

The Landscape of Speech Reporting*

Corien Bary
Radboud University Nijmegen

Emar Maier
University of Groningen

Abstract We survey the various ways in which we report what was said and argue for a fundamental semantic distinction between two types of speech reporting. In evidential speech reports, the fact that something was said is not-at-issue, i.e. it is meant to signal that the at-issue content is based on hearsay evidence. Certain evidential markers in languages like Cuzco Quechua, Gitksan, and Cheyenne, as well as some uses of modals (e.g. Dutch *moeten* ('must')) and speech act adverbials (e.g. English *allegedly*) belong to this class. In eventive speech reports, by contrast, the main contribution is the existence of a speech event with certain properties. Direct, indirect, and free indirect speech reports belong to this class. Moreover, we argue that so-called quotative evidentials are actually eventive, as are parenthetical reports and reportative mood constructions in German and Ancient Greek.

keywords: reported speech, evidentiality, direct/indirect speech, events, not-at-issue content

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1 Introduction

We often refer to what other people have said. And we do so for different reasons. When we're telling a story we might want to vividly describe certain aspects of the speech event itself, e.g. focusing on the actual words or the manner of speaking. In such cases we'll resort to using an "eventive" report construction, such as direct or free indirect speech.

- (1)
 - a. Someone was yelling at me. What the hell did I think I was doing!
 - b. Mary looked up and then turned to John. "Watch out," she whispered, "here he comes. . ."
 - c. He told her that she was being paranoid.

In other situations we only refer to the fact that something was said as a way of indicating the evidential source of some other piece of information we wish to convey. In such cases we'll resort to using an "evidential" report construction, like a reportative evidential morpheme (in languages like Gitksan or Cheyenne), a reportative modal (in languages like Dutch or German), or a speech act adverbial (in any language, including English).

- (2)
 - a. sin-hun=gat John ky'oots
hunt-fish=REP John yesterday
 'John went fishing yesterday, I'm told.' [Gitksan, Peterson 2010]¹
 - b. Der neue Conan-Film soll eine Art Remake sein
the new Conan movie must a kind (of) remake be
 'The new Conan movie is reported to be a kind of remake'
 - c. Trump's lawyer allegedly received corporate payments from AT&T

In this paper we argue that these two functions of reporting are indeed associated with different constructions, warranting distinct semantic analyses. The first type, which we will call eventive reports, describe a speech event by referring to either its

¹ We have adapted the spelling (Peterson has e.g. *kat* rather than *gat* for the reportative marker) and some of the glosses.

linguistic form (direct discourse) or its linguistic content (indirect discourse), or a mixture thereof (free indirect discourse, mixed quotation). For instance:

- (3) a. He told her that she was being paranoid.
 b. $\exists e[say(e) \wedge agent(e) = x \wedge theme(e) = y \wedge content(e) = \wedge paranoid(y)]$

The second type, evidential reports, by contrast, do not describe a speech event but they do imply that someone said something. In these evidential constructions, the reportative meaning is only one component of the total semantic contribution. The received view on constructions like in (2) is that the reportative component, as represented in (3b), is actually but a supplement, secondary to a main point, in this case that Trump’s lawyer (probably) received corporate payments.

- (4) a. Trump’s lawyer allegedly received corporate payments from AT&T
 b. $\left\langle \begin{array}{c} \wedge receive(lawyer, payments) \\ hearsay(\wedge receive(lawyer, payments)) \end{array} \right\rangle$

In the following we survey first the typical evidential report constructions and their semantics, following recent diagnoses and analyses by Murray (2017), Koev (to appear, 2017), AnderBois (2014) and others. Then we survey the eventive reports, following Davidson (2015), Maier (forthcoming), Kratzer (2016) and others, and discuss how their semantics differs. Our aim in this paper is not to introduce a new semantic theory of Gitksan evidential marking or to provide new data on Dutch parenthetical indirect discourse, but to survey the entire landscape of speech reporting, bringing together previously isolated areas of interest in semantics (cf. theories of free indirect discourse and evidential marking), investigating what they share, and how exactly they differ. This leads to genuinely new insights for instance on the nature of quotative evidentials, and the use of reportative mood in narrative.

But first some preliminary remarks about our notation and general semantic formalism. Throughout the paper we’ll be using a rather traditional, two-stage setup, where natural language expressions are translated into formulas, which in turn can be interpreted in a model and/or used to update the common ground. For the formal language we use a standard higher-order, intensional, typed lambda calculus, with indexicals. Basic types are e (entities), v (eventualities), s (possible worlds), and t (times). We’ll use explicit quantification over individuals, events, and times, but not possible worlds – for intensional constructions we use $\wedge \varphi$ to denote the possible worlds proposition expressed by φ .

