

Speech reports: Day 4

Communicative predicates

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Today

- Communicative verbs

General schema I

Propositional attitude predicates

An individual's cognitive state in terms of some propositional content

- DOXASTICS: think, believe, expect; know, be surprised
- BOULETICS: want, desire, hope; be happy
- TELEOLOGICAL: plan, intend
- ...

General schema II

Canonical attitude syntax

- Subject: the attitude holder
- Object: propositional content (typically clausal)
- Speech and attitude verbs: intensional environments
- Classic semantics: quantifiers over possible worlds (Hintikka 1969)

- (1) a. $\llbracket \text{think} \rrbracket^{c,i,g} = \lambda p \lambda x. 1 \text{ iff } \forall i' \in \text{DOX}_{x,i}[p(i)]$
b. $\text{DOX}_{x,i} = \{i' \mid i' \text{ is compatible with what } x \text{ thinks in } i\}$
- (2) a. $\llbracket \text{say} \rrbracket^{c,i,g} = \lambda p \lambda x. 1 \text{ iff } \forall i' \in \text{SAY}_{x,i}[p(i)]$
b. $\text{SAY}_{x,i} = \{i' \mid i' \text{ is compatible with what } x \text{ said in } i\}$

General schema III

- “Compatibility with”: often cached out as being in some set of indices (of belief, of desire, etc.)
- Modal semantics: a straightforward analysis of opacity (*de dicto*)

Speech reports I

The standard view

Speech reports are a species of attitude reports

- Similarities:
 - De re/ de dicto ambiguities
 - Surface syntax

Speech reports II

- Reasons for doubt/more fine-grained view
 - direct discourse complements
 - implicational hierarchies
 - types of subjects
 - factivity

Implicational hierarchies I

Noonan 1985; Cristofaro 2003

Utterance ▷ Propositional attitude (thought) ▷ Knowledge ▷
Perception ▷ Desideratives ▷ ...

- Complementizer omission (Erteshik 1973; Snyder 1992)

- (3) a. Pranav said/thought **(that)** it might rain.
b. Pranav concluded/inferred ***(that)** it might rain.

Implicational hierarchies II

- Various “root” transformations (Hooper and Thompson 1973; Haegeman 2012)

(4) English VP preposing

- a. Wendy **said** she opened the window and **in flew** Peter Pan.
(Hooper and Thompson 1973:474)
- b. #Wendy **was sorry** that she opened the window and **in flew** Peter Pan.
(Hooper and Thompson 1973:479)

Implicational hierarchies III

- German embedded V2 (Reis 1997)

(5) a. V-final

Ich habe gehört, dass man dafür viel Geld
I have.1SG.PRES hear.PRT COMP one that.for much money
braucht.
need.3SG.PRES

b. V2

Ich habe gehört, man braucht dafür
I have.1SG.PRES hear.PRT one need.3SG.PRES that.for
viel Geld.
much money
'I have heard that one needs a lot of money for that.'

Implicational hierarchies IV

(6) a. V-final

Maria bezweifelt, dass Peter sie verehrt.
Maria doubt.3SG.PRES COMP Peter her adore.3SG.PRES
'Maria doubts that Peter adores her.'

b. V2

#Maria bezweifelt, Peter verehrt sie.
Maria doubt.3SG.PRES Peter adore.3SG.PRES her

Implicational hierarchies V

- Availability of different complement strategies
 - Finite complements: full clausal spine, more likely with verbs on the left in the hierarchy
 - Nominalizations: truncated at some level (Borsley and Kornfilt 2000; Kornfilt and Whitman 2011)

(7) Turkish (nominalizations non-factive; Özyildiz 2017)

a. *demek* 'say'

Natasha { dün yağ-dı } de-di
Natasha { yesterday precipitate-PST } say1-PST
'Natasha said that it rained yesterday.'

b. *bulmak* 'find out'

Natasha { dün yağ-dığ-ın-ı }
Natasha { yesterday precipitate-NFUT.NMLZ-3S.POSS-ACC }
bul-du
find.out-PST
'Natasha found out that it rained yesterday.'

Implicational hierarchies VI

- Indexical shift (Deal 2017)
- Logophoricity (Culy 1994)
 - A form of perspectival anaphora, typically *de se* (Anand 2006; Pearson 2015)
 - More likely in speech reports

(8)

Implicational hierarchies VII

- ▶ The patterns easily amenable to a cartographic solution (Rizzi 1997; Cinque 1999; Speas and Tenny 2003; Speas 2004; Sundaresan 2012, 2018; Zu 2018)

A subject contrast

- Some non-sentient subjects are bad (i.e., subject is an Experiencer)

- (9) a. The critic claims that the food is good here.
b. #The critic's notepad claims that the food is good here.

- But not all:

- (10) a. The critic's review claims that the food is good here.
b. #The critic's review believes that the food is good here.

