the window?

May I open the window?

Is there at least one allowed case where I open the window?

May I open the window?

Would it be ok if I opened the window?

Plan

Strict theories

(Lewis 1912, von Fintel 2001, Gillies 2007)

If A, would C means

every *A*-relevant case
where *A* is true, *C* is true.

Variably strict theories

(Stalnaker 1968, Lewis 1973, Kratzer 1981a)

If A, would C means

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Plan

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Two trains approach an intersection in a dense forest at full speed.
One is travelling North to South, the other East to West.
If both continue they will crash into one another.

Network Configuration		Status
A goes	B goes	Forbidden
A goes	B stops	Permitted
A stops	B goes	Permitted
A stops	B stops	Permitted

Table: The deontic status of each configuration of the train network.

Am I permitted to continue through the intersection?

Am I permitted to stop?

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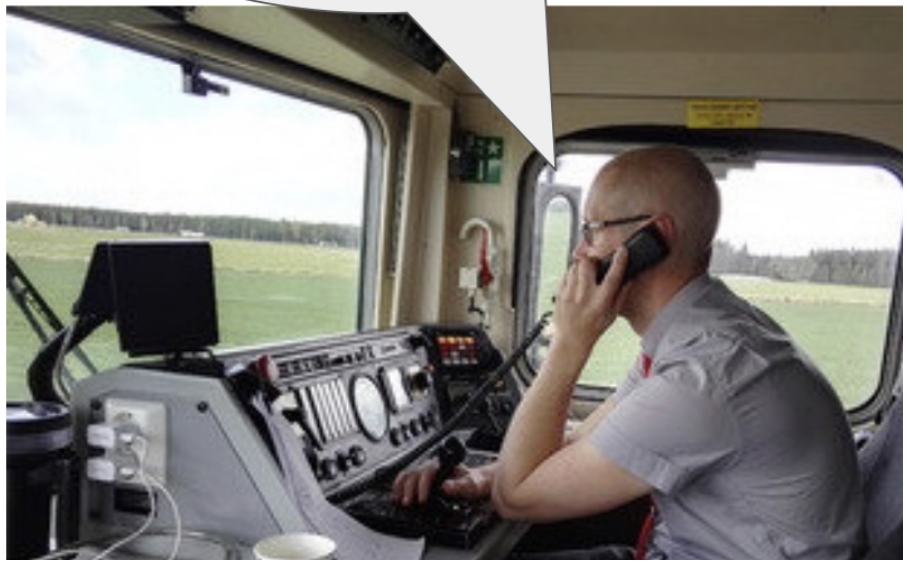

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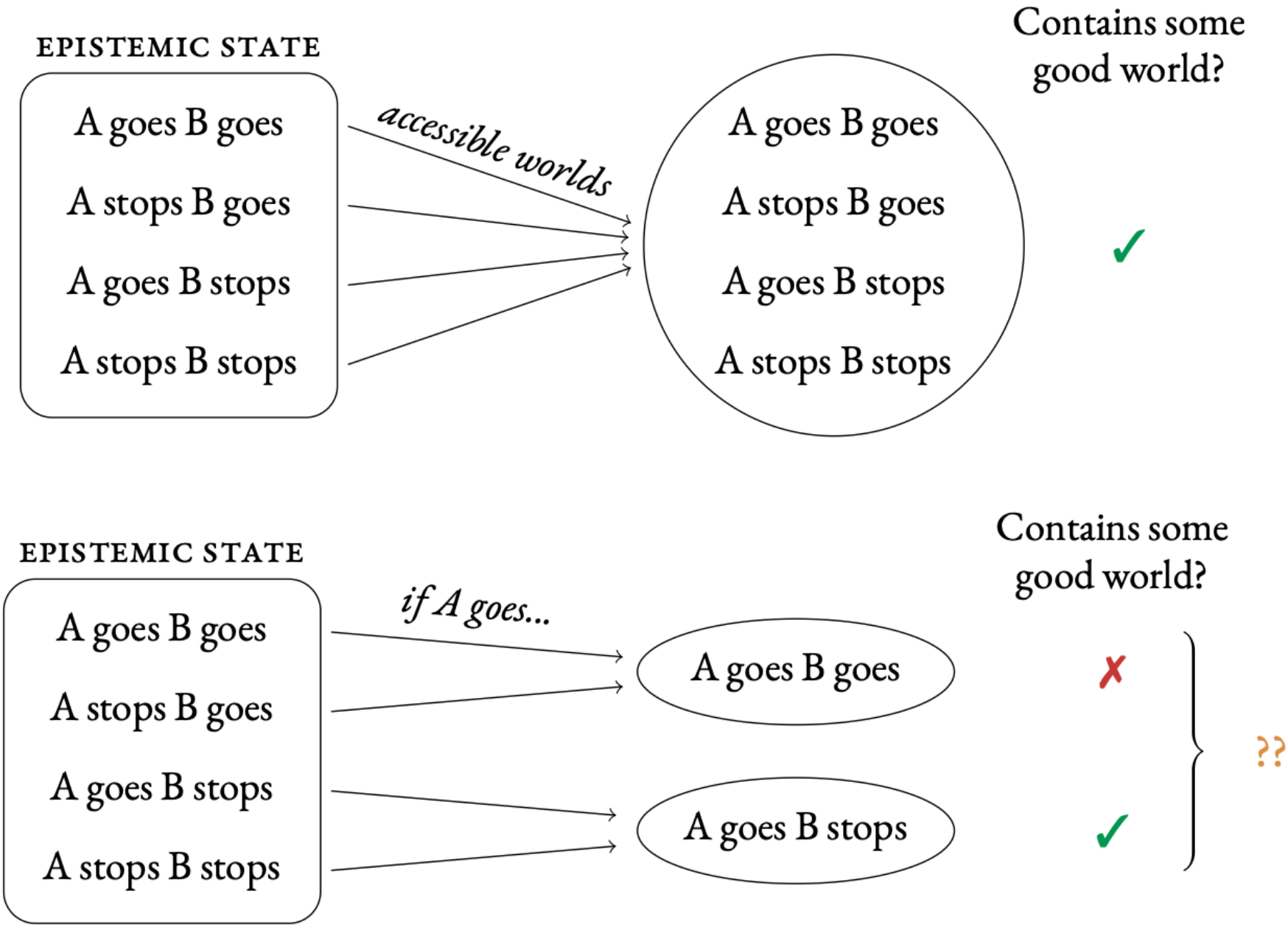
Plan


