Hearsay and (non-)commitment

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Overarching issues

- Disavowals and speech acts
- Hearsay and speech reports
- Semantics/pragmatics division of labor

Evidentiality (Aikhenvald 2004, 2018 a.o.)

Linguistic category that signals the source of the semantically determined information for an utterance

(1) Cuzco Quechua (Quechuan; Peru)

a. para-sha-n=**mi** [FIRSTHAND]
rain-PROG-3=**DIR**
'It is raining, ***I see***.'

b. para-sha-n=**chá** [INFERENCE]
rain-PROG-3=**INF**
'It must be raining, ***I gather***.'

c. para-sha-n=**si** [HEARSAY]
rain-PROG-3=**REP**
'It is raining, ***I hear***.' (adapted from Faller 2002:3)

Methodological note:
Expressions of evidence span across morphosyntactic categories

Research in formal semantics and pragmatics

- Uniformity across environments (see overviews in Murray 2017; Korotkova 2016, 2019; Matthewson 2020)
  - Dialogues
  - Questions
  - Attitudes
- Unified semantics (if the evidential signal is hard-wired; Korotkova 2021b)
  - As epistemic modals within Kratzerian semantics (Izvorski 1997; Matthewson et al. 2007; Schwager 2010; Smirnova 2012 a.o.)
  - As illocutionary force operators (Faller 2002, 2019; Murray 2014, 2017; Murray and Starr 2020; Northrup 2014; Krifka 2019b a.o.)
  - Some evidential restrictions derived from event mereology (Faller 2004; Davis and Hara 2014; Bowler 2018; Altshuler and Michaelis 2020 a.o.)
- Some existing variation: due to syntax (Korotkova 2021a)

Today's talk

Systematic case of variation (AnderBois 2014; Murray 2017; Faller 2019)

- Non-hearsay evidentials: require endorsement of $\phi/\Box\phi/\Diamond\phi$
- Hearsay evidentials: allow absence of endorsement

Q1 Why only hearsay evidentials?

Q2 How much variation?

Q3 Best ways to model presence/absence of endorsement?

Roadmap

1. Setting the stage
2. Empirical landscape
3. Previous approaches
   - Modal views
   - Illocutionary views
4. Proposal
   - At-issueness
   - Speech reports
   - Reasoning
5. Outlook

The pattern I

Systematic case of variation

- Non-hearsay evidentials: require endorsement of $\phi/\Box\phi/\Diamond\phi$
  Bulgarian, Cheyenne, Cuzco Quechua, Georgian, Korean, St'át'imcets...
- Hearsay evidentials: allow absence of endorsement (first noticed for Cuzco Quechua, see AnderBois 2014 for extensive overview)

(2) Cuzco Quechua

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

b. ✓Para-sha-n-**si**, ichaqa mana **crei-ni-chu**. [HEARSAY]
rain-PROG-3-**REP**, but not **believe-1-NEG**
≈'**It's said** that it's raining, but I **don't believe** it'.

(adapted from Faller 2002:163,198)

The pattern II

- Not always dedicated morphology for hearsay
- Case in point: indirect markers (inference+hearsay) (also e.g. Bulgarian (South Slavic), Smirnova 2012; Svan (South Caucasian), Sumbatova 1999)

(3) Georgian (South Caucasian: Georgia, Azerbaijan); evidential past

a. *Maria has red eyes, you think she was crying, later learn it was an allergy.* [INFERENCE]

#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 true**.'

b. *Fox News reports that California legalized marijuana.* [HEARSAY]

✓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**
≈'**It's said** that California legalized marijuana, but that **is not true**.'

The pattern III

Methodological note:
Endorsement diagnosed by disavowals

- Different linguistic shapes
  - 'ϕ is not the case'
  - 'I know that $\neg\phi$'
  - 'I don't believe ϕ'
  - ...
- Not all disavowals are always possible
- Consequential for semantic theory

Variation in hearsay I

1. Optionality of endorsement
2. Endorsement by default

Variation in hearsay II

- Endorsement can be obligatory even with hearsay (also Gitksan (Tsimshianic), Peterson 2010; St'át'imcets (Salish), Matthewson et al. 2007)

(4) Turkish (Turkic; Turkey): hearsay/inference *miş* (pace Şener 2011)

a. *You wake up to white stuff on the ground.* [INFERENCE]

#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 infer**, but I **don't believe** that.'

b. *You hear from a friend that in snowed in LA.* [HEARSAY]

#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's said** that it snowed in LA, but I **don't believe** that.'
Comment: to avoid a contradiction, use *guya* 'allegedly'.

