

The subjective heart of evidentiality

Evidentials across languages share the following properties: (i) resistance to denials in dialogues, (ii) obligatory *de se* construal in attitudes, and (iii) lack of speaker-oriented interpretations in canonical information-seeking questions. Those patterns have been previously viewed as unrelated. I propose that they are rooted in subjectivity and develop a novel account of evidentials as self-ascriptions of a mental state that derives the linguistic behavior of evidentials from the interaction of their semantics and the properties of cognitive processes they describe. The claims are based on firsthand data from Bulgarian, German, Japanese, Turkish; each pattern holds for all four languages, but only one example per pattern is given below for the sake of space.

1. A subjective account of evidentiality It is widely agreed in philosophy that self-knowledge—knowledge of one’s mental states—is special (Gertler 2011). The way we know are own perceptual experiences, beliefs, or desires is different from how we know other things in the world. I will call linguistic expressions that denote self-knowledge *subjective*. Subjective language includes explicit self-attributions (*I am delighted, I am in pain* etc). Furthermore, grammar can conceptualize self-knowledge in a special way, cf. experiencer predicates in Japanese or egophoric agreement across Tibeto-Burman. I argue that evidentials, too, are subjective. I propose that evidentials across evidence types (direct, inference, hearsay) denote a form of reasoning (cf. Krawczyk 2012) and attribute to them a semantics of first-person mental states (1,2). Reasoning is treated as a Hintikkan propositional attitude that quantifies over world-event pairs, where events provide an individual and a time. Informally, an evidential describes the mental state of having reasoned about particular evidence, with a set of indices being the content of that mental state—a conclusion of the reasoning process.

(1) **Inferential evidentials**

$\llbracket \text{EV}_{\text{INF}} \rrbracket^{c,(e,w),g} = \lambda p. \forall \langle e', w' \rangle \in \text{REASON-INF}_{\text{Lx.Holder}(x,e),w} : [p(e')(w')]$,
where $\text{REASON-INF}_{\text{Lx.Holder}(x,e),w} = \{ \langle e', w' \rangle \mid \langle e', w' \rangle \text{ is compatible with what } \text{Lx.Holder}(x,e) \text{ reasons based on inference in } w \text{ at } e \text{ that } \text{Lx.Holder}(x,e) \text{ is } \text{Ly.Holder}(y,e') \text{ in } w' \text{ at } e' \}$

(2) **Hearsay evidentials**

$\llbracket \text{EV}_{\text{REP}} \rrbracket^{c,(e,w),g} = \lambda p. \lambda e. \lambda w. \forall \langle e', w' \rangle \in \text{REASON-HEAR}_{\text{Lx.Holder}(x,e),w} : [p(e')(w')]$,
where $\text{REASON-HEAR}_{\text{Lx.Holder}(x,e),w} = \{ \langle e', w' \rangle \mid \langle e', w' \rangle \text{ is compatible with what } \text{Lx.Holder}(x,e) \text{ reasons based on hearsay in } w \text{ at } e \text{ that } \text{Lx.Holder}(x,e) \text{ is } \text{Ly.Holder}(y,e') \text{ in } w' \text{ at } e' \}$

Most other approaches to evidentiality have a first-person component and are thus indexical. However, indexical expressions do not always describe privileged information: statements such as *I am in London*, unlike *I am in pain*, are objective. The novelty of my account is the addition of the mental state component, which in combination with the first-person component makes evidentials subjective.

2. Dialogues Evidentials across languages resist direct denials of the form *That’s not true* (Murray 2017): denial targets the predjacent, but not the speaker’s evidence (3b). This property is a hallmark of e.g. apositives (4b), and evidentials are often analyzed as contributing a type of not-at-issue content (Murray 2017). I show that evidentials, unlike other not-at-issue inferences, resist all kinds of denials: apositives (4c), but not evidentials (3c), can be targeted by indirect denials (non-evidential examples are in English for reasons of space).

- (3) a. TURKISH
Kaliforniya otu yasallaştır-**miş**
California weed legalize-**IND**
'California legalized marijuana, *I hear/infer.*'
b. That’s not true. = CA didn’t legalize
≠ You don’t have evidence.
c. You’re mistaken. = CA didn’t legalize
≠ You don’t have evidence.
- (4) a. California, the largest state, legalized marijuana.
b. That’s not true. = CA didn’t legalize. ≠ CA isn’t the largest state.
c. You’re mistaken. = CA didn’t legalize. = CA isn’t the largest state. (especially with a clarification)

The infelicity of (3c) is not explained in non-subjective accounts, but follows naturally from my proposal. Self-knowledge is typically immune to correction because of its special epistemic status—a third party has no access to it. As a result, subjective expressions resist denials across the board, as in (5) (cf. Bar-On 2004).