Anand et al. (2019) I

- 4 types of subjects:
 - sentient entities (humans)
 - non-sentient:
 - Repositories of Propositional Information (ROIs)
 - intentional: *book*
 - non-intentional: *notepad, transcript, data*
 - Non-repositories: *glove*
- 4 kinds of attitude predicates (629 word senses)
 - communicatives: *say, argue, claim*
 - doxastics: *think, know*
 - emotives: *hate, love*
 - inferentials: *show, demonstrate*

Anand et al. (2019) II

- Basic findings

| | | John | book | notepad | glove |
|---------------|--------------|------------|------------|-----------|-----------|
| Communicative | (322) | 322 | 202 | 0 | 0 |
| Doxastic | (125) | 125 | 36 | 0 | 0 |
| Emotive | (159) | 159 | 13 | 0 | 0 |
| Inferential | (23) | 23 | 23 | 23 | 23 |
| Total | (629) | 629 | 274 | 23 | 23 |

- only inferentials: non-intentional ROIs and non-Rs
- (almost all) doxastics and emotives: bad with intentional ROIs
- an important question: what about those 50 dox/emo that are good?

Commitments I

- Common Ground: a set of propositions shared by the interlocutors (Stalnaker 1978)
- Recent research on conversational dynamics: a more structured model (Farkas and Bruce 2010; Northrup 2014; Malamud and Stephenson 2015; Farkas and Roelofsen 2017)

Commitments II

(11) CONVERSATIONAL SCOREBOARD

- a. A set of discourse participants X
- b. A set of public commitments for each participant: DC_x
- c. A set of issues to be resolved
- d. Common Ground: a set of propositions each participant is publicly committed to

Commitments III

- Rising declaratives in English (Gunlogson 2003, 2008)
 - A type of non-canonical question
 - Felicitous only if $p \in DC_{ADDRESSEE}$

- (12) a. Do you like spinach?
 b. You like spinach?

- Rhetorical questions (Biezma and Rawlins 2017)
 - the answer is known (Caponigro and Sprouse 2007)
 - the goal is to elicit commitment

- (13) Are you doing a PhD or vacationing in Konstanz? (B&R)

- Some readings on non-canonical questions: Gunlogson (2003, 2008); Malamud and Stephenson (2015); Romero et al. (2017); Jeong (2018); Biezma (2019)

Commitments IV

- Imperatives: often analyzed as deontic modals (Kaufmann 2012)
- Only imperatives require commitment (Condoravdi and Lauer 2017)

(14) *Context: We are planning a dinner after a workshop. Sven has suggested that we have it at his small apartment.*

CLEO. But if you want to have a dinner at your place, you **should** move to a bigger place before the workshop happens.

Cleo's goal could be to make Sven give up his preference

SVEN. Okay, I've been thinking of moving anyways.

CLEO. That is not what I meant: I wanted to convince you that you should not have a party at your place.

(Condoravdi and Lauer 2017)

Commitments V

(15) *Context: We are planning a dinner after a workshop. Sven has suggested that we have it at his small apartment.*

CLEO. But if you want to have a dinner at your place, **move** to a bigger place before the workshop happens.

Cleo's goal could not be to make Sven give up his preference

SVEN. Okay, I've been thinking of moving anyways.

CLEO. #That is not what I meant: I wanted to convince you that you should not have a party at your place.

(Condoravdi and Lauer 2017)

- Bottom line: speech acts are about public commitments (cf. Lauer 2013)

Anand and Hacquard (2014) I

- Not all attitude predicates take Experiencer subjects
- Communicatives take **agents**
 - intentional ROIs can be communicative agents because they make public commitments in discourse
 - reading a book is a form of conversation
- non-intentional ROIs are like non-ROIs – they do not make commitments
- Event semantics for attitudes (Kratzer 2006; Moulton 2009; Hacquard 2010)

- (16) a. $\llbracket \text{claim} \rrbracket^{c,i,g} =$
 $\lambda p.\lambda x.\lambda e.\text{claim}(e, i) \wedge \text{Agent}(x, e) \wedge \text{COMMIT}(p, e)$
- b. $\llbracket \text{believe} \rrbracket^{c,i,g} =$
 $\lambda p\lambda x\lambda e.\text{belief}(e, i) \wedge \text{Experiencer}(x, e) \wedge \text{BELIEF}(p, e)$

Anand and Hacquard (2014) II

Allowed doxastics

A 'communicative sense'

- 13/159 emotives
 - felicitous with *book*
 - indicate desire about unknown outcome

(17) The book {hopes,fears} that our sources of fossil fuels will be deplete by 2030.