We’ll denote the translation of a natural language expression into formal meta-language with \leadsto or \mathbb{T} , as in, $\mathbb{T}(\text{happy}) = happy_{et}$. Subscripts indicate the type of an expression, but are typically omitted. Expressions in the formal language are model-theoretically interpreted relative to a context c (an agent–world–time triple),

an index w (world–time pair), and an assignment function f : $\llbracket happy(i) \rrbracket_w^{c,f} = 1$ iff $\llbracket i \rrbracket_w^{c,f} \in \llbracket happy \rrbracket_w^{c,f}$ iff $agent(c) \in \{x \mid x \text{ is happy in } w\}$.

2 Evidential reports

It is well known that some languages have dedicated morphemes to express the source of the information conveyed by an utterance. Thus, in Cuzco Quechua, if a speaker wants to say that it’s raining they can choose to indicate that they know this because they saw it, inferred it, or heard it from someone else

- (5) a. Para-sha-n-mi.
RAIN-PROG-3-mi
‘It is raining(, I see).’
b. Para-sha-n-chá.
RAIN-PROG-3-chá
‘It is raining(, I guess).’
c. Para-sha-n-si.
RAIN-PROG-3-si
‘It is raining(, I am told).’ [Cuzco Quechua, Faller 2002: 3]

Our interest is in the last subtype, reportative or hearsay evidentiality, i.e. constructions that mark some content as based on hearsay evidence. We’ll refer to utterances like (5c) or (6) as evidential reports, and then later compare them in some detail to eventive reports. Following Murray (2017) and many other semanticists, but contra Aikhenvald (2004), we will include uses of lexical and other non-functional markers of evidential source under the header ‘evidential’, because at the level of semantics/pragmatics at least they behave rather similarly. Thus, in English, we see hearsay parentheticals and adverbials, and in Dutch or German, we have reportative modals.

- (6) a. That’s a great movie, I hear
b. Supposedly, the book is better
c. Maar de film moet ook heel goed zijn / schijnt ook heel goed te
but the movie must also very good be / seems also very good to
zijn
be
‘But the movie is also very good, reportedly’

One of the semantic characteristics of evidentials concerns the way the so-called *scope proposition* (that it is raining, that the movie is good, that the book is better) and the *evidential proposition* (I saw it, I heard it) are packaged: the scope proposi-

tion serves as the main or at-issue contribution; while the evidential proposition is a supplemental or not-at-issue contribution. We'll consider this part of our definition of evidentiality, and build it into the semantics of the constructions. In other words, not-at-issue status of evidential content is a necessary but not sufficient condition for evidentiality. We'll make this precise in section 2.1 where we'll show that the constructions exemplified in (2) and (6) have these two components, and that the evidential component is not-at-issue. For concreteness we'll sketch a semantic framework for reportative evidentiality in section 2.2. A more controversial characteristic of reportative evidentiality – as opposed to other types of evidentiality – is that the speaker's commitment to the scope proposition may be weakened by the evidential marking, hence we can sometimes say things like:

(7) Supposedly, the book is better, but I don't really believe it.

We discuss this aspect of evidential reporting in section 2.3.

2.1 Diagnosing not-at-issueness

Information conveyed by natural language utterances is structured in certain ways. Not every bit of linguistic information is presented equally. Some information is more directly relevant to the communication at hand, other information is merely supplementary to that, and language has a variety of tools to mark such distinctions. There are broadly speaking two schools of thought on the nature of the at-issue vs not-at-issue distinction (Koev 2017). The lexical/conventional approach builds the distinction right into the semantics of certain lexical items or constructions (Potts 2005). The pragmatic approach on the other hand tries to derive it from the global structure of the surrounding discourse (Simons et al. 2011).

For the purposes of this paper, we'll opt for a lexicalist implementation of evidential not-at-issueness: some constructions conventionally mark some of their content as at-issue and some as not-at-issue.² Since not-at-issueness is part of our definition of what it is to be an evidential, what we show in this section is that indeed there is such a group of items and constructions that contribute reportative/hearsay information that is not-at-issue.

Diagnostics for establishing that something is not-at-issue typically involve projection, challengeability, and question-answering (Tonhauser 2012, Simons et al. 2011, Murray 2017). Since the projection test doesn't help in cases where a construction cannot be easily embedded for syntactic reasons, we'll focus on the latter two, both based on the distinctive behavior of not-at-issue content in dialogue.