EPISTEMIC STATE
A goes B goes
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✗
✓
??

Plan

Professor Procrastinate

A graduate student asks Smith for comments on a paper he is planning to read at a job interview. If Smith accepts the task and comments on the paper, the student would make substantial improvements on it, have a highly successful interview, and receive an offer for a three-year position. If Smith accepts the task but fails to comment on the paper in time, the student will make no revisions, have a dismal interview, and receive no job offer. If Smith does not accept the task, the student will elicit comments from another faculty member, make less helpful revisions in the paper, have a moderately successful interview, and receive a one-year job offer letter.

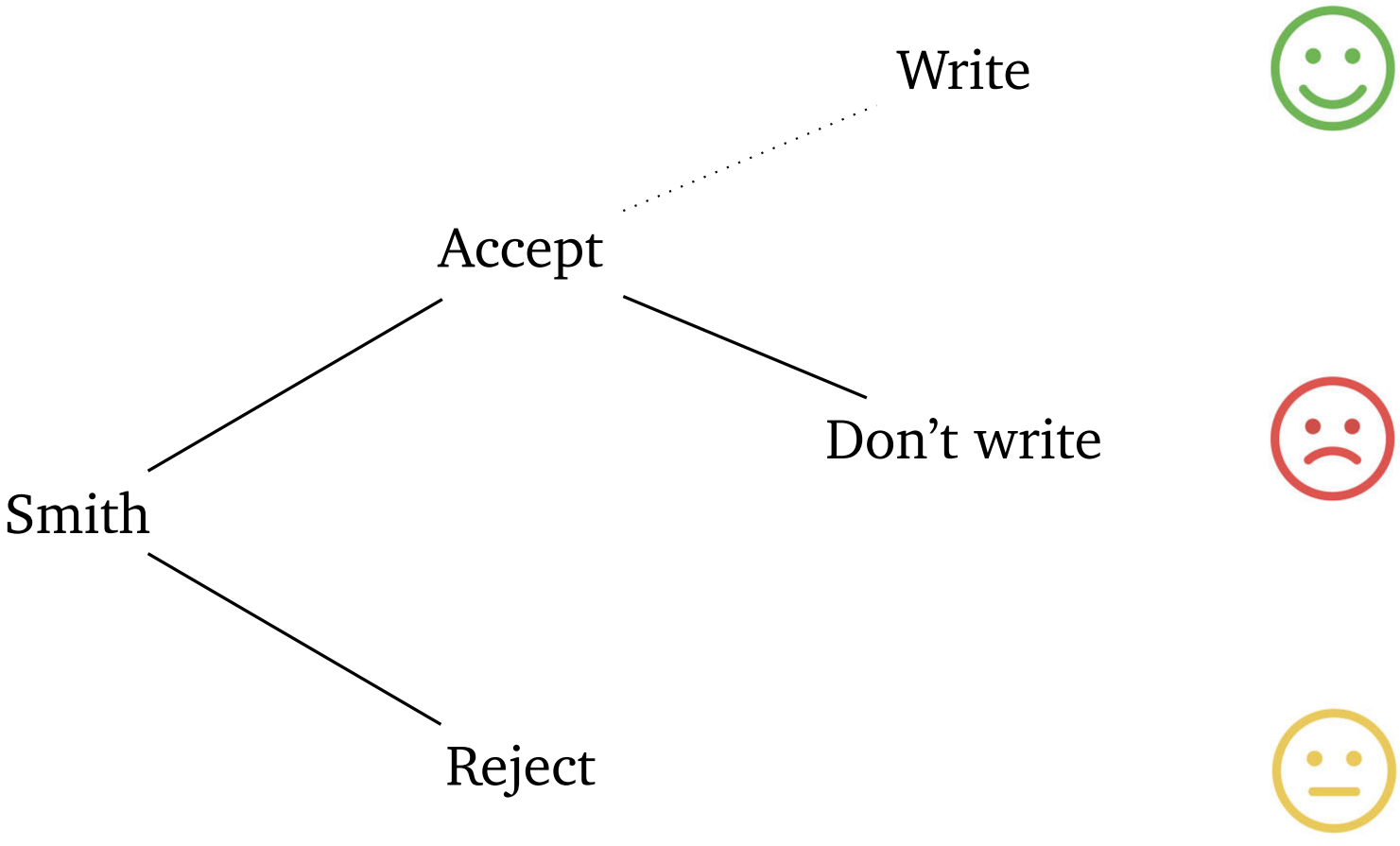
(Smith 1978, p. 185)

