

Diagnosing the semantic status of evidentials

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Agenda

- 1 In-depth discussion of the formal mechanisms that govern the use of evidentials focusing on ...
- 2 The modal and the illocutionary family of approaches
 - motivated by superficially different cross-linguistic data
 - make in fact very similar predictions
- 3 New diagnostics that distinguish between alternative approaches

Warning

- 1 no new data!
- 2 no positive proposal!

Evidentiality I

Signals the source of the semantically determined information conveyed by an utterance (Chafe and Nichols 1986; Aikhenvald 2004)

English: lexical means, e.g. *seem* or adverbials

- (1) Threatened by climate change, Florida **reportedly** bans term 'climate change'.
Washington Post

Many other languages: dedicated grammatical means (verbal morphology, clitics, particles, ...) to talk about information source:

DIRECT	INDIRECT	
<ul style="list-style-type: none"> ● visual ● auditory ● other sensory 	INFERENCE <ul style="list-style-type: none"> ● reasoning ● results 	HEARSAY <ul style="list-style-type: none"> ● secondhand ● thirdhand ● folklore

(Willett (1988) based on a 32-language sample)

Evidentiality II

(2) Cuzco Quechua (Quechuan)

a. *Para-sha-n=mi.* [PERCEPTION]

rain-PROG-3=**DIR**

'It is raining, *I see*.'

b. *Para-sha-n=si.* [HEARSAY]

rain-PROG-3=**REP**

'It is raining, *I hear*.'

c. *Para-sha-n=chá.* [CONJECTURE]

rain-PROG-3=**CONJ**

'It must be raining, *I gather*.'

Scope proposition: 'It is raining' (adapted from Faller 2002: 3, ex.2a-c)

Evidential Requirement (ER): semantic contribution of evidentials

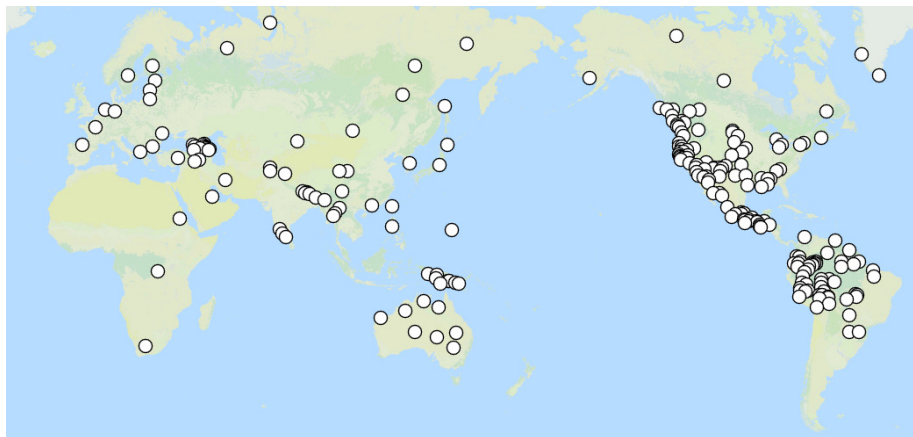
● firsthand = *mi* (2a)

● hearsay = *si* (2b)

● inference = *chá* (2c)

Types of category I

Focus in typology: grammatical evidentials, present in 237 out of 414 languages surveyed by de Haan (2013b)



(from the World Atlas of Language Structures (WALS) Online (de Haan 2013b,a))

Types of category II

- Aikhenvald's (2004)'s criteria (see (Boye 2010) on the validity):
 - obligatory use
 - encoding information source should be the primary function
- Formal semantic studies also suffer from category-centrism

But Semantic categories don't always map onto morphosyntax, see e.g. (Bittner 2014) on temporality in languages with and without tense

- Evidentiality across categories: highly understudied
 - adverbials such as *allegedly* (see (Krawczyk 2012) on English; (Matthewson 2012) on St'át'imcets *lákw7a*)
 - adjectives such as *alleged*
 - copy-raising constructions such as *looks like* (see (Rett et al. 2013; Winans et al. 2015) on English; (Asudeh and Toivonen 2012) on English and Swedish; (de Haan 2000; Koring 2013) on Dutch)
 - parentheticals (Reinhart 1983; Rooryck 2001; Simons 2007)
 - Moulton's (2009) infinitives
 - ...