² This is not to say that all not-at-issueness is to be lexically implemented in this particular way. In section 3.3 we'll see other lexical and pragmatic sources of backgrounding at work in speech reports.

Simons (2007) uses question-answering to bring out the ‘main point status’ of the scope proposition in some report constructions. The idea behind this diagnostic is that in a felicitous discourse the Question under Discussion (QUD) must be addressed by a subsequent discourse move, but the answer cannot be provided by a proposition that is lexically or grammatically marked as not-at-issue. In other words, B’s answer in (8) is felicitous because its main clause, the at-issue contribution, that Mary is ill, gives a partial answer to the question why Mary and Sue aren’t here. The B’ answer is infelicitous because the information that would answer the question is conveyed by a supplemental appositive relative clause, while the main clause content, which is at-issue, doesn’t answer the question.

- (8) A: Why are Mary and Sue not here?
 B: Mary, who likes to come to these meetings, is ill.
 B’: #Mary, who is ill, likes to come to these meetings.

We can turn this reasoning into a test to establish which component of a construction is at-issue and which is not-at-issue. Applied to our putative reportative evidentials we then first establish in (9) that the scope proposition must be at-issue, since in these contexts it’s the scope proposition rather than the reportative proposition that provides a (partial) answer to the QUD.

- (9) A: Why are Mary and Sue not at the meeting?
 B: a. Allegedly, Mary is ill
 b. Mary is ill, I hear.
 c. Marie schijnt ziek te zijn.
Marie seems ill to be
 ‘Mary is ill, reportedly’

We then establish that the reportative proposition must be not-at-issue, by looking at a context where speaker A asks B explicitly about her evidence and makes this the QUD. As expected, our reports are then infelicitous, even though they entail that someone said that Mary is ill, which would in principle answer the QUD:

- (10) A: What makes you think that Mary is ill?
 B: a. #Allegedly, she’s ill.
 b. #She’s ill, I hear.
 c. #Ze schijnt ziek te zijn.
she seems ill to be
 ‘She is ill, reportedly’

We confirmed this pattern for Gitksan, an evidential language in the strict sense of Aikhenvald (2004). (11B) provides a felicitous answer to (11A), which shows that

the scope proposition is at-issue, but not to (11A'), which shows that the reportative proposition is not-at-issue.³

- (11) A: gu gan wil=hl nee=dii di-t'aa=s John ky'oots?
what REAS COMP=CN NEG=FOC DUR-sit=PN John yesterday
 'Why was John not at home yesterday?'
 A': #gu gan ha'niigood-in win sin-hun=s John ky'oots?
what REAS think.2SG.II COMP hunt-fish=PN John yesterday
 'Why do you think John went fishing yesterday?' / 'What's your evidence to think that John went fishing yesterday?'
 B: sin-hun=gat John ky'oots.
hunt-fish=REP John yesterday
 'John went fishing yesterday, I'm told.'

The challengeability test gives us the same picture but is forward-looking rather than backward-looking: it looks at what are potential next moves, more specifically whether or not the reportative component can be challenged by another discourse participant.⁴ In direct and indirect discourse this component is easily challenged. In fact, when responding to a canonical report we can in principle challenge either that such a saying event took place, as in B, or we can challenge the embedded proposition, B':

- (12) A: She said {'I'm innocent' / that she was innocent}
 B: Nonsense, she may be innocent, but she would never say that.
 B': Nonsense, she's guilty, regardless of what she told you.

By contrast, for our putative reportative evidentials a denial targeting only the reportative proposition is impossible, or at least much more difficult. This is illustrated for the Gitksan reportative enclitic *gat* in (13).⁵

- (13) A: sin-hun=gat John ky'oots
hunt-fish=REP John yesterday
 'John went fishing yesterday, I'm told.'

³ Gitksan is a First Nations language of northwestern British Columbia, Canada. The consultants were first asked to translate the individual English sentences into Gitksan and were then given the dialogues in (11) and asked whether these were ok. According to our consultant, felicitous answers to A' would be sentences like *he packed his net, he shouldered his gaffhook, he carried his rod and reel*. Abbreviations: COMP = complementizer, DM = determinate marker, DUR = durative, FOC = focus, NEG = negation, PN = proper noun connective, REP = reportative.

⁴ This test has been criticized in Koev (2017) and Koev (to appear), Korotkova (2016).

⁵ Methodology same as in example (10). As for B', where the evidential proposition is targeted, a consultant remarked 'It's fine but you're just contradicting yourself.'

