All Update is Goat Update Andy Egan (Rutgers) and Tim Sundell (Kentucky) University of Edinburgh, September 22 2023

1. The Ridiculous Informational Richness of Speech Acts

Five minutes before the appointed starting time of Carrie's talk at the Central APA, Alphie says to Betty, in a loud, clear voice in a midwestern-american accent,

"Professor, she'll be here 10 minutes from now".

A few of the very many messages Betty might extract, and things she might update with, in response to Alphie's utterance:

- 1. Carrie will be in the ballroom of the Palmer House Hilton at 1:05pm.
- 2. Alphie believes that Carrie will be in the ballroom of the Palmer House Hilton at 1:05pm.
- 3. Alphie believes that the fact that Carrie will be in the ballroom of the Palmer House Hilton at 1:05pm is relevant for the purposes of Alphie and Betty's conversation.
- 4. Carrie will be in the ballroom of the Palmer House Hilton and ready to begin her talk at 1:05pm.
- 5. Alphie has compelling evidence that Carrie will be in the ballroom of the Palmer House Hilton at 1:05pm.
- 6. Carrie is not presently in the ballroom of the Palmer House Hilton.
- 7. Carrie will be late for her talk.
- 8. Carrie will be able to give her talk.
- 9. Betty should stall, rather than cancelling the session and asking everybody to leave the ballroom.
- 10. Carrie will be in the location where Alphie's and Betty's conversation takes place 10 minutes after the time of Alphie's utterance.
- 11. Alphie believes that Carrie will be in the location where Alphie's and Betty's conversation takes place 10 minutes after the time of Alphie's utterance.
- 12. Alphie believes that Betty didn't already know that Carrie will be in the location where Alphie's and Betty's conversation takes place 10 minutes after the time of Alphie's utterance.
- 13. Somebody who satisfies the conditions to be referred to by Alphie's use of "she" will be in the ballroom of the Palmer House Hilton 10 minutes after the time of Alphie's utterance.
- 14. Alphie believes that Betty knows enough about the conversational context to realize that "she" refers to Carrie.
- 15. There is a person x, a location l, and a time t, such that t is 10 minutes later than the time of Alphie's utterance, l is a location that is partially occupied by Alphie at the time of his utterance, and x is a female person Alphie intends to be talking about, and x will be at l at t.
- 16. Alphie is in a position of lower social standing or authority than Betty.

- 17. Alphie is concerned to explicitly signal that he takes himself to be in a position of lower social standing or authority than Betty.
- 18. Alphie speaks English.
- 19. Alphie believes that Betty speaks English.
- 20. Alphie is not from Australia.
- 21. Alphie does not have laryngitis.
- All of these are things that, under the right circumstances, we might expect Betty to update with in response to Alphie's utterance.
- They're also all things that, under the right circumstances, Alphie might expect and intend Betty to update with as a result of Alphie's utterance. (Might expect and intend Betty to recognize his intention to get her to update with, etc.)
- They're all things that might update either just Betty's private doxastic state, or the conversational common ground.

That's a lot! And that list is barely a beginning.

One thing to think: There are a lot of importantly different communicative mechanisms underwriting the different messages.

For example:

- (1) is a product of literal assertion.
- (6), (8) and (9) are products of the distinctive mechanism that generates implicatures
- (10), (13) and (15) are products of Stalnakerian diagonalization
- (20) and (21) are products of goat updates updates with observable facts about happenings in the conversational environment

And literal assertion, implicature, diagonalization, and goat update are all very importantly distinct mechanisms.

2. All Update is Goat Update

We are pitching the view: all update is goat update.

- It's all updating with the manifest fact of (and facts about) the utterance, then bringing to bear a bunch of other stuff we believe to extract additional information.
- All the updates in (1)-(21) can be comfortably brought under this umbrella.

Some examples to check out while I'm not holding your attention at the front of the room: (I'll talk through a couple of these.)

• We get to (1) by updating with the fact of the utterance, and bringing to bear a bunch of beliefs about the pronunciation of English words, about grammatical rules about their combination into sentences, about the standing meanings (characters) of the relevant words, about the resolution of the context dependence of "she", "here", and "now" (call all of this "the stuff that determines proposition expressed"), plus the assumption that Alphie is speaking truly in English.