Variation in hearsay III

- Frequently: endorsement by default (see discussion in AnderBois 2014)

(5) Dutch reportative *schijnen* (see Koring 2013 on its semantics)

De thee **schijnt** heerlijk te zijn.
DEF tea **REP.3SG.PRES** delicious to be.INF
'The tea is **said** to be delicious.'
⇝ The speaker considers it likely.

- Sometimes: distancing (also Spanish *dizque*; Martínez Vera 2020)

(6) German reportative *sollen* (see Enrich 2001 on its semantics)

Dieser Tee **soll** lecker sein.
this.M tea **REP.3SG.PRES** delicious be.INF
'This tea is **supposed** to be delicious.'
⇝ The speaker has doubts about it. (unlike e.g. claims with *must*-modals)

Recap

- Emerging typology [pattern the same in attitudes, see appendix]

	OBLIGATORY ENDORSEMENT	OPTIONAL ENDORSEMENT	
NON-HEARSAY	✓	×	
HEARSAY	✓	default	+doubt

- NB: Inferential evidentials
  - "Strong": #[[Evϕ $\wedge$ [Ev$\neg\phi$]] (Georgian, Turkish; cf. *must*-modals)
  - "Weak": ✓[[Evϕ $\wedge$ [Ev$\neg\phi$]] (Quechua, German *wohl*; cf. *might*-modals)

Desiderata for the theory

1. Account of disavowals
2. Principled explanation of non-hearsay
3. Space for variation in hearsay

Roadmap

1. Setting the stage
2. Empirical landscape
3. Previous approaches
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Space of options I

1. Modal views
2. Illocutionary views

- Upshot (see detailed discussion in Korotkova 2016, 2021b)
  - Disavowals with hearsay: frequent argument for illocutionary approaches to evidentiality as a whole
  - Modality, as a natural class, difficult to define (see especially literature on the modal future; Cariani 2021)
  - Modal approaches can handle most of the data (not all; Korotkova 2017)
  - Differences: mostly conceptual

Space of options II

The non-endorsement conundrum (modal version)

Target case: I hear ϕ, but it's not the case that ϕ / I don't believe ϕ.

- Epistemics: $\Box\phi/\Diamond\phi/\phi$ endorsed
- Hearsay: ϕ not endorsed

(7) a. #There **must/might** be water on Mars, but **there isn't**.

b. #There **must/might** be water on Mars, but I **know there isn't**.

c. #There **must/might** be water on Mars, but I **don't believe** it.

Space of options III

Methodological note:
Natural classes $\neq$ properties of the formalism

- Modal solutions (see Korotkova 2021b for proof of concept)
  - Hearsay evidentials: non-strong epistemic modals
  - Hearsay evidentials: non-autocentric epistemic modals (McCready and Ogata 2007; Smirnova 2012)
  - Hearsay evidentials: non-epistemic informational modals (Faller 2011; Kratzer 2012)

$\longrightarrow$ details in the appendix $\longleftarrow$

Disavowals in Kratzerian semantics I

- Hearsay evidentials: non-strong epistemic modals
  - Kratzer 1991: incorrect predictions for *must* and *might* (Yalcin 2007)
  - Izvorski (1997): correct predictions for hearsay
  - w: possibly not in the quantifier domain, hence not a ϕ-world

(8) $[\![\text{REP } \phi]\!]^{c,w} = 1$ iff for all of the **most normal** worlds w' compatible with what is known in w', $\phi(w')$.

$[\![\text{REP } \phi]\!]^{c,w,f,g} = \forall w' \in \ max_{g_{st}(w)} \cap f_{ep}(w)\ [\phi(w')]$,
defined if $\exists q \subseteq f_{ep}(w)$ such that q is hearsay evidence for ϕ in w,
where $f_{ep}(w) = \{\ z \mid z \text{ is known in } w\ \}$ (a classic epistemic modal base),
where $\cap f_{ep}(w) = \{\ u \mid \forall z \in f_{ep}(w).u \in z\ \}$
(a set of worlds accessible from w in which the propositions in $f_{ep}(w)$ are true),
where $g_{st}(w) = \{q \mid q \text{ is normal in } w\}$ (a stereotypical ordering source),
where $\forall u, v : v <_{g(w)} u$ iff $\{q \mid q \in g(w) \wedge u \in q\} \subset \{q \mid q \in g(w) \wedge v \in q\}\}$
and where $max_{g_{st}(w)}(\cap f_{ep}(w)) = \{w' \in \cap f_{ep}(w) \mid \neg\exists v \in \cap f_{ep}(w).v <_{g_{st}(w)} w'\}$.