- B: nee=dii hōgyax-t. nee=dii sin-hun=t ky'oots.
 NEG=FOC *correct-3.II* NEG=FOC *hunt-fish*=DM *yesterday*
 'That's not true. He didn't go fishing yesterday.'
- B': #nee=dii hōgyax-t. gya'a-n win sin-hun=s John
 NEG=FOC *correct-3.II* *see.2SG.II* COMP *hunt-fish*=PN *John*
 ky'oots.
yesterday
 'That's not true. You saw John fishing yesterday.'

Similar observations have been made about Cuzco Quechua (Faller 2014), Cheyenne (Murray 2009), and Turkish and Bulgarian (Korotkova 2016), and the pattern seems to extend to our other varieties of evidential reporting. For instance, with the Dutch reportative *schijnen* an interlocutor may challenge the scope, as in B's objection in (14), but not just the reporting, as in B':

- (14) A: Anne schijnt ziek te zijn.
 'Anne is ill, reportedly.'
- B: Onzin. Ik weet niet wat je gehoord hebt, maar ze is kerngezond.
 'Nonsense. I don't know what you heard, but she's very healthy.'
- B': #Onzin. Niemand heeft dat beweerd, ook al is ze misschien wel ziek.
 'Nonsense, nobody said that, though she might be sick.'

Two English examples to make the same point:

- (15) A: Allegedly, Mary is ill / Mary is ill, I hear
 B: #That's false, even if she were, I'm sure you wouldn't have heard about it.

All in all, we believe that there is good reason to treat the reportative proposition in the speech reports discussed in this section as belonging to a separate, not-at-issue dimension. We'll work out the semantic/pragmatic implications of this in the next subsections.

2.2 2D logical forms and pre-updates

The distinction between at-issue and not-at-issue content is often cashed out in terms of multiple meaning dimensions (Bach 1999, Potts 2005, Geurts & Maier 2013).

- (16) Mary, who likes to come to these meetings, is ill
 $\approx \left\langle \begin{array}{c} \text{Mary is ill} \\ \text{Mary likes to come to these meetings} \end{array} \right\rangle$

Potts uses these two-dimensional forms to model the projection behavior of what he calls conventional implicatures, i.e. the supplemental content on the second dimension. The idea is that linguistic operators (negation, quantifiers, modals etc.) only look at the first dimension, leaving the second dimension unaffected, which indeed semantically derives universal projection of not-at-issue marked material.

We have seen in the previous subsection that evidential reports have such a two-part information structure. The starting point of our analysis is to put the scope proposition on the first dimension and the reportative proposition on the second:

$$(17) \quad \begin{array}{l} \text{Allegedly, Mary is ill} \\ \approx \left\langle \begin{array}{c} \text{Mary is ill} \\ \text{I've been told that Mary is ill} \end{array} \right\rangle \end{array}$$

This means that the evidential speech reports considered above somehow manage to compositionally separate the scope and evidential propositions and put them on the two separate dimensions. We propose the following lexical interpretation of *allegedly* and other reportative markers:

$$(18) \quad \mathbb{T}(\text{allegedly}) = \mathbb{T}(\text{gat}) = \mathbb{T}(\text{schijnen}) = \mathbb{T}(, \text{I hear}) = \lambda p_{st} \left\langle \begin{array}{c} p \\ \text{hearsay}(p) \end{array} \right\rangle$$

A couple of remarks about (18). First, the predicate *hearsay* in the second dimension is a traditional Hintikka-style propositional attitude, indicating that the actual speaker has hearsay evidence for a proposition from some source:

$$(19) \quad \langle p, x \rangle \in \llbracket \text{hearsay} \rrbracket_w^{f,c} \text{ iff for all } w' \text{ compatible with the information the agent of } c \text{ heard from source } x \text{ in } w, w' \in p$$

Note the absence of event variables which are characteristic of eventive reports, as we will see in the next section. Note also that, as argument of *hearsay*, p in (18) and (19) ranges over propositions, of type st . We do not extensionalize this proposition to get a regular assertive sentence contribution (of type t) in the first dimension of (18). In section 2.3 we'll return to this point. Third, we abstract away from all the finer semantic distinctions (e.g. between 'supposedly', 'reportedly' and 'allegedly') and syntactic details (e.g. 'schijnen' has to undergo raising to be interpreted as a sentential operator). In the following we illustrate the semantics of evidentials by focussing on (clause-initial) 'allegedly' as a concrete example.

