

What to Do If You Want to Go to Harlem

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- The slides for this talk can be downloaded at <http://mit.edu/fintel/www/harlem-lund.pdf>
- Formally explicit notes can be downloaded at <http://mit.edu/fintel/www/harlem.pdf>

The Sentence

- *If you want to go to Harlem, you have to take the A train.*

A Minimal Pair (from Hare)

- *If you want sugar in your soup, you should ask the waiter.*
- *If you want sugar in your soup, you should see a doctor.*

The Plan

- Why is the Harlem sentence puzzling?
 - Background on Modals and Conditionals
 - The Harlem Puzzle
- Attempts and Obstacles
 - The Mayor
 - Ruud van Nistelrooy
 - Appendix: Pedro Martinez

Modals – First Approximation

- The situation: John has obstructed his neighbor's driveway. Cambridge has a law against that. There is a \$25 penalty for first offenders.
- *John has to pay a \$25 fine.*
- LF: have to (John pay a \$25 fine)
- *have to ϕ* is true in w iff ϕ is true in all w' accessible from w .
- What accessibility relation?
 - deontic: what the law requires
 - but the law requires that you not obstruct your neighbor's driveway and if you don't, you don't have to pay a fine
 - so we wrongly predict our sentence to be false

Modals – Kratzer

- modal statements are doubly relative
 - modal base: the set of accessible worlds
 - ordering: a ranking of the worlds in the modal base
- both factors can be modelled by *conversational backgrounds*
 - functions from worlds to sets of propositions
 - modal base: the set of worlds where the relevant propositions are all true
 - ordering: rank higher worlds where more of the relevant propositions are true

John has to pay a \$25 fine

- modal base: a set of relevant circumstances
 - the fact that John obstructed his neighbor's driveway
- ordering: a set of propositions that the law would like to be true
 - nobody obstructs their neighbor's driveways
 - if anyone obstructs his neighbor's driveway, they pay a \$25 fine.

An advice modal

- A: *I'm going to be in Harvard Square.*
- B: *You'll have to try Burdick's hot chocolate!*
- modal base
 - a set of relevant circumstances, including the presence of Burdick's cafe in Harvard Square
- ordering source
 - a set of desires, preferences

Conditionals – Kratzer

- *if*-clauses restrict the modal base (via intersection)
- *If John obstructed his neighbor's driveway, he has to pay a \$25 fine*
- modal base: a set of relevant circumstances
 - plus the “hypothetical” fact that John obstructed his neighbor's driveway
- ordering: a set of propositions that the law would like to be true
 - nobody obstructs their neighbor's driveways
 - if anyone obstructs his neighbor's driveway, they pay a \$25 fine.

What the Sentence Should Mean

- *If you want to go to Harlem, you have to take the A train.*
- modal base: a set of relevant circumstances
 - plus the “hypothetical” fact that you want to go to Harlem
- ordering source
 - the set of your actual desires, preferences
- Crucially, the “hypothetical” desire to go to Harlem is not necessarily part of your desires in the evaluation world

The Hoboken Problem

- You actually want to go to Hoboken, but I don't know that.
- I say the Sentence and (making certain assumptions about the geography of Metro New York) say the truth.
- But the Sentence is predicted to be false.
 - The best worlds where your desires (including your desire to go to Hoboken) are satisfied are not worlds where you take the A train (rather you take the PATH train).

Sæbø

- *if*-clauses can also restrict ordering sources
- in the Sentence, the *if*-clause adds a “hypothetical” desire to the ordering source
- BUT: it can't be the desire to *want to go to Harlem*, but must be the desire to go to Harlem
 - so, we must ignore the *want* in the *if*-clause (or treat it as a non-compositional signal that we are dealing with an ordering source conditional)

The Hoboken Problem again

- the Hoboken Problem persists!
- the ordering source now includes both your actual desire to go to Hoboken and your hypothetical desire to go to Harlem
- assuming that the two desires are factually incompatible
 - it would neither be true that you have to take the A train nor that you have to take the PATH train
- so, Sæbø incorrectly predicts the Sentence to be false
- *If you want to go to Harlem, you have to take the A train.*

Diagnosis

- Instead of just adding the Harlem goal to the Hoboken goal,
- we need to knock out the Hoboken goal and *replace* it with the Harlem goal

Our Proposal, Part I: Two Layers of Modality

- the *if*-clause restricts a higher (implicit) non-advice modal (more or less epistemic)
- modal₁ (if you want to go to Harlem) [modal₂ (you take the A train)]

The Two Modals

- higher implicit modal:
 - modal base: set of epistemically accessible worlds
 - * in each of which you either want to go to Hoboken or want to go to Harlem
 - * plus the hypothetical fact that you want to go to Harlem
 - * resulting in a set of worlds in each of which you want to go to Harlem and not to Hoboken
- lower advice modal:
 - evaluated not in the actual world but in the worlds the higher modal takes us to
 - modal base: set of relevant circumstances
 - * can be assumed to be the same from any of the worlds of the higher modal
 - ordering source: your desires, preferences
 - * now includes only the Harlem goal and not the Hoboken goal
- The Sentence is correctly predicted to be true

Hare's Pair Again

- *If you want sugar in your soup, you should ask the waiter.*
- *If you want sugar in your soup, you should see a doctor.*
- What's the difference?
 - in the waiter case
 - * your desires and preferences are the source for the advice
 - in the doctor case
 - * my desire to keep you healthy is the source for the advice

Two Problems:

- Kratzer's Mayor
- Huitink on Ruud van Nistelrooy

The Mayor

- Kratzer's example of an unhappy person
 - You want to become mayor.
 - You want to not go to the pub regularly.
 - You will become mayor only if you go to the pub regularly.
- Advice: *You could go to the pub regularly.*
- Another piece of advice:
 - *If you want to become mayor, you have to go to the pub regularly.*
- Diagnosis: We need the *if*-clause to *override* any other goals.

