The notional category of evidentiality: Day 4
Hearsay and (non-)commitment

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Agenda for today

- Hearsay evidentials in a larger context of speech reports
- The landscape of evidential contradictions
- Several existing approaches

Roadmap

Hearsay I

Upshot: Many ways to report the speech of others

- ▶ Reportative evidentials

(1)   Cheyenne (Algonquian; Montana, US)

    ná–hó'tȯhevá-**màse**
    1–win-**REP.1SG**
    'I won, **I hear**.'   (Murray 2010:73)

- ▶ Reportative adverbs

    - ▶ English *allegedly, reportedly*, German *angeblich*

- ▶ Speech operators (Krawczyk 2012, Kaufmann and Kaufmann forth.)

(2)   **According to this book**, the pro-gun argument is built on myth.
                                                          (COCA)

Hearsay II

- **Communicative predicates** (Anand and Hacquard 2014; Grimshaw 2015; Anand et al. 2017)

    - *acknowledge, announce, assert, claim, report, say, tell …*

- Say–complementation

(3) Uyghur (Turkic: China)

Tursun [Ali-ni   ket-ti   **de-p**   ] ishin-i-du
Tursun [Ali-ACC leave-PST.3 **say-CNV**] believe-NON.PST-3
'Tursun believes that Ali left.'
≈ 'Tursun says that Ali left and believes it.'   (Major 2019)

Hearsay III

▶ Reportative moods (see also Eckardt 2014; Sode 2014)

(4) German (Germanic; Germany)

In einem Fall bestritt der Fahrer, [dass er zu wenig
in INDEF case deny.PST DEF driver [COMP he too little
aufmerksam gewesen **sei**].
mindful be.PRT **be.REP.SUBJ**]
'In one case, the driver denied that he had been reckless.'

(Fabricius-Hansen and Sæbø 2004:214)

▶ More on speech reports:

 ▶ Typological landscape (Linguistic Typology 2019, 23:1)
 ▶ Semantic landscape (Bary and Maier 2019)
 ▶ ESSLLI 2019 class w/ P. Anand shorturl.at/dPY15

Hearsay IV

- Hearsay, but not other intensional operators: often special
- Hearsay, but not other evidentials:
  - Can function to relay speech acts (Thomas 2014; Korotkova 2017; AnderBois 2018)
  - Lead to evidential contradictions

Roadmap

Empirical landscape I

- Evidentials: uniformity across environments (Day 2, Day 3)
- Some existing variation is syntactic (Korotkova 2019)
- Today: a systematic case of non-syntactic variation (or not obviously syntactic …)
- Evidentials across languages differ in commitment to p (the term used theory-neutrally; more later)
  - Hearsay: often—but not unversally—allow non-commitment
  - Non-hearsay (direct, inference): commitment to at least the possibility of p (see Degen et al. 2019 on degrees of confidence)
- Presence/absence of commitment: diagnosed by explicit contradictions

Empirical landscape II

▶ **Non-hearsay evidentials**: obligatory commitment at the least to the possibility of *p* (Bulgarian, Cheyenne, Georgian, Korean, St'át'imcets, Quechua, Turkish …)

(5) Cuzco Quechua (Quechuan: Peru)

    a. FIRSTHAND

        #Para-sha-n-**mi**, ichaqa mana crei-ni-chu.
        rain-PROG-3-**DIR** but   not   believe-1-NEG
        Intended: 'It is raining, **I see**, but I don't believe it.'

    b. INFERENCE

        #Llave-qa muchila-y-pi-**chá**   ka-sha-n, ichaqa mana-**n**
        key-top   backpack-1-LOC-**CONJ** be-PROG-3 but   not-**DIR**
        aqhay-pi-chu.
        there-LOC-NEG
        Intended: 'The keys **may** be in my backpack, but they are not there.'

                (adapted from Faller 2002:163, ex. 126 and 178, ex. 138)

Empirical landscape III

(6)   Georgian
      Inference: You see Maria's red eyes and think that she was crying.
      You later learn that it was just an allergy.

      # maria-s **utiria**   magram asi ar   aris
      Maria-DAT cry.3SG.S.**IND.PST** but   this NEG be.3SG.S.PRES
      Intended: 'Maria was crying, **I infer**, but that is not so.'