- We get to (2) from all of the above minus the assumption of truth, plus an assumption of sincerity.
- We get to (3) from the stuff that determines proposition expressed, plus an assumption of relevance. (But not necessarily sincerity or truth.)
- We get to (7) from all the stuff that got us (1), plus some information about the scheduled start time of the talk, plus a cooperativeness assumption. (Which tells us that Alphie wouldn't have said Carrie would be there at 1:05 if she was going to be there earlier than that.)
- We get to (8) from all the stuff that got us (1), plus some information about the prevailing norms and customs about how late it's ok to start talks.
- We get (10) from all the stuff that got us (1) except for what's required to determine the resolution of the context-sensitivity of "here". (Probably we need some information that constrains the resolution of the context-sensitivity of "here", so we know it's not e.g. a map-pointing use.)
- We get (11) from the information that gets us (10), minus truth, plus sincerity. (Maybe we got to *truth* by way of (*sincerity* + *competence*). In that case we get (11) from what got us (10), minus competence.)
- We get to (15) from all the stuff that determines proposition expressed except for the stuff that resolves context dependence, plus truth.
- We get to (16) from some information about the conventional conditions of use for honorifics like "professor", plus an assumption that Alphie is using the honorific in the conventionally-called-for way.
- We get to (17) from the above, plus some assumptions about Alphie's beliefs about the information others will bring to bear in interpreting his utterance, and about his intentions about others' recognition of his communicative intention.
- We get (20) and (21) from some assumptions about the acoustic features of Alphie's utterance standing in some standard sorts of relations to his history and physical condition.

Something we (Egan & Sundell) think is cool about this:

- There's a totally general story about how updating in response to speech works, which
 applies to all of the super diverse kinds of updates that in fact happen as a result of the
 things people say to each other.
- The differences between the different updates are just differences in which background beliefs of hearers are being brought to bear in order to extract the relevant bit of information.
- We update in response to speech the same way we update in response to anything else

 we update with the manifest fact or event, and we also update with things that follow
 from that together with other things we believe.

This is a picture on which there's no really deep theoretical difference between all the various kinds of updates to audience members' belief states and/or to the common ground as a result

of a speaker's utterance. (Also no really deep theoretical difference between updates due to speech acts and any other kind of update.)

There are just differences in

- What kind of information needs to be brought to bear
- Whether the information being brought to bear is private or presupposed
- Whether the speaker is relying on the required information being brought to bear by their audience

(These differences can be super interesting, though!)

Note – it's also a picture that requires a notion of belief and inference that allows for a ton of tacit belief and inference. We think that's zero cost, because we need that kind of notion of belief and inference anyway. But YMMV.

3. Yeah duh

This idea is not unprecedented. Might think it's widely presupposed in a bunch of the existing literature.

For example, D. Lewis on linguistic communication in ICC:

- I want you to believe P, so I pick something to say whose truth depends on whether P. You trust that what I'm saying is true. And so you come to believe P.
- (L&L and *Convention* pictures are similar.)

(There Lewis just talks about the individual belief update, but the extension to presupposition is very natural.)

Might worry that it's *universally* presupposed in the existing literature, because it's the only way things could possibly work, and so it couldn't possibly be worthwhile pointing it out.

But (a) it's not, and (b) even if it was it could still be worthwhile bringing it out explicitly.

Other ways things could be:

- The forehead-button model of communication strong modularity and automaticity.
- Objective, non-psychological contexts and updates thereto
 - One pretty plausible version: Fundamentally normative updates

We also think that, even for people (like us) who have been at least tacitly committed to this kind of picture forever, it can be helpful & clarifying to explicitly frame things in these terms.

4. No way

It's not that the view is uninteresting because it's too obviously right. It's uninteresting because it's too obviously wrong.

A straightforward refutation:

 Goatism can only deliver doxastic/presuppositional updates. But even if you've got entirely psychologically reducible contexts, lots of the features of them that get updated are not at all doxastic (QUDs, to-do lists, planning states, etc.).
 Updates to the non-doxastic features of audiences/contexts aren't going to be goat updates.

Answering this requires a more careful statement of goatism, and also a crucial goatist maneuver.

Careful goatism:

• All update is goat update, or a downstream consequence of goat update.

Crucial maneuver: Eating the rulebook

Stipulate a linguistic practice where the conventional response to use of a sentence S is for audiences to ϕ .

The way we actually wind up ϕ ing in response to uses of S is by

- Recognizing that the speaker produced S
- Recognizing that the speaker's production of S calls for us to ϕ
- Assuming that if the speaker's calling for us to ϕ , it's a good idea to ϕ
- Concluding that it's a good idea to φ

So the goatist can accommodate non-doxastic update by building knowledge of the conventions calling for non-doxastic update into the information that's being brought to bear in order to extract information from the fact of the utterance.

Whatever non-doxastic updates you want to build in to your story are then brought on board as downstream consequences of goat update.