Ruud van Nistelrooy

- Janneke Huitink's scenario
 - both the A train and the C train go to Harlem, the C train will have Ruud van Nistelrooy on it, you want to meet Ruud van Nistelrooy.
- *To go to Harlem, you have to take the C train (because Ruud van Nistelrooy is going to be on that train).*
- predicted to be true, but it doesn't seem to be true

A Detour

- Think about advice modals with purpose infinitives:
 - *To go to Harlem, you must/have to take the A train.*
 - *To go to Harlem, you should/ought to take the A train.*
- Two strengths of strong advice modals

Sloman

- "For instance *If you want to get to London by noon, then you ought to go by train* picks out the best means without excluding the possibility of others, whereas *If you want to get to London by noon then you have to (must, will be obliged to etc.) go by train* implies that no other means exists."
- Aaron Sloman: 1970, "Ought and Better", *Mind*, 79(315): 385–394.

Evidence for Two Strengths

- *You ought to take the train, but you don't have to.*

Our Proposal, Part II: Triple Relativity

- Advice Modals take three arguments:
 - modal base
 - designated goal
 - ordering source: subsidiary goals/desires
- the advice modals differ as to whether they care about subsidiary goals

Designated Goals

- the *to*-infinitive serves as the “designated goal” argument of the advice modal
- semantics for the modals:
 - *to p, ought to/should q* is true relative to a modal base and an ordering source iff all the best (according to the ordering source) worlds in the modal base where *p* is achieved are *q*-worlds
 - *to p, must/have to q* is true relative to a modal base and an ordering source iff all the worlds in the modal base where *p* is achieved are *q*-worlds

The Sentence Again

- *If you want to go to Harlem, you have to take the A train.*
- *If you want to go to Harlem, you have to take the A train (to go to Harlem).*
- The *if*-clause makes salient the goal of going to Harlem.
- That goal then fills the goal argument of the advice modal.

The Hare Pair Again

- *If you want sugar in your soup, you should ask the waiter.*
- *If you want sugar in your soup, you should see a doctor.*
- In the waiter case
 - the conditional helps fill the goal argument of the modal
 - \approx *To get sugar in your soup, you should ask the waiter.*
- In the doctor case
 - the goal argument is independently identified
 - $\not\approx$ *To get sugar in your soup, you should see a doctor.*

The Mayor case

- *If you want to become mayor, you have to go to the pub regularly.*
 - the conditional helps fill the designated goal argument of the modal
 - to achieve the designated goal it is necessary to go to the pub regularly, even if you have other goals that conflict with that

Ruud van Nistelrooy

- Janneke Huitink's scenario
 - both the A train and the C train go to Harlem, the C train will have Ruud van Nistelrooy on it, you want to meet Ruud van Nistelrooy.
- *To go to Harlem, you have to take the C train (because Ruud van Nistelrooy is going to be on that train).*
- We now predict this to be false, and we predict the ought-version to be true:
 - *To go to Harlem, you ought to take the C train (because Ruud van Nistelrooy is going to be on that train).*

Success!

- Our analysis
 - is compositional
 - solves all the puzzle cases
 - * the Hoboken problem
 - * Hare's pair
 - * Kratzer's mayor case
 - * Ruud van Nistelrooy
- Ingredients
 - two layers of modality
 - designated goal argument of advice modals

Appendix

- A Problem noted by Jon Nissenbaum
- Speculations

Pedro Martinez

- Jon Nissenbaum's scenario
 - both the A train and the C train go to Harlem, the C train will have Pedro Martinez on it, you want to kiss Pedro Martinez.
- #*To go to Harlem, you ought to kiss Pedro Martinez.*
- #*To go to Harlem, you can kiss Pedro Martinez.*

Nissenbaum's proposal

- The *to*-clause does not serve as an argument to the modal
- Instead, it is a VP-modifier
- *He took the A train to go to Harlem.* (= with the goal of going to Harlem)
- #*He kissed Pedro Martinez to go to Harlem.*
- Problem:
 - *To get this job, you have to be fluent in Spanish.*
 - #*I am fluent in Spanish to get this job.*

Means to an End

- complicate the semantics of advice modals one more time
- advice modals present the VP action as a means to an end
- formally: an INUS condition à la Mackie
- entailment or presupposition?
 - *To go to Harlem, you don't have to kiss Pedro Martinez.*
 - *To go to Harlem, you can't kiss Pedro Martinez.*