   ▶ "Strong" inferentials: # [[Evp ∧ [Ev¬p]]
   ▶ "Weak" inferentials: ✓[[Evp ∧ [Ev¬p]], much like *might*,
     but never flat-out contradictions

Empirical landscape IV

- **Hearsay evidentials**: commitment often optional (first noticed for Cuzco Quechua (Faller 2002), later observed in e.g. Bulgarian, Cheyenne, Georgian, Dutch, Tagalog; see AnderBois 2014 for an extensive overview)

(7) Cuzco Quechua

Pay-kuna=**s**   ñoqa-man-qa   qulqi-ta   muntu-ntin-pi
(s)he-PL=**REP**   I-ILLA-TOP   money-ACC   lot-INCL-LOC
saqiy-wa-n, mana-má riki   riku-sqa-yki ni   un   sol-ta
leave-1O-3 not-SURP right see-PP-2   not one sol-ACC
centavo-ta-pis saqi-sha-wa-n-chu
cent-ACC-ADD   leave-PROG-1O-3-NEG
'They left me a lot of money, *as it is said*, but, as you have seen, they didn't leave me one sol, not one cent.'

Empirical landscape V

▶ Interesting case: evidential perfects

(8) Georgian
Hearsay: There is a report that California legalized marijuana.

kalifornia–s   k'anonier–i   **gauxdia**   marihuan–is
California–DAT   legal–NOM   make.**IND.PST**   marijuana–GEN
gamoq'eneba magram asi ar   aris
usage.NOM   but   this NEG be.3SG.S.PRES
'California legalized marijuana, *I hear*, but that's not true.'

Empirical landscape VI

▶ Commitment can be obligatory even with hearsay (Finnish, own data (pace AnderBois 2014); Gitksan (Peterson 2010); St'át'imcets (Matthewson et al. 2007); Turkish, own data (pace Şener 2011))

(9) Turkish (Turkic; Turkey): hearsay/inference miş
Context: You hear from a friend that in snowed in LA, but you have reasons to be skeptical.

LA'ye kar yağ-**mış** ama kar yağ-dıg-ın-a
LA.DAT snow rain-**IND** but snow rain-NMLZ-3SG.POSS-DAT
inan-mı-yor-um.
believe-NEG-PROG-1SG
Intended: 'It snowed in LA, I hear, but I don't believe that it snowed.'
Comment: to avoid being contradictory, use *guya* 'allegedly'.

Empirical landscape VII

- Emerging typology

	HEARSAY	NON-HEARSAY
OPTIONAL COMMITMENT	✓	☹
OBLIGATORY COMMITMENT	✓	✓

- Some hearsay statements argued to be committal w/out follow-ups (AnderBois 2014; Faller 2019) but in some cases the opposite is true, e.g. *sollen*

- Desiderata for a theory
  1. Account for optional commitment with hearsay (Bulgarian, Cheyenne, Dutch, Quechua …)
  2. Explain the effect of follow-ups
  3. Allow obligatory commitment with hearsay (Finnish, Gitksan, St'át'imcets, Turkish)
  4. Explain the systematic gap: only obligatory commitment with non-hearsay

Roadmap

Modal approaches I

Part 1. Epistemic modals

Modal approaches II

- ▶ Non-commitment has been used as an argument

  - ▶ in favor of treating evidentials as interacting with the structure of speech acts (including Faller 2002; Murray 2010, 2014, 2017; also Davis et al. 2007; Northrup 2014)
  - ▶ over treating evidentials as epistemic modals (Izvorski 1997; Garrett 2001; Matthewson et al. 2007; McCready and Ogata 2007; Peterson 2010)

- ▶ The rationale: no contradictions with *must*

(10)   # There **must** be water on Mars, but there is no water on Mars.

Premise	Some evidentials do not behave like *must*
Premise	*Must* is a prototypical epistemic modal
Conclusion	Non-committal evidentials $\neq$ epistemic modals

Modal approaches III

- ▶ Flawed reasoning: natural classes vs. formal toolkits
- ▶ Yalcin (2007, 2011): most weak approaches to *must*, including standard Kratzerian semantics, overgenerate (see Lassiter 2016 for a weak analysis that avoids this problem)

(11)   There must be water on Mars.

    (i)   epistemic modal base: $f_{ep}(w) = \{z \mid z$ is known in $w \}$

    (ii)   stereotypical ordering source:
             $g_{st}(w) = \{q \mid q$ is normal in $w\}$

    (iii)   *must* universally quantifies over the most normal of the epistemically possible worlds

    (iv)   the world of evaluation may not be in the domain of the quantifier

    (v)   contradictions should be available

Modal approaches IV

- ▶ Weak theories of *must* are suitable for non-committal evidentials

    - ▶ Incl. Izvorski's (1997) analysis of Bulgarian (Day 1)

- ▶ Non-commitment: not an argument for a speech-act analysis of evidentiality

- ▶ Crucial aspect for Yalcin and for us later today: lack of contradictions with *must* is semantic, rather than pragmatic; unlike the pragmatic nature of Moore's paradox