Professor Procrastinate

[. . .] let us suppose that if Smith accepted the task, he would actually fail to comment on the paper in time – perhaps he would misunderstand what the deadline is, or perhaps he would become so bogged down in administrative work that he wouldn't get around to it.

(Smith 1978, p. 185)

Professor Procrastinate



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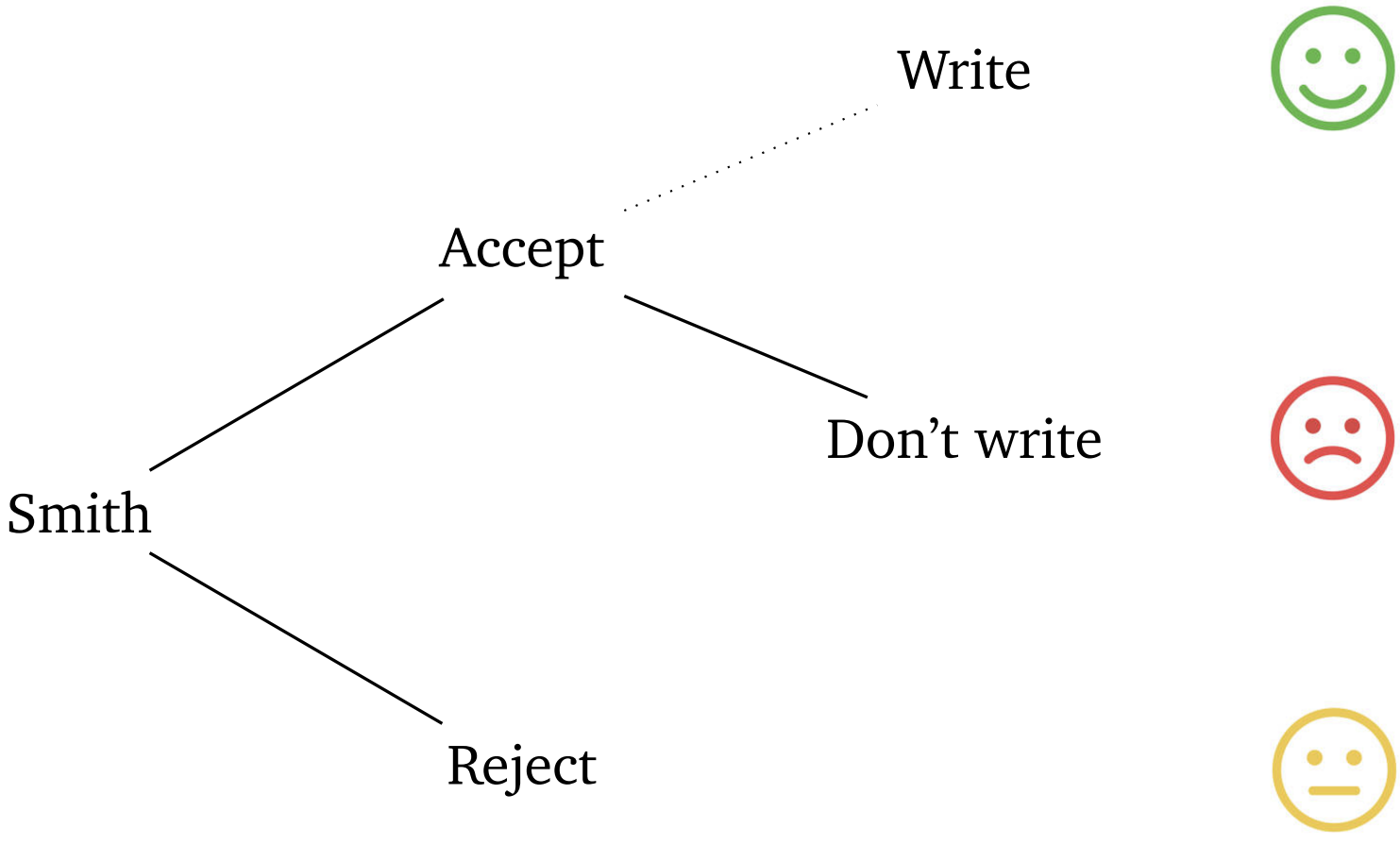