5. So what?

Some selling points:

- 1) We really do see a bunch of informational/communicative effects that you'd expect if communication all proceeds in a goaty, information-deploying kind of way. (And maybe not so much if it proceeded in a super modular way) (Barrage of examples shortly)
- 2) The goatist picture gives us some nice explanatory resources for theorizing about those phenomena.

- 3) It gives us a unified picture of communication that helps make clear the relations between and conditions for lots of communicative phenomena, and provides a helpful framework for theorizing about a lot of phenomena.
- 4) Theorizing in goatist terms is fruitful b/c it helps make it easier to see some places where we should expect to see other interesting phenomena right next door to some that we're already paying attention to (and in fact we do see interesting phenomena in those places).

6. PIU PIU

Partial Information Update (PIU):

Update that's the result of the fact of the speaker's utterance, plus information that only partially determines proposition expressed.

(For example, when I didn't catch all the words, or I don't know what some of the words mean, or I don't know enough to fully resolve context dependence.)

PIUs are ubiquitous and communicatively central.

This is totally to be expected, and easy to explain and theorize about, if you're approaching from a goatist angle.

One species of PIU that's gotten a lot of attention:

Updating with utterance + constraining information + truth

Some familiar examples from Stalnaker, Grice, Perry, and Barker

- "That's Zsa Zsa Gabor or Elizabeth Anscombe"
 - The person appropriately positioned to be referred to with 'that' is Gabor or Anscombe
 - Variant: "He needs to go back to sneaky school"
- "An ophthalmologist is an eye doctor"
 - 'ophthalmologist' means 'eye doctor' (well...)
- "He is caught in the grip of a vice"
 - The Gricean disjunction
- "You are spilling coffee"
 - Perry is talking to somebody who's spilling coffee
- The smudged postcard
 - Whoever wrote the postcard was having a good time at the time when they wrote it
- "Stop there!"
 - The kid in the back seat wants me to stop someplace
- "Feynman is tall"
 - The currently active cutoff for application of 'tall' is no higher than 6'1".

(Note that there are cases where updating with the PIU is full communicative success, and also cases where it's not.)

Some more examples:

- Me talking to the mechanic
- 1st year in grad school
- Language instruction

A few things to notice:

- 1) PIUs are totally ubiquitous.
- 2) They're (often) communicatively central
- 3) They're not in competition with each other, or with FIUs, as objects of update or communication. (Shout out to Almotahari & Glick)
- 4) PIUs aren't in general washed out by updates with the proposition in fact expressed. The PIU can still be a useful additional piece of information.

Making all of this easy to see, and making PIUs easy to characterize and theorize about, is a benefit of explicitly framing things in a goaty way.

A spotting-nearby-phenomena benefit:

- Lots of ink spilled about information we can extract from the assumption that an utterance is *true*.
- But truth is just one of many features we can take an utterance to have.
- Famously: Various species of cooperativeness.
- Lots of other features that are less famous, but clearly helpful for understanding cases.
- (MLN and features other than truth)

Something we think is clarifying about goatist framework:

- Unifies and helps sort out relations between a lot of diagonalization-adjacent phenomena (PIUs).
- Also helps make clear that the phenomena are totally real, totally to be expected, and appeal to them is not a suspicious sort of epicycling of special pleading.
- Helps detach the phenomena from the particular bits of theoretical apparatus people use to represent or theorize about them.
- Makes clear that the assumption-of-truth based phenomena that get a lot of press are just a special case of a more general phenomenon.

Generalized Lewis

More generally:

• I pick something to say whose F-ness depends on whether P, and such that I'm confident you'll take for granted that my utterance is F. You trust that my utterance is F. And so you come to believe P.

Truth's an important substituent for F, but not the only one. Famously, in implicature cases, it's some (other) species of *cooperativeness*.

7. Testimonial Injustice, time permitting

Paradigmatic Frickerian testimonial injustice is very goat-friendly.

There are some audience beliefs that are required to support the standard kinds of cases of successful testimony.

Belief that the speaker's speaking truly, supported by belief that they're

- Competent
- o Sincere

Successful-communication-supporting beliefs in speaker competence and/or sincerity can go missing, in which case we get a loss of communicative power.

They can go missing for bad identity-prejudice-based reasons, in which case we get testimonial injustice.

Lots of important communication is supported by audience beliefs that speakers' utterances have some feature other than truth.

Would not be surprising to see kinds of communicative injustice where other kinds of communication-supporting belief go missing.

(And go missing for identity-prejudice-based reasons.) Seems like this probably also happens.

- 8. Flatness and the role of semantic content, time permitting
- 9. PIUs for non-declaratives, time permitting
- 10. Thanks!