Modal approaches V

Part 2. Non-epistemic modals

Modal approaches VI

- ▶ Non-committal evidentials: informational modals with a non-epistemic modal base (introduced in Kratzer 2012; roughly equivalent to *say* in Hintikkan semantics; adopted in Enrich 2001; Faller 2011; Matthewson 2012)

(12) $f_{inf}(w) = \{z \mid z$ is the content of a report in $w\}$

- ▶ The world of evaluation: needn't be included
- ▶ Contradictions possible

Modal approaches VII

- Taking stock: everything hinges on how modal bases are chosen, a general issue with Kratzerian semantics
    1. account for optional commitment with hearsay ✓
    2. effects of the follow-up ☹
    3. allow obligatory commitment with hearsay ?/✓
    4. explain the systematic gap ?/✓

Roadmap

Pragmatic shift I

- AnderBois 2014: non-commitment as pragmatic shift
- Cf. a pragmatic view on appositives (Harris and Potts 2009)
  - speaker-oriented by default (Potts 2007)
  - can shift to a salient perspective (Amaral et al. 2007; Harris and Potts 2009)

(13) *Context: My aunt is extremely skeptical of doctors in general.*

    a. **She** says that dentists, **who are only in it for the money anyway**$_{AUNT}$, are not to be trusted at all.

    b. Dentists, **who are only in it for the money anyway**$_{AUNT}$, are not to be trusted at all. (Harris and Potts 2009)

- NB: appositive shift likely driven by grammar (Schlenker 2013)
- Pragmatic shifting is legit in general (Day 3; Mitchell 1986; Bittner 2012, Craige Roberts at SemDial 2020)

Pragmatic shift II

- ▶ Only hearsay evidentials introduce another perspective
  - ▶ Commitment shifts to that of the reporter (cf. Smirnova 2012)
  - ▶ No such thing with non-hearsay
- ▶ Major problem: cross-linguistic variation
- ▶ Pragmatic shift expected to be universal
- ▶ AnderBois's (2014) take
  - ▶ Committal hearsay: only languages of the Pacific Northwest
  - ▶ Such languages lack pragmatic shift altogether
- ▶ Explanation doesn't work
  - ▶ Gitksan (PNW): non-literal language, e.g. irony (Peterson 2010)
  - ▶ Committal hearsay: more widespread (Finnish, Turkish)

Pragmatic shift III

► Taking stock

    1 account for optional commitment with hearsay   ✓

    2 effects of the follow-up   ✓

    3 allow obligatory commitment with hearsay   ☹

    ⇒ failure to predict the variation

    4 explain the systematic gap   ✓

Roadmap

Speech–act approaches I

▶ **Central assumption**: one doesn't assert things that are known to be false (Day 1: norms of assertion)

Speech–act approaches II

Part 1. Hearsay as hedging: Murray 2010, 2014, 2017
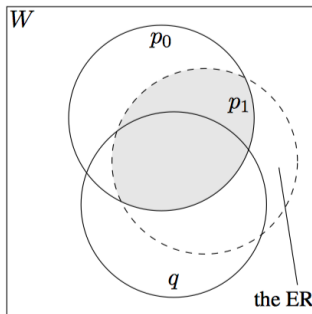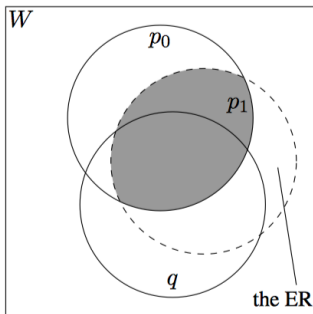
Speech–act approaches III

- Some evidentials assert *p*
  - introduction of a discourse referent for *p*
  - proposal to add *p* to the common ground
  - reduction of the common ground to *p*-worlds if proposal accepted
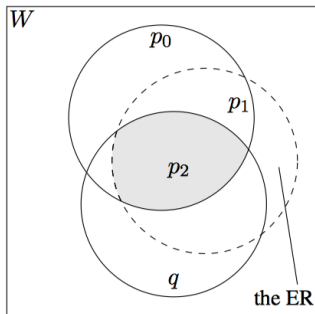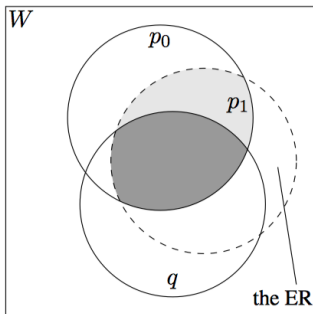
Speech–act approaches IV