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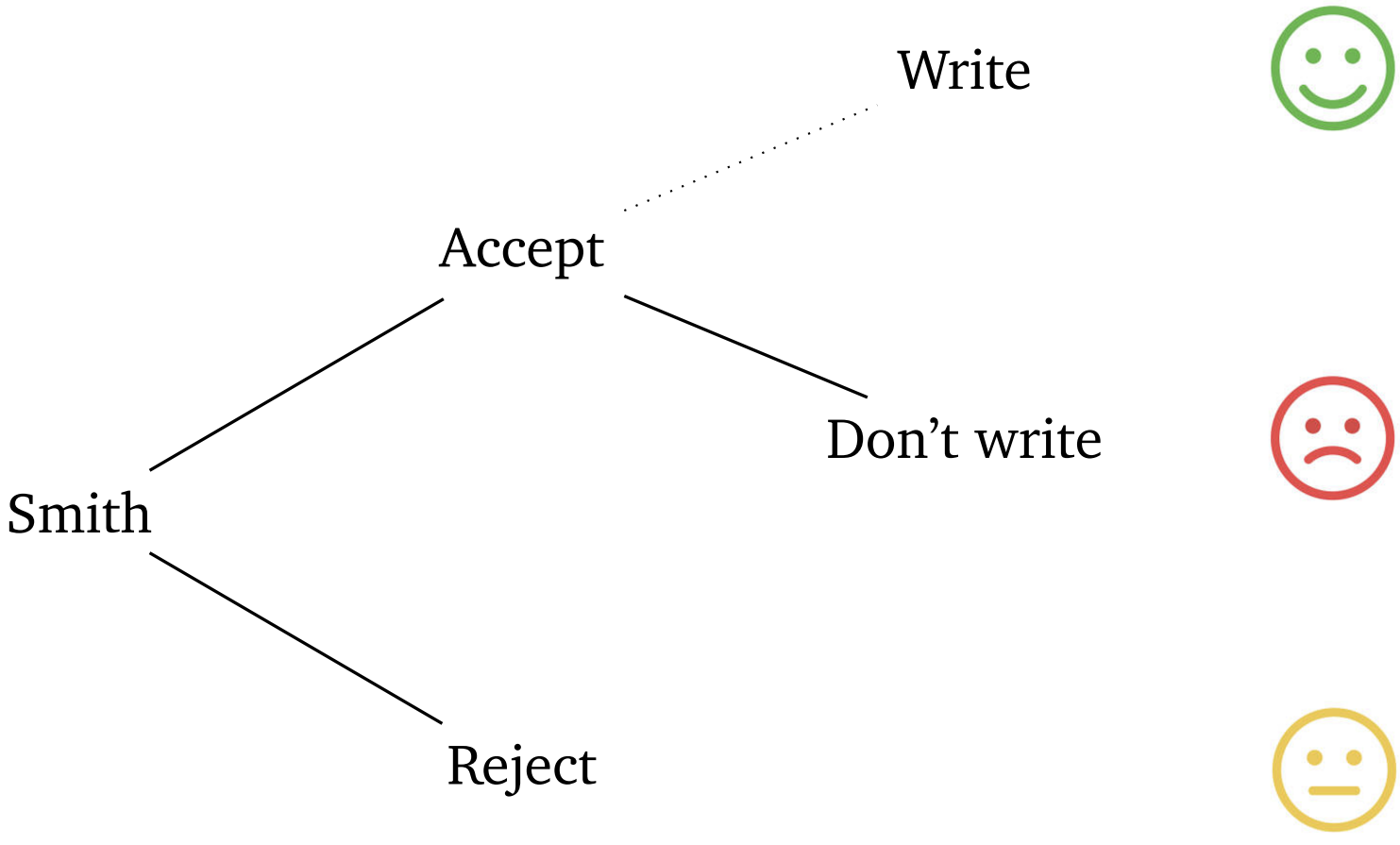

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(14) Smith should accept the offer and follow through with reviewing it.