- (5) a. I have a headache. / I want to go on vacation. / I hope that Trump wins. b. #That’s not true. c. #You’re mistaken.

3. Attitudes It is often noted that evidentials shift to the attitude holder in attitude environments. This fact alone does not constrain the theory: world-sensitive elements in the main predicate position are always affected by intensional quantification (Percus 2000). As (6) shows, evidentials in attitudes require awareness on part of the evidence holder and cannot be read *de re*. This novel fact has no account in the previous literature.

(6) ✓ *Context 1: Alexis was playing an escape room with a team. One of the team members told her that the clue was in the left corner and she describes the situation to me.*

#*Context 2: Alexis and I are watching a muted video of a team of people in an escape room. After talking to a team member, one person suddenly rushes to a far left corner. Alexis thinks that that person was told that a clue is in that corner, and says so to me. What she doesn't realize is that this person is herself.*

Alexis glaubt, dass der Hinweis auf der linke Seite sein **soll**. [GERMAN]

Alexis thinks COMP DEF clue on DEF left side be **REP**

'Alexis thinks that she was told that the clue was in the left corner.'

Awareness is the signature of attitudes *de se* (Lewis 1979). A number of linguistic expressions can only occur in such attitudes, and the obligatory *de se* construal needs to be derived semantically (cf. Anand 2006; Pearson 2018), something that previous accounts of evidentiality do not accomplish. To account for *de se*, I adopt an analysis along the lines of *de se* binding (Chierchia 1989), with evidentials relativized to a *de se* event. The unique holder of this event is the individual the attitude holder identifies with.

(7) [[Alexis thinks [*sollen* [the clue is in the left corner]]]]^{c,(e,w),g}

= 1 iff $\forall \langle e', w' \rangle \in \text{DOX}_{\text{Alexis}, w} : [\forall w'' \in \text{REASON-HEAR}_{\text{Lx.Holder}(x, e'), w'} : [\text{the clue is in the left corner in } w'']]]$

4. Questions Evidentials in canonical questions shift to the addressee (see discussion in Murray 2017).

✓ *Context 1 (addressee-oriented): Kit and I are hiking in the bear country and see fresh tracks. I am clueless about such things, but Kit recently took a wilderness class and has better judgment. I ask:*

#*Context 2 (speaker-oriented): Kit and I are hiking in the bear country and see fresh tracks. Kit is clueless about such things, but I recently took a wilderness class and can recognize a bear's tracks. I then forget what I say and ask:*

(8) BULGARIAN 'Did a bear pass here?'

Mečka li e mina-**I**-a ottuk? ✓ADDRESSEE-ORIENTED: given what you infer

bear Q be.3SG.PRES pass-**IND**-F from.here #SPEAKER-ORIENTED: given what I infer

Current theories attribute the shift to an obligatory grammatical mechanism (e.g. Speas and Tenny 2003; Lim 2010). I argue that speaker-oriented interpretations are not attested due to the subjectivity of evidentials and the pragmatics of canonical information-seeking questions. The speech act of questioning requires the speaker's ignorance about the answer (Hintikka 1962; Searle 1969). In the account I advocate, the evidence holder has the highest epistemic authority over their evidence and other parties have no access to it. To this end, a question about one's own evidence cannot be a sincere inquiry for information. The proposed account further predicts that evidentials may, after all, be speaker-oriented in those non-canonical questions that do not require the speaker's ignorance. The prediction is borne out for e.g. exam questions (where the speaker knows the answer) and biased questions (where the speaker has a hunch about the answer) (9, also from Bulgarian). Approaches that hard-wire the shift to the syntax/semantics of evidentials do not predict the pattern.

(9) a. BIASED QUESTION

Ortcutt e špionin nali?

Ortcutt be.3SG.PRES spy BIAS

'Isn't Ortcutt a spy?'

b. BIASED QUESTION WITH AN EVIDENTIAL

Ortcutt bi-**I** špionin nali?

Ortcutt be-**IND** spy BIAS

≈ 'Ortcutt is a spy, I heard. Is that true?'

Conclusions I have argued that evidentials share a subjective core that is responsible for of their interpretations across a range environments. The proposed account explains cross-linguistically robust patterns in a unified fashion and places evidentials in a larger context of subjective expressions. By deriving the universals in the evidential domain from non-linguistic properties of self-knowledge, this approach makes a necessary first step towards a better understanding of cognitive underpinnings of evidence in language.