To fill the type st argument of this function we apply Heim & Kratzer's (1998) Intensional Function Application rule, i.e. we just add an $^{\wedge}$ to the type t sentential argument.

$$(20) \quad \mathbb{T}(\text{Allegedly, Mary is ill}) = \left\langle \begin{array}{c} \wedge \text{ill}(m) \\ \text{hearsay}(\wedge \text{ill}(m)) \end{array} \right\rangle$$

Potts’ semantics then gives us the projection behavior that we hinted at in 2.1. But, as we said there, for our evidentials we’re less interested in projection but more in how these two dimensions interact with the larger discourse structure, because that’s what the question-answering and challengeability tests are based on.

In modeling how 2D logical forms update the common ground, we follow a recently popular idea about the interpretation of appositives and evidentials, viz. that they impose a non-negotiable, forced “pre-update” of the common ground (Murray 2009, Koev 2013, Anderbois et al. 2015, Griffiths 2015). Based on ideas from Farkas & Bruce (2009), Inquisitive Semantics (Groenendijk & Roelofsen 2009), and going back to Stalnaker (2002), at-issue content is analyzed as an “update proposal”, that can be accepted or rejected by other discourse participants.

The interpretation of a sentence with a not-at-issue component is thus analyzed as a three-step process: (i) the not-at-issue content directly updates the common ground; (ii) an additional at-issue update, addressing the QUD, is proposed; and then, (iii), unless the proposal is challenged at the next turn in the dialogue, it is accepted (“grounded”) and used to further update the common ground.

For the first two steps we propose the following update rule:

$$(21) \quad c + \left\langle \begin{array}{c} \varphi \\ \psi \end{array} \right\rangle = (c +_1 \psi) +_2 \varphi$$

In this formula, c is the context set (i.e., a set of worlds), representing the common ground; $+_1$ is a standard, intersective update; and $+_2$ is meant to capture the idea of an update proposal, to be made precise.⁶ Let’s apply (21) to our concrete example evidential.

$$(22) \quad c + \left\langle \begin{array}{c} \wedge \text{ill}(m) \\ \text{hearsay}(\wedge \text{ill}(m)) \end{array} \right\rangle = (c +_1 \text{hearsay}(\wedge \text{ill}(m))) +_2 \wedge \text{ill}(m)$$

In words, the dynamic interpretation of (22) in context starts by updating c with the not-at-issue proposition, i.e. throwing out possibilities from c where the speaker hasn’t heard that Mary is ill. As we’ve seen, the proposition at the first dimension, i.e., the proposition that Mary is ill, is open for discussion, so this shouldn’t be an automatic update of the common ground. We can think of $+_2$ as a proposal to update, which only becomes an actual update when it’s accepted by the interlocutors.

Proposing that φ just means adding it to the queue of proposals, which we will

⁶ Note that simple one-dimensional assertions (*it is raining*) will be effectively treated as two-dimensional ones with a trivial second dimension and an extensional first dimension, of type t .

model by creating a new pair, consisting of our updated context and ϕ . To capture the characteristic behavior of at-issue versus not-at-issue content in question–answer pairs (cf. (8)–(10)), we require that a proposal may only be added to the queue if it addresses the QUD.

$$(23) \quad c +_2 \phi := \langle c, \phi \rangle, \text{ if } \forall \phi \text{ answers QUD (otherwise undefined)}$$

Applied to our example, we thus add the proposal that Mary is ill:

$$(24) \quad (22) = c +_1 \text{hearsay}(\wedge \text{ill}(m)) +_2 \wedge \text{ill}(m) = \\ = \langle (c +_1 \text{hearsay}(\wedge \text{ill}(m))), \wedge \text{ill}(m) \rangle$$

When a proposal is thus on the table it can be negotiated. A dialogue participant may either reject or accept the proposal. Note that what is on the table is still of type *st* rather than of type *t*. In the next section we’ll discuss how we use this feature to account for ‘reportative exceptionality’.

2.3 Reportative exceptionality

One of the reasons for using an adverb like *allegedly* rather than a plain assertion of its scope is to weaken one’s commitments to its truth. We see this weakened commitment most clearly in examples like (25a)–(25b) where the reporter herself explicitly denies the scope proposition:⁷

- (25) a. Dadating daw siya sa isang oras, pero hindo talaga.
will.come REP he in one hour but not really
‘He says he will come in an hour, but in fact he won’t.’
[Tagalog, Schwager 2010]
- b. Anneloes schijnt thuis te zijn, maar ik geloof er niets
Anneloes seems.REP at-home to be, but I believe there nothing
van.
of
‘Anneloes is at home, I am told, but I don’t believe it.’
[Dutch, Koring 2013]

The apparent lack of scope commitment in some reportative evidential constructions is dubbed ‘reportative exceptionality’ in the evidentiality literature (cf. AnderBois 2014 for a detailed overview), referring to the fact that this pattern is not found in any other types of evidentiality marking.⁸

⁷ Matthewson et al. (2007) and Matthewson (2010) note that some reportative evidentials, such as *ku* in St’át’imcets, do not allow this.