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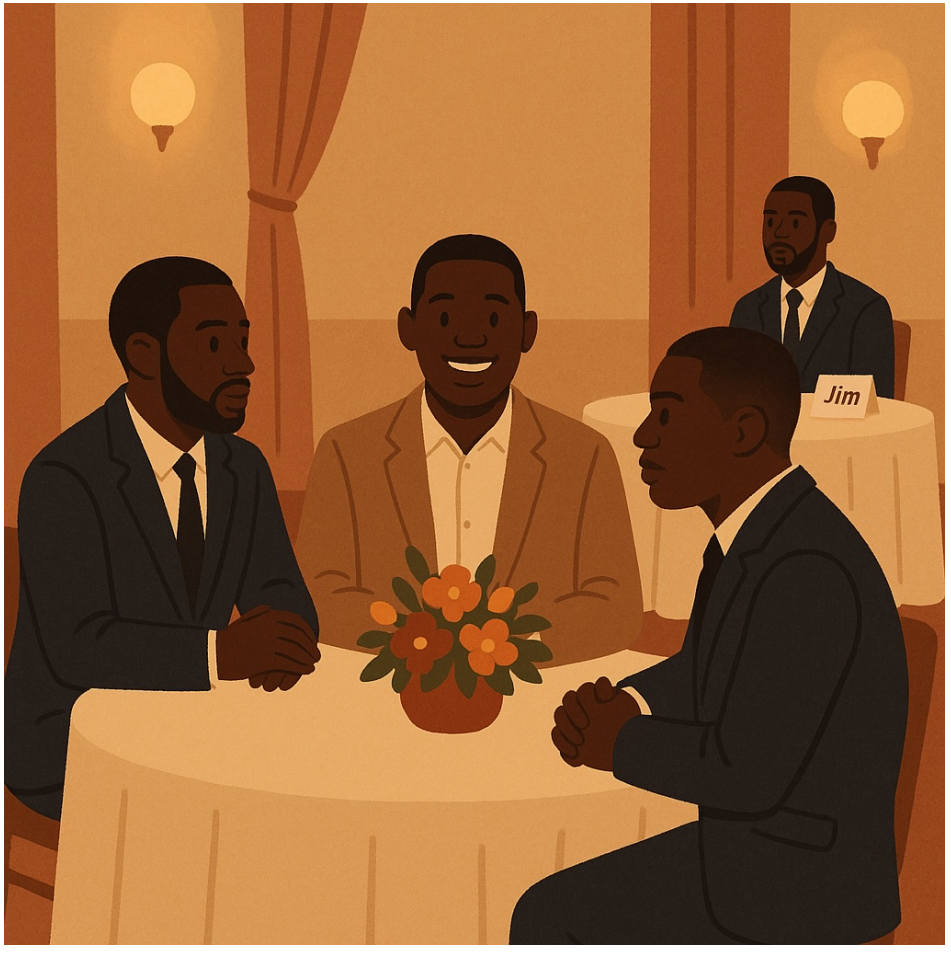
Counterfactual-Style Revisions in the Semantics of Deontic Modals

ANA ARREGUI
University of Ottawa

Arregui's (2011) Wedding Party

Your friend, the bride, has asked you to sit with her three brothers in law: John, Jack and Jim. They are very shy and she wants to make sure somebody friendly has dinner with them. [The more brothers you sit with, the better.] As it turns out, two of the brothers (John and Jack) sit at one table and Jim sits at another. You sit with John and Jack.