Existing approaches

Views on evidentiality within formal semantics gravitate towards one of the landmarks:

- ① An (Izvorski 1997)-style **modal analysis**: evidential markers are treated as epistemic modals within the Kratzerian framework
- ② A (Faller 2002)-style **illocutionary analysis**: evidential markers are treated as interacting with the structure of speech acts

Modal approaches I

- First introduced by Izvorski (1997) for Bulgarian (South Slavic)
- Point of departure: similarities between (a) Bulgarian evidential perfect and (b) English *must* and *might*
- Analysis: vanilla epistemic modal plus an indirect evidence presupposition

NB Formalization of the long-standing typological tradition that treats evidentiality as a sub-category of epistemic modality (Bybee 1985; Palmer 1986; van der Auwera and Plungian 1998)

Modal approaches II

- Similarly-spirited approaches to evidentials: German *sollen* (Ehrich 2001; Faller 2007, 2012); Japanese (McCready and Ogata 2007); Korean (Lee 2013); St'át'imcets (Matthewson, Davis, and Rullman 2007; Matthewson 2012); Tibetan (Garrett 2001); Cuzco Quechua (Faller 2011)
- Further reinforcement of the connection between the two categories: evidential component of the epistemic *must* (von Stechow and Gillies 2010; Lassiter 2016)

Illocutionary approaches

- First introduced by Faller (2002) for Cuzco Quechua (Quechuan)
- Point of departure: dissimilarities between (a) Quechua evidential enclitics =*mi*, =*si* and =*chá*, and (b) English modal auxiliaries
- Analysis: Cuzco Quechua evidentials operate at a level higher than proposition and modify sincerity conditions
- Later work: Murray (2010, 2014) on Cheyenne (further adopted by Koev (2016) for Bulgarian), similar data and predictions
- Insights are easy to reformulate within other approaches to speech acts, e.g. commitments instead of sincerity conditions; see e.g. (Northrup 2014)

NB Long-standing tradition (dating back to Lyons 1977) to treat epistemics as dealing with speech acts

- ① The **dichotomy view** (Faller 2007; Matthewson et al. 2007):
 - evidentiality is semantically heterogeneous
 - some evidentials are modal, some illocutionary
- ② The **modal view** (Matthewson's recent work; Matthewson 2012)
 - evidentiality is semantically homogeneous
 - all evidentials are modal
- ③ From a purely combinatorial perspective, the not attested illocutionary view

- The illocutionary approach to evidentials in individual languages, and the dichotomy view on cross-linguistic variation, emerged as a response to the dominant modal view
- Let's review the diagnostics!

Why current diagnostics don't work

Motivation for the illocutionary view and for the dichotomy

Cuzco Quechua evidentials ...

- Wide scope wrt clause-mate operators: tense, negation, conditionals
- Non-embeddability: banned from attitude reports and conditional antecedents
- Evidential contradictions: hearsay =*si* gives rise to interpretations such that the speaker is agnostic about, or overtly disagrees with, the truth of the scope proposition

The pattern and proposed solution

- Facts
 - Some languages (e.g. Quechua): evidentials take obligatory wide scope wrt to clause-mate operators
 - Some other languages (e.g. Japanese, German): evidentials allow narrow scope
- Predictions (Faller 2007; McCready and Ogata 2007):
 - Modal evidentials are supposed to allow narrow scope construals
 - Illocutionary evidentials are expected to only take wide scope
- Assumptions:
 - speech acts are scopally inert (not a given; cf. Krifka 2014, 2015)
 - epistemics are not

Criticism

- Parameterizing scopal behavior does not require postulating different semantic categories
- Case in point: modals and negation (de Haan 1997; Iatridou and Zeijlstra 2009, 2013; Yanovich 2013)

- (3)
- a. English deontic *must*: always above \neg
 - b. English *have to*: always below \neg
 - c. French *devoir*: both construals

The bottom line

Scopal behavior is not instrumental in resolving the modal-illocutionary debate

The pattern and proposed solution

- Epistemics: embeddable (though not under all attitude predicates; Hacquard and Wellwood 2012; Anand and Hacquard 2013)
- Some languages (Georgian, Turkish, St'át'imcets, Tagalog, ...): evidentials allowed in attitudinal complements

(4) ✓_{[CP ... attitude verb ... [CP ... Ev ... p ...]]}

- Some other languages (Abkhaz, Cheyenne, Quechuan, Tariana, ...): evidentials banned from attitudinal complements

