ASSERTION, EVIDENCE, AND THE FUTURE (NINAN 2022)

(1) Beth will enjoy this meal when she eats it.

Main Question: Although Andy can say sentence (1) at a given time t, he cannot utter sentence (2) at a later time t' without first acquiring a novel information. Thus he needs an alternative utterance, such as sentence (3).

(2) She enjoyed it.
(3) She `probably` enjoyed it.

Why? 3 possible explanations:
(i) implicature 👎, (ii) modal 👎, (iii) epistemic view 👍

They differ in what they blame.
IMPLICATURE: assertion at t'
MODAL: *will* at t
EPISTEMIC: knowledge at t'

IMPLICATURE VIEW

What is it?

- Proposition assertion usually requires relevant evidence for support.
- When given multiple possible utterances, the choice of one over the others implies a reason for rejection.
- If a speaker chooses to say (2) over (3), it is because they have a reason to reject (3).
- The possibility of such reasoning by the audience is what makes the speaker utter (3).

What is wrong with it?

- Optional "$must$"
  - The modal "$must$" can be used optionally.
  - A speaker may use "$must\ p$" when they are able to say "p."
  - "*Someone must be mowing the lawn*" and "*Someone's mowing the lawn*" are both valid utterances to describe a sound that is recognized as a lawnmower.

- some criticism of antiskeptical views (*may* discuss them later, p.3)

MODAL VIEW

What is it?

- $will$ quantifies over the set of future possibilities that are *sufficiently normal*.
- $N_{w,t}$ = sufficiently normal future possibilities for w at t.
- If everything goes normal, w can be inside the $N_{w,t}$ set. Yet, things can go south.
- What Andy knows is something weaker than assertion.
- He knows *if everything goes normal*, Beth will probably enjoy it.

What is wrong with it?

- It gives wrong truth conditions.
  - $\alpha := \{w: \forall w' \in N_{w,f_4}:$ Beth enjoys the dish at f_4 in w'$\}$
  - Truth conditions can be satisfied even if Beth does not enjoy the food at any later time.

EVIDENCE VIEW

- Let's imagine that when Andy utters (1) at t, Andy has the following set of <u>possible</u> propositions in your kernel that says:
  ○ The knowledge of Beth's tastes (😊),
  ○ Perfect knowledge of dish's nature (🌮),
  ○ The most probable events that are going to happen (🔮).

- Thus, Andy's kernel at t is { 😊, 🌮, 🔮}.
  ○ All of this information matches perfectly with the prediction that Beth will like the dish.
  ○ Andy's degree of belief to the truth of utterance in (1) is `[B(1) > 99%]`*(in this toy model assuming Bayes Theorem)*.

- Now, let's imagine the evidence that Andy's kernel <u>can possibly</u> provide at the time of t'.
  ○ The knowledge of Beth's tastes (😊),
  ○ Perfect knowledge of dish's nature (🌮),
  ○ The most probable events that are going to happen (🔮),
  ★ Beth's response to the dish ({ ❤️‍🔥●————●😠 })

- Thus, Andy's kernel at t' is { 😊, 🌮, 🔮} ∪ ({ ❤️‍🔥●————●😠 })
- Not all of this information perfectly matches with the possibility of Beth liking the dish.
  ○ Andy's degree of belief to the truth of utterance in (2) is `[B(2) ≤ 62.50]`*(in this toy model assuming Bayes Theorem)*.

→ Andy's evidence at t is as exhaustive as it gets (in this toy kernel).

→ Andy's evidence at t' is not as exhaustive.

↳ Andy had enough belief to utter a sentence meaning "Beth enjoys the dish at t."

↳ Andy lost his standing to utter a sentence meaning "Beth enjoys the dish at t'."

What's wrong with the Evidence View?

- Now, let's imagine the evidence that Andy's kernel <u>can possibly</u> provide at the time of t'.
- There can be some scenarios where Andy is not able to receive Beth's response.
- ☠️ Let's imagine that immediately after Beth tasted the dish, she died.
- Kernel will not include ({ ❤️‍🔥●————●😠 }), but will include (☠️).
- Given that ☠️ is irrelevant for `B(2)`, there must be nothing changing between `B(1)` and `B(2)`.
- Yet, (2) is still an infelicitous utterance.

FUTURE NORMALITY VIEW

- Evidence View: Knowing fewer proportion of the evidence.
- Another possibility (Me vs. Andy): x knows p at t, but x' does not know p at t.
  - The difference between x and x' is about evidence concerning p.
  - x knows less of the evidence at t, compared to x'.
- Another possibility (☠️): p concerns x's past at t, x knows p at t,
  - x loses this knowledge at later time t' because the evidence is destroyed between t and t'.
- What if we can lose knowledge just because of time passing?
- Future Normality View: Some possibilities can be eliminated from the set of what is being entertained. And, it can be then re-introduced to the same set.
- Imagine the following scenario: ($t < t' < t''$)
  - The Kernel {😊, 🌮, 🔮} tells us that Beth enjoys the food (🍖) at t' in w.
  - From the point of w, 🍖 unfolds in a relatively normal manner after t.
    - Yet, other possibilities are not completely eliminated.
  - In Beth case, even though 🍖 is expected, 🪳 can occur somewhere after t and before t'.
  - Ending up changing 🍖 to 🤮 event and prohibiting Andy from saying (2) at t''.
  - Andy has the knowledge of 🍖 at t due to Future Normality yet loses it after t'.
  - But, since he is uncertain at t'', the possibility of 🍖 is re-introduced.

What's wrong with the Future Normality View?
- It is a skeptical view, so it has the same objections to any skeptical view has.
- Is *must* factive?
  - If *must p* entails p, then Andy must have known p when he utters *must p*.
  - Where is Sarah? ✅ She must be stuck in traffic. ❌ She is stuck in traffic.
  - Maybe epistemic must is not factive.
- Counterfactuals
  - Let's assume Andy does not know whether Beth will come home in time to eat the dinner.
  - Then Andy would say: "Beth would enjoy it if she had eaten it." What if Andy learns that she actually came home in time.
  - He would still not be able to assert (2). So, it is not about knowledge. ??? I give up…

Antiskeptical

1. (2) cannot be a premise to a reasoning process.

Knowledge is a norm of practical reasoning. We can use certain information as a premise in our practical reasoning if and only if we know that information. Thus, Andy cannot have the following reasoning.

- If Beth enjoyed last night's dish, then I should make it again on Friday.
1. Beth enjoyed last night's dish.
2. So, I should make it again on Friday.

2. Inquiry necessitates ignorance.

One can only ask questions about the information that they already do not know. In our scenario, there is nothing odd about Andy asking Beth whether she liked the dish.