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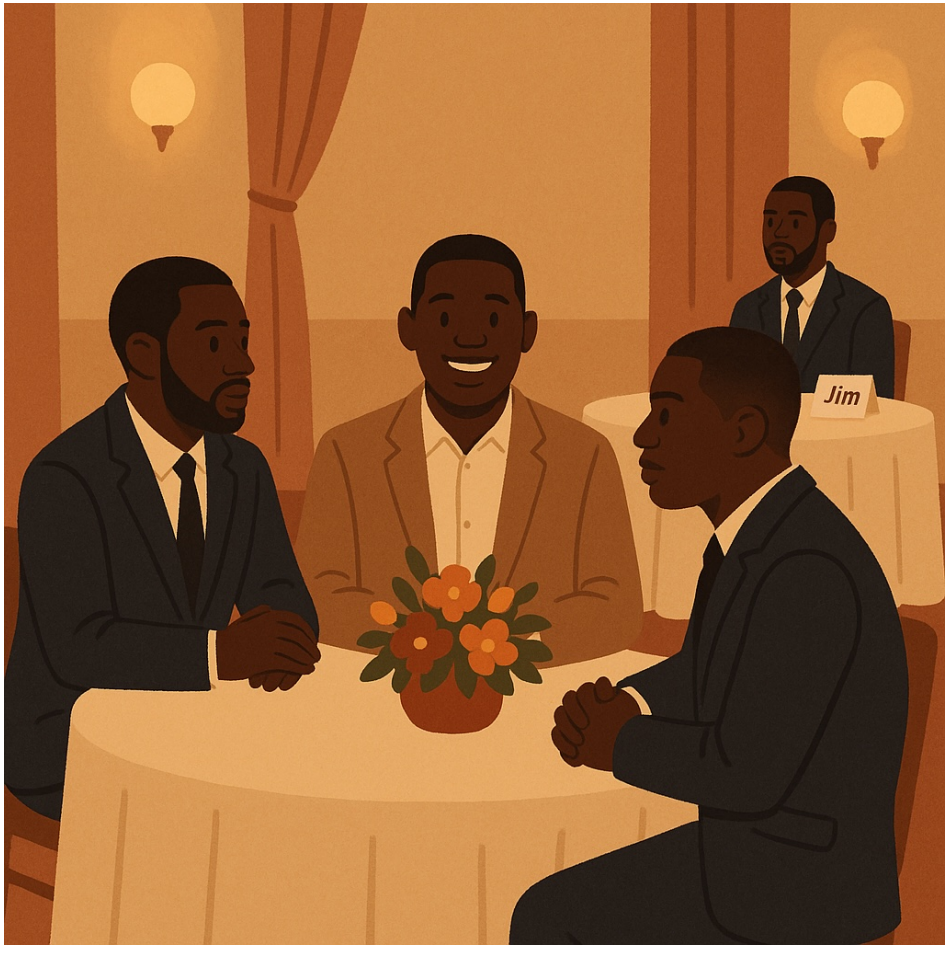

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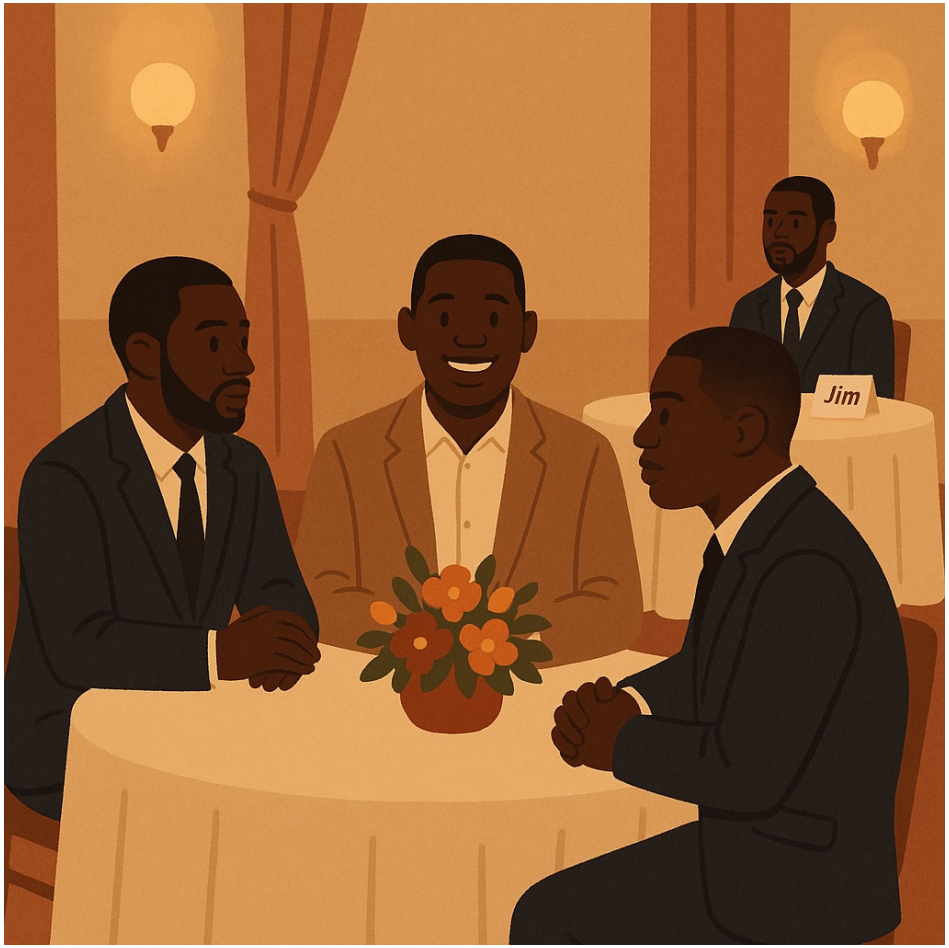