(5) #_{[CP ... attitude verb ... [CP ... Ev ... p ...]]}

- Embedding behavior is taken to be indicative of semantics (Faller 2002, 2007; Garrett 2001; Matthewson et al. 2007; Matthewson 2012; Murray 2010, 2016); highly controversial (e.g. syntactic embeddability often confused with interpretational differences)

Non-semantic alternative (Korotkova 2016b)

- Languages with non-embeddable evidentials lack finite embedding
- Embeddability of evidentials depends on their morphosyntactic category and on the availability of suitable embedders
- Case in point: Turkish *miş*

(6) a. embeddable in tensed clauses:

✓ *Natasha* [*dün kar yağ-miş*] *söylü-yor*
 Natasha [yesterday snow precipitate-MIŞ] say-PROG
 'Natasha says that *allegedly* it snowed yesterday.'

b. non-embeddable in nominalizations:

**Natasha* [*dün kar yağ-dığ-ın-ı-miş*
 Natasha [yesterday snow precipitate-NFUT.NMLZ-3S.POSS-ACC-MIŞ
 / *yağ-miş-dığ-ın-ı*] *söylü-yor*
 / precipitate-MIŞ-NFUT.NMLZ-3S.POSS-ACC] say-PROG
 Intended: 'Natasha says that *allegedly* it snowed yesterday.'

The bottom line

Embedding behavior is not instrumental in resolving the modal-illocutionary debate

The pattern

- Hearsay markers (most, if not all; AnderBois 2014):

$$\checkmark [\text{Evp}] \wedge [\neg p]$$

(7) Georgian

Hearsay context: There is a report that California legalized marijuana.

\checkmark kalifornia-s k'anonier-i **gauxdia** marihuan-is
 California-DAT legal-NOM make.3SG:S.3SG:0.**IND:PST** marijuana-GEN
 gamoq'eneba, da es ar aris martal-i.
 usage.NOM but it.NOM NEG be.3SG:S.PRES true-NOM
 'California legalized marijuana, I hear, but that's not true'.

- Epistemics: $\# [\text{must } p] \wedge [\neg p]$

(8) $\#$ There must be water on Mars. But there is no water on Mars.

An illocutionary analysis (Faller 2002; Murray 2010, 2014)

- Speech acts with hearsay evidentials are not assertions (= there is no proposal to add p to the common ground)
- Hearsay evidentials and *must* belong to different semantic categories
- But:
 - even if (some) hearsay markers require an illocutionary analysis, why should other evidentials from the same language be assigned the same semantics?
 - semantics doesn't have to map onto morphosyntax, cf. the morphosyntactic vs. semantic behavior of future (Winans 2016 and references therein)

A modal analysis

- Hearsay evidentials are non-epistemic modals (Ehrich 2001; Faller 2011; Kratzer 2012; Matthewson 2012): e.g. a non-realistic modal base will include non- p worlds (cf. the Hintikka semantics for 'say')
- Moreover ...
 - as Yalcin (2007) points out, the standard Kratzerian semantics predicts the availability of epistemic contradictions (as well as many weak theories of *must*; see Lassiter 2016)
 - Izvorski's (1997) original proposal handles evidential contradictions

The bottom line

Evidential contradictions are not instrumental in resolving the modal-illocutionary debate

Revisiting motivation for the illocutionary view and for the dichotomy

- Wide scope wrt clause-mate operators
- Non-embeddability in attitudes
- Evidential contradictions with hearsay markers

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Revisiting motivation for the illocutionary view and for the dichotomy

- Wide scope wrt clause-mate operators
scopal variability \neq semantic variation
- Non-embeddability in attitudes
morphosyntactic variation \neq semantic variation
- Evidential contradictions with hearsay markers
can be handled by either theory

Summary

- Each family handles the known facts relatively well
- No knock-down arguments for either of them

Additionally, **semantic** heterogeneity is overrated (Korotkova 2016b): evidentials exhibit previously unnoticed uniformity across a range of environments (dialogues, attitudes, questions)

Special cases

- Sometimes hearsay markers can be used to relay speech acts made by other parties, e.g. questions in Quechua (Faller 2002) and imperatives in Tagalog (Schwager 2010)
- The semantic and pragmatic contribution of these readings is debated (Thomas 2014; AnderBois 2017; Korotkova 2017)
- It is possible that they are best analyzed akin to quotative particles