(adapted from Izvorski 1997:230)

Disavowals in Kratzerian semantics II

Taking stock

1. Account of disavowals ✓
2. Principled explanation of non-hearsay ??
3. Space for variation in hearsay ✓

- Much hinges on how modal bases are chosen; general problem for the framework

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Assertion and discourse commitments I

- Major conceptual difference between modal vs. illocutionary views on evidentiality: **discourse commitments** (first used by Gunlogson 2003)
  - Public
  - Held for the sake of conversation
- Linguistic literature: commitments define speech acts (Farkas and Bruce 2010; Malamud and Stephenson 2015; Geurts 2019; Krifka 2019a a.o.)
  - distinguish imperatives from otherwise similar deontic modals (Condoravdi and Lauer 2017)
  - distinguish speech predicates from otherwise similar doxastics (Anand and Hacquard 2014)
- ESSLLI 32: Bart Geurts on commitments (July 26–August 13, 2021, https://esslli2021.unibz.it/)

Assertion and discourse commitments II

- The nature of speech acts: an ongoing debate, in particular speech acts with modals (Cariani 2020)
- Philosophical literature: commitments are not a given (see overviews in e.g. Fogal et al. 2018; speech acts as mental states, Bar-On 2004; speech acts as intention recognition, Harris 2019, in press, ...)

Methodological note:
How to diagnose commitment?

- Disavowals: often use belief
- Difficult to tell the difference

Assertion and discourse commitments III

The non-endorsement conundrum (illocutionary version)

Target case: I hear ϕ, but it's not the case that ϕ / I don't believe ϕ.

- Assertion: ϕ endorsed (epistemic norms: knowledge/justified belief, Williamson 2000; Lackey 2007; Gricean Quality, Benton 2016; commitment)
- Hearsay: ϕ not endorsed, cannot be asserted

- Illocutionary solutions
  - Speech acts with hearsay aren't assertions (Faller 2002, 2019)
  - Speech acts with hearsay are hedged assertions (Murray 2014, 2017; see also Benton and von Elswyk 2020 on hedged assertion and McCready 2015 on hedges)
  - Perspectival shift to the original reporter (AnderBois 2014)

⟶ details in the appendix ⟵

Presentational speech acts (Faller 2019) I

- The default speech act associated with declaratives: presentation
  (assumption: strict mapping between sentence types and speech acts they perform; see e.g. Farkas and Bruce 2010; Krifka 2014; Farkas and Roelofsen 2017)

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

- Presentation **may** result in assertion
- Speech acts with hearsay present ϕ without asserting it

Presentational speech acts (Faller 2019) II

- Framework: conversational scoreboard (Farkas and Bruce 2010)
- Presentation: putting ϕ on the Table, updating commitments
- Intended effect of assertions: adding ϕ to the Common Ground

Proposal to update *cg* with ϕ

Speaker	Table	Addressee
$TC_{Sp} \cup \phi$ $AeC_{Sp} \cup \phi$ $RepC_{Sp}$	ϕ	TC_{Ad} AeC_{Ad} $RepC_{Ad}$
Common Ground *cg*		

Acceptance of the proposal

Speaker	Table	Addressee
$TC_{Sp} \cup \phi$ $AeC_{Sp} \cup \phi$ $RepC_{Sp}$		$TC_{Ad} \cup \phi$ AeC_{Ad} $RepC_{Ad} \cup \phi$
Common Ground $cg \cup \phi$		

(where TC_x is the set of propositions the truth of which x is committed to, AeC_x is the set of propositions for which x has adequate (good-enough) evidence, $RepC_x$ is the set of propositions for which x has hearsay evidence, and the common ground *cg* is the set of joint commitments of the interlocutors)

Presentational speech acts (Faller 2019) III

- Additional assumptions
  - Separation of speaker roles (Goffman 1979): animator (=physical utterer) vs. principal (=commitment/belief holder)
  - Collaborative principle (Walker 1996): discourse participants must provide evidence of a discrepancy in commitment as soon as possible
- Discourse effects of hearsay-claims
  - As is: commitment to the truth (due to collaborative principle)
  - With a disavowal: no commitment