- ▶ Some evidentials present *p*
    - ▶ introduction of a discourse referent for *p*
    - ▶ common ground not reduced to p-worlds
    - ▶ contradictions possible

- ▶ A straightforward account of other phenomena under the "hegde" umbrella (cf. Simons 2007; McCready 2015; Benton and von Elswyk 2019; Koev 2019)

Speech–act approaches V

▶ Taking stock

1. account for optional commitment with hearsay ✓
2. effect of the follow-up ☹
3. allow obligatory commitment with hearsay ✓
4. explain the systematic gap ☹

→ nothing excludes a non-committal inference/direct evidential (cf. criticism in AnderBois (2014))

Speech–act approaches VI

Part 2. Commitments

Speech–act approaches VII

- Discourse commitments, unlike private beliefs, are:
  - Public
  - Held for the sake of conversation

- An emerging consensus in using this notion for speech acts, especially declaratives (Szabolcsi 1982; Gunlogson 2003, 2008; Romero and Han 2004; Farkas and Bruce 2010; Krifka 2014, 2015, 2019; Malamud and Stephenson 2015; Geurts 2019)

- ESSLLI 2020: Bart Geurts on commitments

Speech-act approaches VIII

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

(14)   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

(15)   Are you doing a PhD or vacationing in Konstanz?

                                          (Biezma and Rawlins 2017)

Speech–act approaches IX

- In practice, not easy to distinguish commitments and private beliefs

- Imperatives: often analyzed as deontic modals (Kaufmann 2012)

- Only imperatives require commitment (Condoravdi and Lauer 2017)

(16) *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.

<div align="right">(Condoravdi and Lauer 2017)</div>

Speech–act approaches X

(17) *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)

Speech–act approaches XI

- Speech act approaches to evidentials
  - show that it is possible to treat evidentials in terms of commitments
  - do not show that it is necessary

- No evidence for a purely commitment–based approach (though see discussion in Faller 2019)

Speech–act approaches XII

Part 3. Differentiated commitments (Faller 2019)

Speech–act approaches XIII

- Crucial components:
    - Separation of speaker roles: animator vs. principal
    - Separation of declarative sentence type and assertion
    - Separation of AI content vs. asserted content

- Speaker roles (Goffman 1979)
    - Animator: the person physically producing an utterance (always present)
    - Principal: the person whose positions/beliefs are established by the words spoken

- This move allows to distance oneself from what one is saying

Speech–act approaches XIV

- ▶ Default speech act: presentation, not assertion

(18) Eating chocolate is unethical. Discuss. (Faller 2019:24)

- ▶ Assertion is the default resulting from presentation, but may be overriden
- ▶ All presented content is AI: QUD-relevant, put on the Table
- ▶ Because not all presentations amount to an assertion, being asserted is not necessary for being AI in this system
- ▶ Default acceptance due to collaborative principle (Walker 1996)
    - ▶ Discourse participants must provide evidence of a discrepancy in commitment as soon as possible

Speech–act approaches XV

- Conversational scoreboard (Farkas and Bruce 2010; Northrup 2014)

  1. A: The set of the speaker's commitments, including truth commitments *TC* and evidential commitments, such as propositions for which the speaker has adequate evidence *AeC*, hearsay evidence *RepC* etc.
  2. B: The set of the addressee's commitments
  3. The table: stack of questions/issues
  4. Common Ground CG: $A \cap B$

Speech–act approaches XVI

- Discourse effects: speech act operators (cf. Krifka 2014, 2015)

(19) **PRESENT**$(\phi, a, K_i) = K_{i+1}$ such that

a. $T_{i+1} = push(\phi, T)$

b. $(TC_{p,i+1} = TCp, i \cup \{\phi\})$

c. $(AeC_{a,i+1} = AeCa, i \cup \{\phi\})$

d. $(a_{i+1} = p_{i+1})$

- Plain sentence

A	Table	B
$TC_A \cup \{\phi\}$	ϕ	TC_B
$AeC_A \cup \{\phi\}$		AeC_B
$RepC_A$		$RepC_B$
Common Ground		
CG		

- Acceptance

A	Table	B
$TC_A \cup \{\phi\}$		$TC_B \cup \{\phi\}$
$AeC_A \cup \{\phi\}$		AeC_B
$RepC_A$		$RepC_B \cup \{\phi\}$
Common Ground		
$CG \cup \{\phi\}$		

Speech-act approaches XVII

- Meaning for the reportative (analyzed as a function from speech acts to speech acts; Faller 2002)