Anand and Hacquard (2014) III

- 36/125 doxastics
 - felicitous with *book*
 - involve public communication

- (18)
- a. communication: *calculate, conclude, deem, determine, generalize*
 - b. forecast: *anticipate, envisage, envision, forecast*

Anand and Hacquard (2014) IV

Banned communicatives

Additional entailments

- 120 communicative verbs don't allow intentional ROIs

(19) *cackle, enthuse, exclaim, explode, fib, frown, fume, gasp, gesticulate, mumble, whisper*

Anand and Hacquard (2014) V

Grimshaw (2015) on SAY

Speech attitude predicates all built off of core meaning, SAY

- SAY: 3 argument structural roles
 - Agent
 - Addressee
 - Linguistic content (vs. *speak, discuss*)
- Other lexemes: conflation with other lexical content
 - say by means
 - sound: *grunt*
 - form: *write*
 - manner: *mutter*
 - say with attitude: *bitch, gripe*

Anand and Hacquard (2014) VI

- Communicatives incompatible with *book* subjects: say by means
- Means: impossible for a non-physical 'speaker'

(20) The book {#whispered, #wrote, bitched}.

Non-communicative 'say'

- 'Say': an inferential use
- Allows all subjects:

- (21) a. The {transcript, corpus, archive, data} {says, #claims} that Bill is the murderer.
- b. {The bloody glove, (The fact) that he is lying, Him lying} {says, #claims} that Bill is the murderer.

- SAY verbs permit direct discourse

- (22) {John, the book} says, "This is a great restaurant."

- The inferential use does not

- (23) #{The transcript, The bloody glove, (The fact) that he is enjoyed the meal } says, "This is a great restaurant."

According to I

- Intensional (cf. von Fintel and Heim 2011)
- Speech report (cf. Krawczyk 2012)

(24) According to Trump, there is a crisis at the Mexican border.

- a. ✓ But an expedition to the Rio Grande valley showed little evidence for that.
- b. # But he never said that.

- Inanimate ROI subjects

(25) a. According to this book, the pro-gun argument is built on myth.

- b. According to that theory, the universe and all it contains is more like 15 billion years old. (COCA)

According to II

- No non-ROI subjects

(26) #According to the { desk / weather }, it might rain.

- Broader than just intentional ROIs (Korotkova 2019; counter to Anand et al. 2019)

(27) The { ✓biography, # novel, # transcript } claimed that Einstein was autocratic. (?:6)

(28) a. According to the novel, the West is apparently awash with predatory homosexuals. (COCA)

b. According to the transcript, Baker made the revelation toward the end of the hearing. (Business Insider)

► Merely presents linguistic information

Container alternation I

- A linguistic alternation

(29) The book claims that the war will end soon.

(30) In this book, {the author claims, it is claimed} that the war will end soon.

- Not universal among attitudes
 - *claim, hope, plan, promise*: ✓
 - *surprised, happy, believe*: #
 - *fear, want*: ?
- Correlates with the distribution observed above
- Approach: replace subject X by 'in X, it is V-ed'

Container alternation II

- Upshot:
 - Explanation of ROI subjects
 - Overgeneration

Container alternation III

- Intentional ROIs: possibility of *de se* reports to the AUTHOR

(31) Sarah Palin's memoir claims that she hunts every summer.

- But there is also ascription of the ROI itself (*de se argumentum*):

(32) The book says that it was published in 2009.

(33) The Bible claims to lead readers to salvation.

Container alternation IV

- Approach: replace subject X by 'the author of X'

- (34) a. The book claims that the war will end soon.
 b. The author of the book claims that the war will end soon.

- Predicts incorrect referential effects
- Must be stipulatively limited to communicatives

Container alternation V

- ROI subjects must be capable of commitment

- (35) a. `#{The transcript, phone call, tape recording, video cassette}` states he is married.
- b. In `{the transcript, phone call, tape recording, video cassette}` he states he is married.

- ROI subject is controller of PRO, not author

- (36) The book claims to be the only Polish `{guide to Riga, #guide living in Riga}`.
- (37) The letter threatens to `{bore the reader to death, #blow up the building, #visit next week}`.

Factivity I

Factivity generalization

No communicative predicate is factive. We only find factivity amongst the doxastics (*know, discover, learn*), and emotives (*hate, love*). (Anand and Hacquard 2014)

Factivity II

- 1100 attitude predicates with projection tests; 4 potential counterexamples
 - acknowledge
 - admit
 - confirm
 - uncover

(38) Does the book {acknowledge, admit, confirm, uncover} that Mary is the murderer?

Factivity III

- Response Stance Predicates: *acknowledge*, *admit*, *confirm*
- Describe events e that react to particular properties of reported context c' wrt p
 - precondition #1: p is almost common ground in c'
 - precondition #2: e will make p common ground in c'
 - *admit*
- Factive *illusion*
 - assumption that c' is a reliable discourse
 - when this seems unlikely, factivity vanishes

(39) In Ancient Greece it was widely accepted that the Earth was flat. Eratosthenes however thought that it was round. After his peers demonstrated to him that he couldn't be right, he finally {acknowledged, admitted} that the Earth was flat.

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