Presentation of REPϕ (committal)

Speaker	Table	Addressee
$TC_{Principal} \cup \phi$	ϕ	TC_{Ad}
$TC_{Animator} \cup \phi$		
$AeC_{Animator}$		AeC_{Ad}
$RepC_{Animator} \cup \phi$		$RepC_{Ad}$
Common Ground		
cg		

Presentation of REPϕ (non-committal)

Speaker	Table	Addressee
$TC_{Principal} \cup \phi$	ϕ	TC_{Ad}
$TC_{Animator}$		
$AeC_{Animator}$		AeC_{Ad}
$RepC_{Animator} \cup \phi$		$RepC_{Ad}$
Common Ground		
cg		

Presentational speech acts (Faller 2019) IV

Taking stock

1. Account of disavowals ✓
2. Principled explanation of non-hearsay ✓
3. Space for variation in hearsay ??

- Concerns:
  - How does it work for embedded clauses? (technically possible; Krifka 2019a)
  - Why aren't all evidentials perceived as committal w/out follow-ups?
  - Does the collaborative principle apply to communicative predicates?

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Discourse status of evidential claims I

- Starting point of most approaches (see overview in Korotkova 2020)
  - The scope proposition: at-issue, main point of the utterance
  - Evidential restriction: not-issue, peripheral information

(10) tovl-i **mosula** Georgian
snow-NOM come.**IND.PST**
At-issue: ϕ = 'It snowed'
Not-at-issue (arguably): ER = 'I hear/infer ϕ'

- English parallel: appositives, non-restrictive relative clauses, slifting parentheticals (Murray 2014, 2017)

(11) a. It hailed last night, **I hear**.

b. Polina, **my friend**, is a giving talk later today.

c. TripleA, **which is taking place online this year**, is awesome.

Discourse status of evidential claims II

The non-endorsement conundrum (again!)

Target case: I hear ϕ, but it's not the case that ϕ / I don't believe ϕ.

- Asserted content: always endorsed, always at-issue (at-issueness sometimes defined via assertion; Potts 2005; Farkas and Bruce 2010; Anderbois et al. 2015)
- ϕ: not endorsed, cannot be asserted
- Rep ϕ: not-at-issue, cannot be asserted

- Solution:
  - Evidential restrictions: variable discourse status, backgrounded by default (Roberts 2019; Korotkova 2020)
  - Disavowals: evidence is at-issue

Discourse status of evidential claims III

- At-Issue vs. Not-At-Issue content (Potts 2005; Farkas and Bruce 2010; Simons et al. 2010; Tonhauser et al. 2013; Anderbois et al. 2015; Gutzmann 2015; Hunter and Asher 2016; Beaver et al. 2017; Tonhauser et al. 2018)
  - Distinct formal notions (Snider 2017; Koev 2018)
  - Different empirical diagnostics
  - Content can be AI under one definition and NAI under another

Discourse status of evidential claims IV

Methodological note:
How to construe and diagnose evidential (not-)at-issueness?

- Korotkova (2020): arguments for the QUD-view
  - QUD-view on at-issueness (Simons et al. 2010; Beaver et al. 2017): general discourse principles and relevance to the current Question Under Discussion (QUD) (Büring 2003; Ginzburg 2012; Roberts 2012)
  - A proposition is AI only iff the speaker intends to address the QUD with it
    - relevant to the QUD
    - entails a complete or partial answer to the QUD

Discourse status of evidential claims V

- Answerhood (Diagnostic 2 in Tonhauser 2012): the ability to address the QUD via answering explicit or implicit questions (also Korean, Lee 2011; Gitksan, Bary and Maier 2021; Cuzco Quechua, Faller 2019)

(12) Georgian
#Q1: What makes you think there is a new metro line in LA?
✓Q2: Any news on public transportation in LA?

los-anʒeles-ʃi	metro-s	axal-i	haz-i	**gauxvaniat**
LA-in	metro-GEN	new-NOM	line-NOM	construct.3PL.**IND.PST**

'They built a new metro line in Los Angeles, *I hear/infer*'.