(20)   **-si**($\textbf{PRESENT}$)(ϕ, a, K_i)=$\textbf{PRESENT}$(ϕ, a, K_i) such that

    a. $RepC_{a,i+1} = RepC_{a,i} \cup \{\phi\}$

    b. $a_{i+1} \neq p_{i+1}$ require A and P to be distinct

- Sentence with -*si* (no follow-up)

A	Table	B
$T\bar{C}_{P,P\neq A} \cup \{\phi\}$	ϕ	$T\bar{C}_B$
$TC_A \cup \{\phi\}$		AeC_B
AeC_A		$RepC_B$
$RepC_A \cup \{\phi\}$		
Common Ground		
CG		

- Sentence with -*si* (with follow-up)

A	Table	B
$T\bar{C}_{P,P\neq A} \cup \{\phi\}$	ϕ	$T\bar{C}_B$
AeC_A		AeC_B
$RepC_A \cup \{\phi\}$		$RepC_B$
Common Ground		
CG		

Speech–act approaches XVIII

- Taking stock
  1. account for optional commitment with hearsay ✓
  2. effects of the follow-up ✓
  3. allow obligatory commitment with hearsay ?/✓
  4. explain the systematic gap ✓

- Concerns:
  - How does it work for embedded clauses?
  - Are all evidentials perceived as committal w/out follow-ups?

1 Hearsay

2 Empirical landscape

3 Modal approaches

4 Pragmatic shift

5 Speech–act approaches

6 Outlook

Outlook I

▶ Speech act accounts predict that contradictions evaporate in embedded clauses (like norms of assertion; cf. Yalcin 2007 on epistemics)

(21) Moore's paradox:
It is sunny, # but I don't believe it's sunny.

(22) ✓Suppose that it is sunny and that you don't believe it's sunny.

(23) # Suppose that it must be sunny and that it isn't sunny.

Outlook II

- Prediction not borne out: the commitment pattern with evidentials is the same in root and embedded clauses

(24) Dutch

Lisa zegt [dat John de wijn **schjint** te hebben
Lisa say.3SG [COMP John DEF wine **seem.3SG** INF AUX
opgedronken,] maar ze gelooft het niet.
drink.PART] but she believe.3SG that NEG
'L. said that J., as she heard, drank all the wine, but she does not believe it.'

(25) Turkish

Lisa woke up to white stuff on the ground and tells you:

#Lisa [LA'ye kar yağ-**mış**] de-di ama kar
Lisa [LA.DAT snow rain-**IND**] say-PST but snow
yağ-dıg-ın-a inan-mı-yor.
rain-NMLZ-3SG.POSS-DAT believe-NEG-PROG
Intended: 'Lisa says that it snowed in LA, given what she inferred, but she doesn't believe that it snowed.'

Outlook III

▶ Optionality of commitment in the evidential domain reflects a more general distinction that cross-cuts the grammar: the divide between mental attitudes and speech reports (Anand and Hacquard 2014; Anand et al. 2017)

    ▶ Private mental states about p require commitment to $p/\square p/\diamond p$ on part of the attitude holder

(26)   # I infer / think / conclude that it was raining, but I don't believe it was raining.

    ▶ Reporting a previous discourse move does not (but may) require such commitment:

(27)   ✓ I was told / I read / Jane says that it was raining but I don't believe it.

Outlook IV

- Obligatory commitment with non–hearsay
    - Entailment
    - Sanity check with English attitude verbs

(28) a. Jane concluded that Los Angeles is the capital of California.
         → Jane believes that LA is the capital.

      b. Jane did not conclude that Los Angeles is the capital of California.
         ↛ Jane believes that LA is the capital.
         NB: *conclude* is not a neg-raising verb

Outlook V

- Optional commitment with hearsay
    - A relevance implicature
    - Non-commitment is when evidence may become relevant
    - Epistemic commitments are known to be expressed via implicatures (cf. ignorance effects with modal indefinites; Kratzer and Shimoyama 2002; Alonso-Ovalle and Menéndez-Benito 2010)

Outlook VI

- Obligatory commitment with hearsay

    - Several languages require commitment with hearsay evidentials: Finnish, Gitksan, St'át'imcets, Turkish
    - Parallel: entailment about the truth of the complement can be present with speech predicates, albeit rare (English *be right*)
    - *Be right*: entailment about the truth of the complement is foregrounded and such predicates are veridical

(29)   a.   Mary **is right** that Riga is in Latvia.
            $\rightarrow$ Riga is in Latvia.

        b.   It is not the case that Mary **is right** that Riga is in Latvia.
            $\nrightarrow$ Riga is in Latvia.

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