⁸ In direct (i) and inferential (ii) evidentials, the speaker is usually committed to the scope proposition:

The crucial puzzle then consists in reconciling this behavior with the information structuring brought out with denials and question–answer-pairs above: If the main point of a report is the scope proposition, how come the speaker is not committed to that?

Existing accounts differ on whether or not speaker commitment to the scope proposition is built into the semantics. On the one side, we have AnderBois (2014) who argues that scope commitment is part of the semantics of evidentials, analyzing exceptions in terms of a pragmatic perspective shift of the sort proposed by Harris & Potts (2010). On the opposite side, Faller (2002) argues that the reported content is not proposed to be added to the common ground at all: it is merely presented rather than asserted. Yet another solution is that of Murray (2014, 2017), who makes a distinction between what is on the table for discussion (viz. the plain scope proposition), and what updates the common ground (viz. a suitably modalized version thereof).

Synthesizing some key insights from Faller (2002), Murray (2017), and Hunter (2016), we suggest the following picture: The speaker herself initially only *presents*, as Faller puts it, a main content, which corresponds to the fact that the context–proposal pair contains a proposition of type *st* as the proposal under discussion in our formalism (24). The idea was that the proposal is what’s on the table for discussion, leading either to rejection or acceptance. But to discuss or accept a propositional object, we have to first bring it down to something that can be true of false, i.e. of type *t*. Assuming a simple \vee operator would entail full commitment to the scope proposition, which, as we saw above, would be too strong. We’ll assume that various contextual factors play a role in determining in what way the intensional proposal enters the common ground: $\vee\phi$, as if it was asserted; $?\phi$, i.e., ‘it is an issue whether ϕ is true,’ explicitly introducing a new QUD; $\diamond\phi$, i.e. ‘it is possible that ϕ ’ (Hunter 2016). These factors may even include subtle factors such as the confidence that the actual speaker and his interlocutors have in the reported speaker as regards the scope proposition (cf. Davis et al. 2007, Koev to appear).

Working all this out in a formal dialogue system would be a paper on its own. But for concreteness we formulate the following definitions of the dialogue moves of accepting and rejecting a proposal on the table.

-
- (i) # E-hotaheva- \emptyset Floyd naa+oha e-saa-hotaheva-he- \emptyset .
 3-win-DIR Floyd but 3-NEG-win-DIR
 ‘Floyd won, I’m sure, but I’m certain he didn’t.’ [Cheyenne, Murray 2009:327]
- (ii) # Aya-llru-llini-uq ... Aya-ksaite-llru-yuk-aa.
 leave-past-inf-ind.3sg leave-neg-past-think.that-ind.1sg.subj -3sg.obj
 ‘Evidently she left ... [but] I don’t think that she left.’ [Yup’ik, Krawczyk 2012:22]

- (26) $Accept(\langle c, \varphi \rangle) = c +_1 MOD \varphi$,
 where MOD is one of $\vee, ?, \diamond, \dots$, depending on the context
- (26) $Reject(\langle c, \varphi \rangle) = c +_2 \neg \varphi$

In this section we have provided a minimal semantics in which the first dimension generated by an evidential contains the scope proposition (type st), which gets treated as the presentation of a proposal. In modeling the process of accepting the proposal, (26), we allow for a weakening of the eventual commitment, but leave open which factors contribute in which way to the eventual update in specific situations.

3 Eventive reports

Among other things, we have seen how evidential reports convey that the speaker heard from someone that p , which further entails that someone said that p – hence the term ‘evidential (speech) reports’. Direct quotations (27) of course also convey that someone said something, but now that fact is not presented as a source of evidence for some other, primary proposition.

- (27) Mary said “I’m ill”

(27) doesn’t convey that Mary is ill and, in addition, that I have hearsay evidence for that, it just describes the occurrence of a speech act by Mary. In this case, we describe that act by pointing out its linguistic form. In indirect discourse speech reports, we characterize the speech act by its content, and in free indirect discourse it appears to be some kind of mixture of form and content. We refer to such descriptions of speech acts as eventive reports.

In section 3.1 we lay out the basic characteristics of the canonical forms of eventive reports, direct and indirect discourse, and propose a neo-Davidsonian semantics. In section 3.2 we show how our analysis of eventive vs. evidential reports sheds new light on a class of so-called quotative evidentials, which come out as eventive rather than evidential. Interestingly, while evidentials necessarily involve a not-at-issue report component, we argue in section 3.3 that eventive reports can in principle have their report component marked as at-issue or as not-at-issue. In particular, we propose that parenthetically framed reports and reportative moods in German or Ancient Greek are best thought of as not-at-issue eventive report constructions.