- Evidential restriction: cannot address the QUD, therefore NAI

Discourse status of evidential claims VI

- QUD-definition
  - Ultimately pragmatic
  - Related to information structure (see also Velleman and Beaver 2016)
- AI-NAI status may change as the discourse changes
- Disavowals
  - Evidential restriction becomes at-issue
  - Such statements are regular assertions
  - Overall semantics of Ev ϕ: 1-person attitude reports (Korotkova 2016, 2019)

Discourse status of evidential claims VII

- Support: conventional triggers of NAI ban disavowals
  - Slifting parentheticals: always QUD-NAI (Anderbois et al. 2015; Koev 2018)
  - Discourse parentheticals: variable status (Simons 2007; Hunter 2016; Hunter and Asher 2016)

(13) a. #The Democrats won, **she claimed**, but I **know they lost**.

b. #The Democrats won, **she claimed**, but I **don't believe** it.

c. ✓The Democrats won, **she claimed**, but I 'm **not so sure**.

d. ✓**She claimed** that the Democrats won but I **don't believe** it.

Discourse status of evidential claims VIII

Methodological note:
At-issueness in a given language

- What constructions?
  - Mostly studied in well-known languages
- What means?
  - English: comma intonation
  - Yucatec Maya: topic marking (AnderBois 2016)
  - ...

Default endorsement I

- Recap: in many languages, REP ϕ indicates endorsement of ϕ unless cancelled by an explicit disavowal
- Previous approaches
  - Optional pragmatic shift to the reporter (Smirnova 2012; AnderBois 2014)
  - Collaborative principle (Faller 2019)

Default endorsement II

- Proposal: endorsement as a relevance implicature

(14) $\textsc{Rep}\ \phi \rightsquigarrow \phi \subseteq \text{Dox}_{sp,w}$
(speaker in root declaratives, more involved semantics for attitudes)

  - Cancellability: a hallmark of implicatures (since Sadock 1978)
  - Default: $\textsc{Rep}\ \phi$ not-at-issue, ϕ at-issue (=relevant to the QUD)
  - Only at-issue when endorsed

- Epistemically neutral?
  - Many speech reports: no indication of endorsement
  - What about neutral hearsay evidentiality?
  - Possibly: if the evidential restriction isn't NAI by default

Default endorsement III

Bottom line

Disavowals and default endorsement: interplay with at-issueness

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Variation in hearsay I

- Speech reports (Bary 2021; Bary and Maier 2021 a.o.)
  - Communicative verbs: *assert, claim, report, say* ... (Grimshaw 2015; Anand, Grimshaw, and Hacquard 2017)
  - Free Indirect Discourse (Banfield 1982; Eckardt 2014)
  - Quotation and direct Discourse (Capellen and Lepore 1997, 2003)
  - Mixed quotation (Maier 2014)
  - Reportative moods (Fabricius-Hansen and Sæbø 2004)
  - Role shift in Sign Languages (Davidson 2015)
  - ...
- Variation in hearsay
  - only expected
  - hearsay evidence is not a semantic primitive

Variation in hearsay II

- Recap: some hearsay evidentials require endorsement (pace AnderBois 2014)
  - Speech verbs may have a veracity entailment: *agree, be right* (Anand and Hacquard 2014)
  - Hearsay evidentials can be of the same nature

(15) a. I **agree** that Konstanz is lovely.
presupposes: Previous discourse with the content ϕ.
entails: $\phi \subseteq \text{Dox}_{sp,w}$

b. It is not the case that I **agree** that Konstanz is lovely.
presupposes: Previous discourse with the content ϕ.
doesn't entail: $\phi \subseteq \text{Dox}_{sp,w}$

Variation in hearsay III

- Recap: some hearsay evidentials indicate distancing
  - Speech reports aren't always neutral: e.g. *disagree*, mixed quotation
  - Another parallel: doxastic predicates ≈ 'falsely believe' (e.g. Tagalog *akala*, Kierstead 2013; Mandarin *yǐwéi*, Glass 2020 ...)
  - Possible analysis of distancing hearsay: preference component (cf. Anand and Hacquard 2013 on *doubt*)

(16) a. **Overt contradiction:**
"Extinct" pygmy elephants have been found living on Borneo.
(Maier 2014:29)

b. **Clear lack of endorsement:** [Jacobin embraces different values]
In a 2008 paper, [Warren] acknowledged that single-payer would be a preferable system but claimed it was **"politically unacceptable."**
(Jacobin)

Variation in hearsay IV

Bottom line

Variation in hearsay evidentiality: case of lexical variation in the domain of attitude predicates and speech reports

- Other instances of variation
  - Variation in hearsay: ability to relay speech acts (Korotkova 2017; AnderBois 2018)
  - Variation across the board: fine-grained distinctions in evidence types (see especially Krawczyk 2012)
- Presence of variation: indicative of semantic, rather than pragmatic, differences

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No variation in non-hearsay I

- Recap: non-hearsay evidentials ban disavowals

(3a) Georgian
Maria has red eyes, you think she was crying, later learn it was an allergy. [INFERENCE]

#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 true.'

