

Languages vary in whether evidentials can be syntactically embedded under attitude verbs. The current view attributes non-embeddability to the semantics of respective markers: their illocutionary nature. I argue against such view and propose a theory wherein speech acts with evidentials can be embedded. I further propose that (non-)embeddability of evidentials depends on two factors: the embedding strategy and the embedder.

**1. The empirical landscape.** Some languages do not allow evidentials under attitude predicates, e.g. Cheyenne (Murray 2010), Korean (Lim 2010) (but see Lee 2013) or Cuzco Quechua (CQ) (Faller 2002), exemplified below. Normally, CQ evidential enclitics attach to any phrase. In (1) direct *-mi* is banned inside the nominalised embedded clause and can only appear on its edge, being syntactic part of the main clause:

(1) Marya ni-wa-rqa-n    Pilar-(\*mi) chayamu-sqa-n-ta-mi

Marya say-1O-PST1-3 Pilar    arrive-PST2-3-ACC-DIR

$p$  = ‘Marya told me that Pilar arrived’. *Speaker has direct evidence that  $p$ .* (Faller 2002, p. 222, ex.183a)

Some languages allow evidentials under attitude predicates, e.g. Georgian (Boeder 2000), German (*sollen*, Schenner 2010), St’át’imcets (Matthewson et al. 2008), Tibetan (Garrett 2001), Turkish (Şener 2011).

**2. The common view.** The distinction between embeddable vs. non-embeddable evidentials is often regarded as a reflex of the general distinction between two classes of evidentials (Faller 2002, 2006; Matthewson et al. 2008): those that operate at the propositional level (treated as epistemic modals) and those that operate at the speech act level (= illocutionary). Most empirical tests that distinguish between the two classes give controversial results (Matthewson 2012). As an unmistakable diagnostic of illocutionary evidentials, I will use the ability to report speech acts performed by a third party (suggested by Faller (2002, 2006) for CQ): (1) questions in CQ, which can be rendered by the English ‘I heard someone asking you whether  $p$ ’; (2) imperatives in Mbyá, roughly equivalent to ‘I heard someone directing you to do  $p$ ’. (Epistemic) modals do not behave this way, which undermines Matthewson (2012)’s claims that all evidentials are modal. So, non-embeddability is often viewed as a trait of illocutionary evidentials. If speech acts only correspond to root clauses and illocutionary evidentials modify speech acts, we expect such evidentials to be non-embeddable. This view predicts a one-to-one mapping between illocutionary evidentials and non-embeddable evidentials. However, there are counter-examples: (1) Korean: non-embeddable, non-illocutionary (rather temporal or modal, Lee 2013), (2) Mbyá: embeddable, illocutionary (Thomas forth.).

**3. Proposal.** I propose to reimplement Faller (2002)’s semantics for evidentials within Krifka (forth.)’s framework (based on Szabolcsi 1982), wherein speech acts can be arguments to connectives and attitude predicates.

**3.1. The formalism.** Speech acts involve a change of states: from one where certain commitments between interlocutors do not hold to one where they hold. This change is recorded as the change in indices, where index is a time-world point. Domain of indices  $I$  is ordered by a relation of precedence  $\leq$  that is transitive, reflexive and left-linear. This generates a tree of indices where each index is the root of an option space that represents the future. Speech acts update the context so that the utterance index  $c_t$  moves forward in its option space. Index change is defined via *index incrementation* with a certain illocutionary condition  $F$  and is an instruction to find the closest index  $i'$  such that  $i \leq i'$  and that  $F$  is true of  $i'$  (after Thomas (forth.), who provides another empirical application of this formalism, I assume that time is discrete). Conditions on commitments are recorded with the help of illocutionary operators, which are defined in terms of illocutionary predicates, e.g. *Assert* for assertions. We define Speech Act Potential (SAP, an element that can be used to perform a speech act in a context) as a function that maps speaker  $x$ , addressee  $y$  and an index  $i$  to an index  $i'$  that increments  $i$  with a specific condition on commitments of  $x$  and  $y$ . A speech act is an update of the common ground with a speech act potential. The illocutionary operator responsible for assertions is defined in (2). I depart from Krifka in that I add the definedness condition that the speaker believes  $p$ . It functions as a standard sincerity condition associated with plain assertions in speech act theory (Vanderveken 1990):

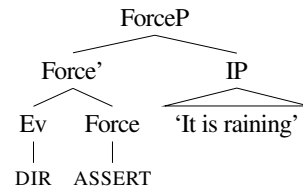
(2) a.  $\llbracket \text{ASSERT} \rrbracket^{M,g} = \lambda p. \lambda x. \lambda y. \lambda i. \lambda i' [ \text{Believe}(p)(x)(i) \cdot i \leq i' [ \text{Assert}(p)(x)(y)(i') ] ]$

b. *Assert*( $p$ )( $x$ )( $y$ )( $i$ ) is true iff in  $i$ ,  $x$  is taking up assertive commitments towards  $y$  with respect to  $p$