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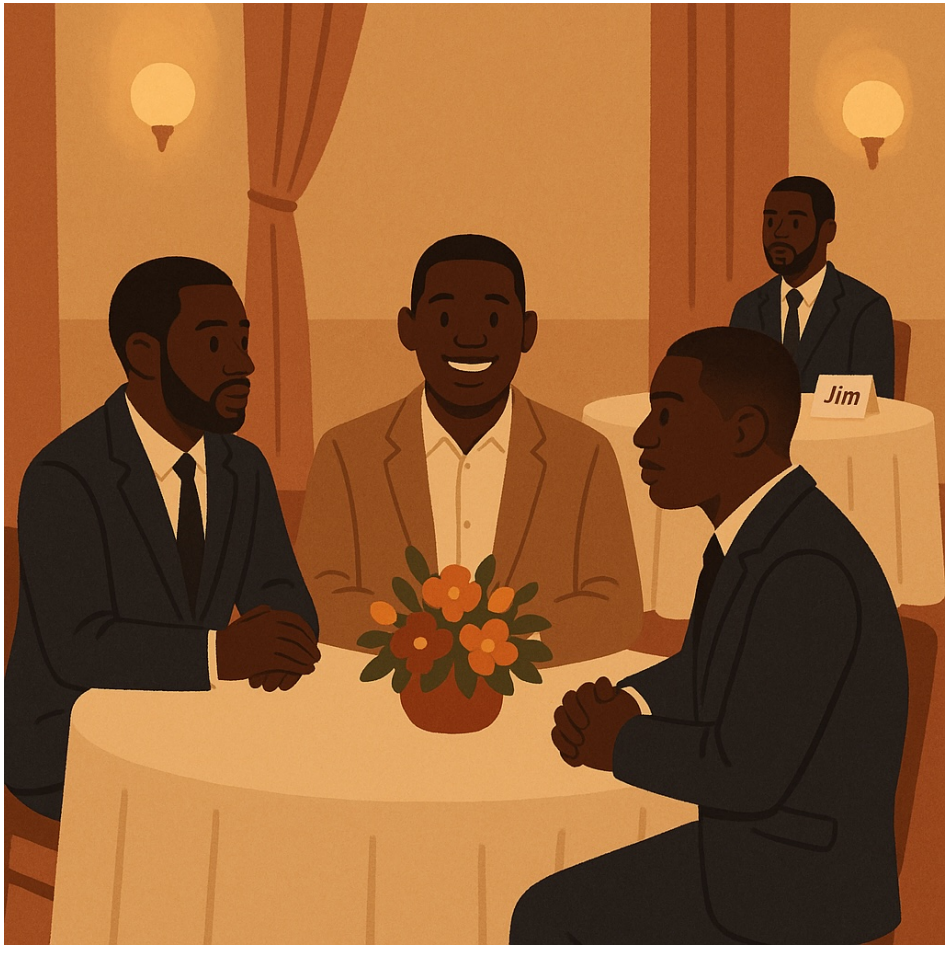

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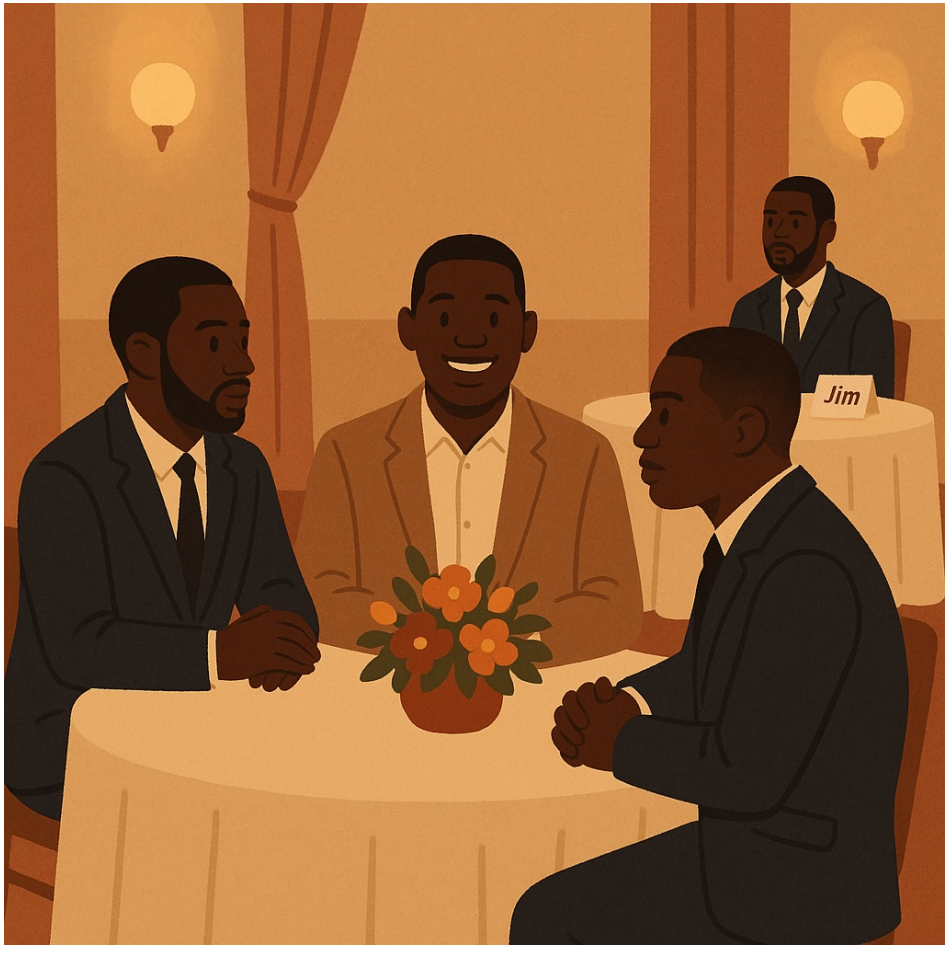