- Previous explanations:
  - Rooted in linguistic properties
  - Only hearsay introduces another salient perspective

No variation in non-hearsay II

- Proposal: grammar reflects a fundamental property of inference
- Non-linguistic facts
  - Inference: always endorsement of the conclusion (deduction: necessarily true; abduction: the best explanation at the moment)
  - Abductive inference: defeasible, subject to belief revision (Koons 2017; Douven 2021)
  - Assumption: perception involves inference (cf. Lyons 2017)

No variation in non-hearsay III

- Linguistic facts (see Krawczyk 2012 on evidentials and reasoning; also Eckardt 2020 on German *wohl*)
  - Inferential expressions evaluated at t don't allow disavowals evaluated at t (=utterance time in root declaratives)
  - Only some inferential expressions allow temporal displacement
  - Many evidentials scope above tense, hence ban disavowals (see Matthewson and Hirayama 2019 on evidential-temporal interactions)

(17) a. #I **infer/conjecture/guess/assume** that there is water on Mars but I **don't believe** it.

b. ✓I **inferred/conjectured/guessed/assumed** that there is water on Mars but I **don't believe** it (anymore).

No variation in non-hearsay IV

Bottom line

Obligatory endorsement with non-hearsay is not a random fact of grammar

No variation in non-hearsay V

Taking stock

1. Account of disavowals ✓
2. Principled explanation of non-hearsay ✓
3. Space for variation in hearsay ✓

- Bonus: agnostic about the modal vs. illocutionary debate

- This talk
  - The landscape of endorsement with evidentials
  - Survey of existing analytical options
  - Novel proposal for disavowals and default endorsement
- More research
  - What kind of speech reports are hearsay evidentials?
  - How much more variation?
- Pipeline
  - Volume on evidence in language in JoP (Bary & Korotkova in prep)

Thank you!

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Appendix 1: The pattern in attitudes

Semantics vs. pragmatics I

- Disavowals with evidentials: likened to Moore's paradox

(18) #It is raining, but I don't believe it.

- Moore's paradox: linked to assertion, typically analyzed as a pragmatic phenomenon (Stalnaker 2000; Williamson 2000; Lawlor and Perry 2008; see also Mandelkern 2019 on another type of speech-acty infelicity)

(19) ✓Suppose it's raining and that you don't believe it.

- Some other infelicities: do not resolve in embedded environments, are due to semantics (point made originally by Yalcin 2007 on epistemics; cf. a remark in Murray 2017:23-24 on evidentials)

Semantics vs. pragmatics II

- Evidentials in attitudinal environments
  - The evidence, and endorsement, holder shifts to the attitude holder (Korotkova 2015, 2016, 2019)
  - The endorsement pattern reproduced

(20) ✓Lisa zegt [dat het **schijnt** te sneeuwen,] Dutch
Lisa say.3SG.PRES [COMP it **REP.3SG.PRES** to snow.INF]
maar ze **gelooft** het **niet**.
but she **believe.3SG.PRES** that **NEG**
'Lisa says it snowed, as she heard, but she **doesn't believe** it.'

(21) #Lisa [LA'ye kar yağ-**mış**] de-di Turkish
Lisa [LA.DAT snow rain-**IND**] say-PST
ama kar yağ-dıg-ın-a ınan-mı-yor.
but snow rain-NMLZ-3SG.POSS-DAT **believe-NEG-PROG**
Intended: ≈'Lisa says that it **apparently** snowed in LA but she **doesn't believe** that it snowed.'