3.1 The semantics of eventive reports

A natural way to think of canonical report constructions is as asserting the existence of a speech event with certain properties (Brasoveanu & Farkas 2007, Davidson

2015, Maier forthcoming, Kratzer 2016). A direct speech report says that there was a saying event whose linguistic form is given by the quoted phrase.

- (28) Mary said “You’re crazy”
 $\leadsto \exists e[say(e) \wedge agent(e) = mary \wedge form(e) = \ulcorner \text{You’re crazy} \urcorner]$

In words: (28) says that there is an event e , that is a saying event with Mary as agent, and with a phonological surface form approximated by the sequence of letters *You’re crazy*.

There are a number of advantages of such an event-based approach over more traditional, logico-philosophical approaches to direct and indirect speech. First, it allows us to treat direct and indirect speech more uniformly. The only difference is that in direct speech the complement specifies the utterance event’s form, and in indirect speech it specifies its content:

- (29) Mary said that I’m crazy
 $\leadsto \exists e[say(e) \wedge agent(e) = mary \wedge content(e) = \wedge crazy(i)]$

In fact, the event-based approach has proven particularly well-suited for modeling also less canonical report types, such as be-like quotative constructions and sign language role shift (Davidson 2015, Maier 2018), free indirect discourse (Maier forthcoming), hear-reports in Turkish (Ozyildiz et al. 2018), and unembedded indirect speech constructions in Latin (Solberg 2017). In sections 3.2 and 3.3 below we’ll add quotative evidentials and certain uses of reportative moods to this list.

Second, the event-based approach allows us to capture the anaphoricity of these types of speech reports. As Brasoveanu & Farkas (2007) argue, (29) doesn’t just mean that it’s compatible with what Mary said that I’m crazy, but rather that she said this in some specific, salient conversation under discussion. We can build this presuppositional dependency into (29), for instance by restricting the event quantification to a free variable E (referring to a conversation, modeled as a sequence of utterances):

- (30) $\exists e \in E[say(e) \wedge agent(e) = mary \wedge \dots]$

Third, we can derive logical forms like these compositionally, using just standard tools from event semantics, intensional type theory, and the logic of (pure) quotation. For concreteness, we end this subsection with a brief demonstration of the formal apparatus involved in making the event-based approach more precise, just as we did with the two-dimensional semantics/pragmatics of evidential reports in section 2.

In event semantics in general, clauses and adverbial modifiers alike express properties of events, which can be combined via the predicate modification rule (i.e., we can combine $\lambda x[P(x)]$ and $\lambda y[Q(y)]$ into $\lambda x[P(x) \wedge Q(x)]$, cf. Heim & Kratzer

1998).

- (31) a. $\mathbb{T}(\text{John walks}) = \lambda e[\text{walk}(e) \wedge \text{agent}(e) = \text{john}]$
 b. $\mathbb{T}(\text{clumsily}) = \lambda e[\text{clumsy}(e)]$
 c. $\mathbb{T}(\text{John walks clumsily}) = \lambda e[\text{walk}(e) \wedge \text{agent}(e) = \text{john} \wedge \text{clumsy}(e)]$ ■

In the Neo-Davidsonian paradigm even the standard arguments of the verb (agent, theme, etc) may be introduced via (covert) thematic role operators (which we'll tend to leave out of our syntactic LF representations):

- (32) a. $\mathbb{T}(\text{AGENT}) = \lambda x \lambda e[\text{agent}(e) = x]$
 b. $\mathbb{T}(\text{walk}) = \lambda e[\text{walk}(e)]$
 c. $\mathbb{T}([\text{AGENT John}] \text{ walks}) = \lambda e[\text{walk}(e) \wedge \text{agent}(e) = \text{john}]$

At the end of the translation of a clause we apply existential closure to turn an event property into an event quantification (i.e., of type t):

- (33) (31) $\leadsto \exists e[\text{walk}(e) \wedge \text{agent}(e) = \text{john} \wedge \text{clumsy}(e)]$

Applied to speech reports, we assume that indirect and direct discourse complements are modifiers of the verb of saying, introduced by dedicated operators on a par with AGENT above. For indirect discourse, we posit the operator CONTENT, relating an event and its propositional content:⁹

- (34) $\mathbb{T}(\text{CONTENT}) = \lambda p_{st} \lambda e[\text{content}(e) = p]$