(17) If you were sitting with Jim, things would be better.

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(19) If Alexandria danced, she'd be breaking the rules.

(20) If Alexandria left the library and danced, she wouldn't be breaking the rules.

If A, would C means:
every relevant world where *A* is true, *C* is true
(von Fintel 2001, Gillies 2007)

Entertainability for conditionals

If A, would C presupposes that there are some relevant worlds where *A* is true.

(20) presupposes that there are some relevant worlds where Alexandria leaves the library and dances

Revising the circumstances?

On Kratzer's view, deontic modals are *circumstantial*:
they are interpreted in view of the relevant circumstances.

> *"the kind of facts we take into account for circumstantial modality are a rather slippery matter" (Kratzer 1981b, p. 53)*

A reply to Smodal sequences: we revise the circumstances to give the prejacent a chance of being true.

Suppose Suzy and Bob work in a ski resort in the Swiss Alps. Suzy is the safety officer and Bob is a bartender. If there is an avalanche, the resort rulebook states that the safety officer is required to stay, but bartenders may go home.

One day, there is an avalanche. As it happens, the snowfall blocks any route Bob could take to leave. He is unable to leave. It is nonetheless true that, as far as the resort rulebook is concerned, only Suzy is required to stay. Suzy is required to stay but Bob is not.

The Problem

We can revise the circumstances to make it possible for Bob to leave by removing the avelanche, but then Suzy is no longer required to stay.

Plan

Independence inferences

Menéndez-Benito (2005) and Booth (2022):

Alice and Bob are siblings in an orphanage. They are not allowed to be separated.

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You may take all or none of the cards in the discard pile.

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The domain of permission

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The domain of permission

Alice has a driving licence. She also has a strict rule whereby she will only drive over the speed limit. She simply refuses to drive within the speed limit.

Is Alice allowed to drive?

If Alice drove, would the rules be met?

A possible fix?

There are different *ways* to violate the rules. If Alice drive, she would be violating the rules with respect to the speed limit, but not with respect to whether she drives or not.

Plan

John is in a three-person race. If he loses (gets bronze), he loses his athletics scholarship. If he gets gold or silver, he keeps his scholarship.

(25) If John won silver or bronze, he would win bronze.

$!(S \vee B) \mathrel{\Box\!\!\rightarrow} B$

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In alternative semantics, $\neg\neg(A \vee B)$ is not equivalent to $A \vee B$

The first always has **one** alternative, while the second can have many

A surprising prediction for sequences like (28):

(28) a. If Sue hired Alice or Bob, she would hire Alice.
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b. Sue must hire neither Alice nor Bob but she may hire Bob.
$\Box\neg(A \vee B) \wedge \Diamond B$

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- So $!(A \vee B) \boxrightarrow \neg\text{OK}$ only tells us that A-worlds are not OK
- It says nothing about the selected B-worlds, leaving open that some of them are OK ($\Diamond B$)

Plan

Summary

In contrast to the standard theory of modality, the conditional theory provides

- a unified account of failure of inheritance and failures of antecedent strengthening
- an interesting account of free choice, which captures the behaviour of possibility modals under negation and probability operators

Thank you!

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An employee is required to work Monday to Friday. Their boss then tells them that they may take Friday off. Much changes in response. The requirement to work Friday morning disappears. So does the requirement to work every morning this week. But much else stays the same. They are still required to work Monday to Thursday. Murder is still forbidden. The are still permitted to take the weekend off. And so on.

The Similarity Analysis. The newly permissible worlds should be selected to resemble (as closely as possible) the worlds that were permissible before.

(1979, p. 28)