Semantics vs. pragmatics III

Methodological note:
Evidentials can be excluded from clausal complements for syntactic reasons (Korotkova 2021a)

- Testing under *say*/*think*/*believe* impossible
- Semantic substitutes without syntactic confounds
  - *according to X* (Kaufmann and Kaufmann 2020)
  - *in X's opinion*
  - other clause-mate intensional operators (von Fintel and Heim 2011)

(22) a. **According to this book**, the pro-gun argument is built on myth.
(Corpus of Contemporary American English)

b. **According to this book**, the pro-gun argument is **presumably** built on myth.

Appendix 2: Modal views

Disavowals in Kratzerian semantics I

1. Hearsay evidentials: vanilla epistemic modals (see Korotkova 2021b for proof of concept)
   - Kratzer 1991: incorrect predictions for *must* and *might* (Yalcin 2007)
   - Izvorski (1997): correct predictions for hearsay
   - w: possibly not in the quantifier domain, hence not a ϕ-world

(23) $[\![\text{REP } \phi]\!]^{c,w} = 1$ iff for all of the **most normal** worlds w' compatible with what is known in w, $\phi(w')$.

$[\![\text{REP } \phi]\!]^{c,w,f,g} = \forall w' \in \ max_{g_{st}(w)} \cap f_{ep}(w)\ [\phi(w')]$,
defined if $\exists q \subseteq f_{ep}(w)$ such that q is hearsay evidence for ϕ in w,
where $f_{ep}(w) = \{\ z \mid z$ is known in $w\ \}$ (a classic epistemic modal base),
where $\cap f_{ep}(w) = \{\ u \mid \forall z \in f_{ep}(w).u \in z\ \}$
(a set of worlds accessible from w in which the propositions in $f_{ep}(w)$ are true),
where $g_{st}(w) = \{q \mid q$ is normal in $w\}$ (a stereotypical ordering source),
where $\forall u, v : v <_{g(w)} u$ iff $\{q \mid q \in g(w) \wedge u \in q\} \subset \{q \mid q \in g(w) \wedge v \in q\}\}$
and where $max_{g_{st}(w)}(\cap f_{ep}(w)) = \{w' \in \cap f_{ep}(w) \mid \neg\exists v \in \cap f_{ep}(w).v <_{g_{st}(w)} w'\}$.

(adapted from Izvorski 1997:230)

Disavowals in Kratzerian semantics II

2. Hearsay evidentials: informational modals (Faller 2011; Kratzer 2012)
   - Quantify over contents of reports (Hintikkan semantics for *say*)
   - w: possibly not in the quantifier domain, hence not a ϕ-world

(24) $[\![\text{Rep } \phi]\!]^{c,w} = 1$ iff $\forall w'$ such that w' is compatible with what was said in w, $\phi(w')$.

$[\![\text{Rep } \phi]\!]^{c,w,f,g} = \forall w' \in \cap f_{inf}(w)\ [\phi(w')]$,
where $f_{inf}(w) = \{ z \mid z \text{ is said in } w \}$ (an informational modal base),
and where $\cap f_{inf}(w) = \{ u \mid \forall z \in f_{inf}(w). u \in z \}$

(a set of worlds accessible from w in which the propositions in $f_{inf}(w)$ are true).

(adapted from Kratzer 2012)

Disavowals in Kratzerian semantics III

3. Hearsay evidentials: non-autocentric modals (McCready and Ogata 2007; Smirnova 2012)
   - Quantify over doxastic/epistemic alternatives of a third party (=the reporter)
   - Such proposals have been made independently for *must* and *might* (Egan et al. 2005; Stephenson 2007; MacFarlane 2014)
   - Relativism problematic for evidentiality (Korotkova 2016, 2019)

(25) $[\![\text{Rep } \phi]\!]^{c,w} = 1$ iff $\lambda x.\forall w' \in Dox_{x,w}, \phi(w') \ \wedge \ x \neq$ the speaker.