Routes to reconciliation

Recap

- No evidence for genuinely semantic variation
- The lack of variation does not resolve the modal-illocutionary debate
- Current debate does not provide adequate empirical diagnostics that would uniquely identify modal or illocutionary evidentials
 - natural classes are poorly defined
 - the properties of natural classes and the properties of the formalism are often conflated

An empirical strategy

Faller's (2002) point of departure

Comparison with English *must* and *might*

But risk of mistaking syntax for semantics: not all properties of English modal auxiliaries are due to semantics, and not all are even shared by their relatives across Germanic

But modal auxiliaries lack certain semantic properties that other epistemic elements have: e.g. gradability, cf. modal adjectives such as *probable* (Lassiter 2011, 2017) and lexical expressions such as *70% chance that* (Swanson 2011)

A theoretical strategy

Matthewson's (2012) point of departure

Probe whether the semantics of an element can be formulated within the Kratzerian apparatus

But the framework accommodates many phenomena dealing with intensional quantification; classifying evidentials as modal based on this criterion is akin to classifying attitude verbs as modal (see e.g. (Hacquard 2013) for discussion)

But the jury is still out for the right semantics for English *must*, see never-ending work in philosophy of language

Assessment-sensitivity (see (MacFarlane 2014) for an overview)

- Epistemic modals across morphosyntactic categories are not always about the speaker's exclusive knowledge (even in root declaratives)
- Helpful analogy (Weatherson and Egan 2011): the epistemic authority resembles the referent of *we*

(9) Faultless disagreement (though see Knobe and Yalcin 2014)

Context: Everyone present acknowledges that Joe might be in Berkeley. No one thinks there are going to be grounds to assert that he is in Boston. The point of conversation is to settle whether he might be in Boston.

A. Joe **might** be in Boston.

B. That's wrong.

(i). = \neg 'Joe might be in Boston'. **disagreement about $\diamond p$**

(ii). \neq \neg 'Joe is in Boston'. **disagreement about p**

(adapted from MacFarlane 2011: 148)

Disagreement with evidentials I

- Some types of disagreement are widely discussed, such as the inability of the interlocutor to challenge the **speaker's** having evidence (see Korotkova (2016a) and references therein)
- Matthewson et al. (2007): quantificational force of evidential statements may be disagreed with
- This is yet another type: do evidentials allow addressee-oriented or 'communal' readings in root declaratives?

Disagreement with evidentials II

(10) Georgian

A. *tovl-i mosula*
 snow-NOM come.IND.PST
 'It snowed, I hear/infer.'

B. *es ar aris martal-i*
 it.NOM NEG be.3SG:S.PRES true-NOM
 'That's not true.'

(i) = 'It is not the case that it snowed'

(ii) ≠ 'It is not the case that you heard/infer that it snowed'.

(iii) ≠ 'Given what I hear/infer, it didn't snow'. [ADDRESSEE-ORIENTED]

(iv) ≠ 'Given what we all hear/infer, it didn't snow'. [COMMUNAL-ORIENTED]

- Evidentials in root declaratives are always *I*-statements
- But what about the evidential component of epistemics?

- Lack of tools that would diagnose illocutionary evidentials:
 - still little understanding of the repertoire of speech act modification in natural language
 - no sound non-negative procedure that would identify a speech act modifier
 - many properties that initially motivated the illocutionary analysis can be reformulated without making reference to speech acts
- Solution: an overlooked distinction between **private beliefs** and **discourse commitments**

Conditional endorsement I

Guiding parallel: research on imperatives

- Kaufmann (2012): a deontic analysis of imperatives
- Lauer and Condoravdi (2016): only imperatives require endorsement

(11) *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.

(Lauer and Condoravdi 2016: ex.30)

Conditional endorsement II

Guiding parallel: research on imperatives

- Kaufmann (2012): a deontic analysis of imperatives
- Lauer and Condoravdi (2016): only imperatives require endorsement

(12) *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.

(Lauer and Condoravdi 2016: ex.31)

This talk

- Long-overdue discussion of the theories of evidentiality
- The current debate on the semantic status of evidentials lacks formally-explicit tools that would differentiate between the existing approaches
- New theory-neutral diagnostics that may resolve the debate
- ...future research will determine if they work

Thank you!

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