**3.2. Semantics for evidentials.** Illocutionary operators head ForceP (after Rizzi 1997) and are functions from propositions to speech act potentials. In the spirit of (Faller 2002), I analyse evidential markers as SAP modifiers that take SAP as an argument: assertions and questions in CQ (Faller 2002), imperatives in Mbyá (Thomas forth.). Type of information source signalled by the evidential is recorded as a definedness condition. The semantics for the direct *-mi* is formulated in (3), other evidentials are modelled likewise:

- (3)  $\llbracket \text{DIR} \rrbracket = \lambda P. \lambda p. \lambda x. \lambda i. \lambda i' [ \text{Believe}(p, x) \wedge \text{Bpg}(\text{Believe}(p, x))(x)(i) \cdot P(p)(x)(y)(i') ]$   
 where  $\text{Bpg}(\text{Believe}(p, x), x, i)$  is true iff at  $i$ , the speaker  $x$  has the best possible grounds to believe  $p$ , which can be direct visual evidence or knowledge from an authority; and where  $P$  is an illocutionary predicate

- (4) Para-sha-n-mi.  
 rain-PROG-3-DIR  
 $p = \text{'It is raining.'}$   
*Speaker has direct evidence that  $p$ .*  
 (Faller 2002, 3, ex.2a)



- (5)  $\llbracket [\text{ForceP} [\text{Force}' \text{ DIR} [\text{Force} \text{ ASSERT}]] [\text{IP} \text{ It is raining}]] \rrbracket^{M, c, g} = \lambda x. \lambda i. \lambda i' [ \text{Believe}(\llbracket \text{It is raining} \rrbracket^{M, c, g}, x) \wedge \text{Bpg}(\text{Believe}(\llbracket \text{It is raining} \rrbracket^{M, c, g}, x))(x)(i) \cdot \text{Assert}(\llbracket \text{It is raining} \rrbracket^{M, c, g})(x)(y)(i')) ]$

**3.3. Embedded speech acts.** Speech acts correspond to root clauses that are of syntactic category ForceP (following Rizzi 1997). However, certain root phenomena (e.g. German V2) can be, to some extent, embedded. Provided a strict correspondence between syntax and semantics, such embedded root (ER) clauses should be interpreted as embedded speech acts. Krifka argues that certain predicates that are able to license ER, e.g. *tell*, *ask* and *wonder*, are ambiguous between a proposition-embedding reading and a speech-act embedding reading, with which it is possible to perform two speech acts with one sentence. The crucial point is that (in)ability of speech acts to appear in the complements of attitude predicates stems from selectional properties of respective predicates rather than from some property of speech acts.

**3.4. Predictions.** The theory I develop makes welcome predictions. **I.** If evidentials are analysed as SAP modifiers, they should be able to appear in the complements of predicates that license ER (Heycock 2005, Aelbrecht et al. 2012, a.o.). This prediction is borne out in Mbyá where reportative is only licensed by 'say' and 'tell'. **II.** If evidentials are analysed as SAP modifiers and cannot be embedded, this cannot be attributed solely to their semantics (contra Faller 2002). I suggest a syntactic explanation: evidentials are confined to finite clauses. This hypothesis explains why (1) is ungrammatical: it is a nominalisation. Nominalisations across languages are known to have a reduced functional structure (Alexiadou 2001) and are likely to lack structural space for evidentiality. The hypothesis is also confirmed by the data from Turkish (Şener 2011) and Daghestanian language family (T. Maisak, p.c.), where evidential morphology does not occur respectively in nominalisations and non-finite clauses, and from Cheyenne (Murray 2010), where evidentials compete for the same morphological slot with dependent mood markers, and therefore cannot appear in subordinate clauses.

**4. Conclusions.** Some evidentials are special and can report speech acts, which contradicts the idea of a unified semantics for all evidentials alike. I maintain the term illocutionary for such evidentials and propose a new theory thereof within Krifka (forth.)'s formalism. The empirical payoff is as follows. Unlike (Faller 2002), my account is compliant with cross-linguistic facts and allows to embed speech acts with evidentials. Unlike (Murray 2010), my account is unidimensional and fully compositional, thus offering a tight connection with syntax and having space to incorporate syntactic restrictions on embedding. I argue that embeddability of evidentials depends (1) on the embedding strategy (previously unnoticed generalisation): both illocutionary and non-illocutionary evidentials are banned from non-finite clauses (data from CQ, Daghestanian, Cheyenne and Turkish); (2) on the embedder: not every attitude predicate takes SAP arguments, which explains the distribution of reportative in Mbyá. The empirical success of this explanation confirms that it is fruitful to look at the properties of the embedder to explain the distribution of embedded elements, see e.g. (Sudo 2012) for shifted indexicals and (Anand and Hacquard 2013) for epistemic modals.