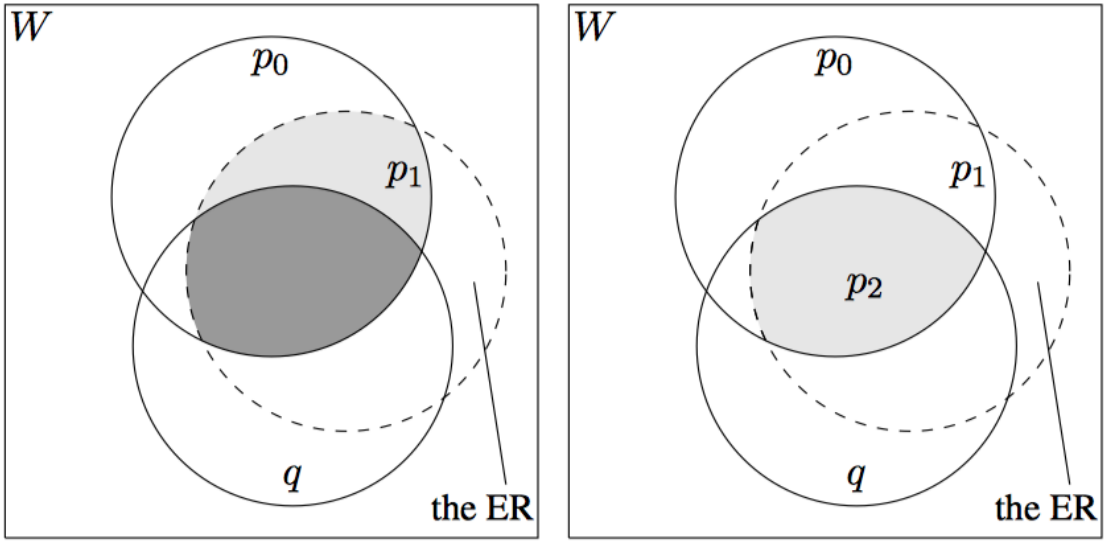
$[\![\text{Rep } \phi]\!]^{c,\langle w,j\rangle,f,g} = \forall w'$ compatible with what j knows in w, $\phi(w')$,
defined if $\exists q \subseteq f_{ep}(w)$ such that q is indirect evidence for ϕ in w.

(based on Stephenson 2007:502)

Appendix 3: Illocutionary views

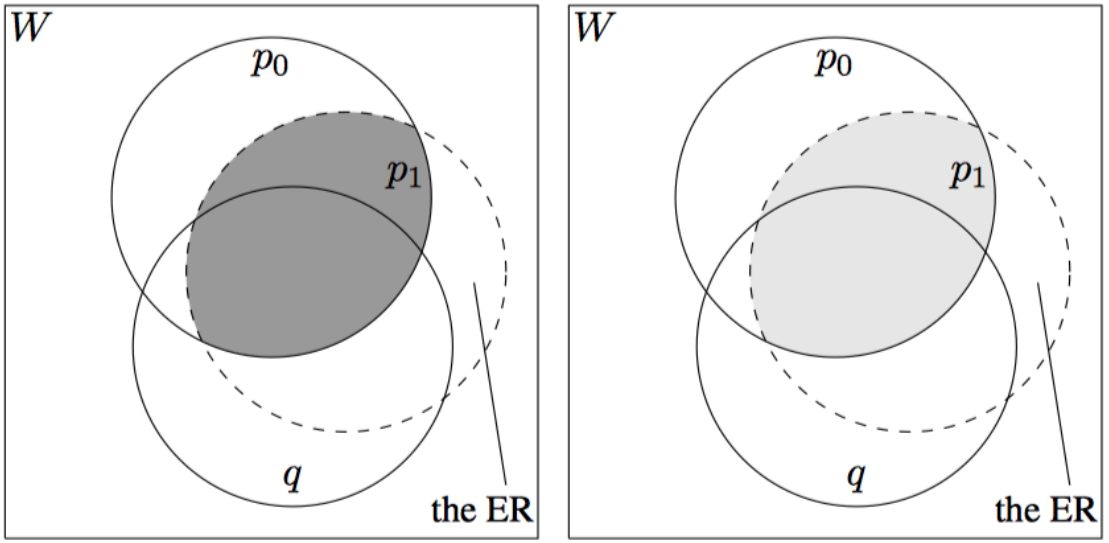
Hearsay as hedging: Murray 2010, 2014, 2017 I

- Some evidentials assert p
  - introduction of a discourse referent for ϕ
  - proposal to add ϕ to the common ground
  - reduction of the common ground to ϕ-worlds if proposal accepted



Hearsay as hedging: Murray 2010, 2014, 2017 II

- Some evidentials present ϕ
  - introduction of a discourse referent for ϕ
  - common ground not reduced to ϕ-worlds
  - disavowals possible
- A straightforward account of other phenomena under the "hegde" umbrella (cf. Simons 2007; McCready 2015; Koev 2019; Benton and von Elswyk 2020)



Perspectival 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)

(26) *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 (Mitchell 1986 and much later work)

Perspectival 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