The syntactic LF for our indirect discourse example then is (35) (where we may think of the optional complementizer *that* as the overt realization of CONTENT):

- (35) [AGENT John] said [CONTENT [I'm crazy]]
 a. $\mathbb{T}(\text{I'm crazy}) = \text{crazy}(i)$
 b. $\mathbb{T}(\text{CONTENT [I'm crazy]}) = \lambda e[\text{content}(e) = \text{crazy}(i)]$
 c. $\mathbb{T}(\text{say}) = \lambda e \in E[\text{say}(e)]$
 d. $\mathbb{T}(\text{say [CONTENT [I'm crazy]]}) = \lambda e \in E[\text{say}(e) \wedge \text{content}(e) = \text{crazy}(i)]$

Note that this event modifier treatment immediately accounts for the possibility of modifying speech verbs, like any other verb, in a report construction (*John told me, softly, in his thick New York accent, that Mary was crazy*).

For direct quotation we'll need a way to refer to a linguistic form (and/or demonstration, depending on your basic theory of quotation). In our formal language

⁹ Cf. Kratzer 2006, Hacquard 2010, Moulton 2009, Kratzer 2016 for more on contentful eventualities and the CP-as-modifier approach to attitude and speech reports.

we introduce a new type u (à la Potts 2007) and use Quine hooks to indicate (pure) quotation in the formal metalanguage, i.e.:

- (36) If σ is a string of letters (or signs, or phonemes), then $\ulcorner \sigma \urcorner$ is of type u and $\llbracket \ulcorner \sigma \urcorner \rrbracket = \sigma$.

Note that strings of letters are now part of our ontology. We assume that each natural language expression corresponds to such a string and that at any point in the semantic derivation we have access to that string. We then introduce an operator QUOT as the quotational analogue of CONTENT, i.e., relating an event and its form (given as an expression of type u).

- (37) $\mathbb{T}(\text{QUOT}) = \lambda q_u \lambda e [\text{form}(e) = q]$

Using Sudo's (2013) quotational analogue of Intensional Function Application, we coerce the argument of QUOT into a type u object (i.e., in the metalanguage, we put its phonetic surface realization in Quine hooks $\ulcorner \urcorner$). The logical form and derivation for direct speech then looks rather like that of indirect speech above:

- (38) [AGENT John] said [QUOT [you're crazy]]
 a. $\mathbb{T}(\text{QUOT} [\text{you're crazy}]) = \lambda e [\text{form}(e) = \ulcorner \text{you're crazy} \urcorner]$
 b. $\mathbb{T}(\text{say} [\text{QUOT} [\text{you're crazy}]]) = \lambda e \in E [\text{say}(e) \wedge \text{form}(e) = \ulcorner \text{you're crazy} \urcorner]$

Summing up: The semantics for evidential speech reports that we have seen in section 2 is very different from that of eventive ones in this section. Although there certainly is variation within the eventive class – we have varieties that specify the form (direct discourse) and ones that specify the content (indirect discourse), and mixtures (mixed quotation, free indirect discourse) – they have a uniform semantics in the sense that they specify linguistic features of a *speech act*, represented as an event. This speech event can be further specified in the report, through event modification (*yesterday at noon, with a heavy German accent, softly*). Moreover, the asserted speech event is supposed to be part of a specific, already salient conversation. By contrast, our proposed semantics for evidential reports does not involve reference to speech events. Indeed, the kind of evidentials we've discussed don't specify linguistic forms, nor do they seem to refer back to a specific conversation, or allow modification of the speech event (*Yesterday at noon Mary was allegedly ill* doesn't mean that the speaker heard about Mary's illness yesterday afternoon). For this reason we kept the traditional intensional operator analysis for the built-in reportative hearsay predicate in our analysis of evidential reports.

Another difference between evidential reports and the eventives we've seen so far is the information structure: evidentials but not eventives have lexically marked

at-issue and not-at-issue components. In section 3.3 we'll see that this is not actually a distinguishing characteristic, because, we'll argue, there are not-at-issue eventive report constructions. But first, in 3.2, we take a look at 'quotative evidentials' and argue that that's a misnomer.

3.2 A note on quotative evidentials

We have seen that eventive and evidential speech reports differ, among other things, in whether they refer to a speech act. Specifying the form of a speech act (i.e. direct discourse) requires the presence of a speech event in the semantics, so we would expect that this is possible with eventive, but not with evidential speech reports. According to the evidentiality literature, however, there are also evidentials that involve a direct quote, the so-called *quotatives*.¹⁰ At first sight these constructions seem to undermine our proposal of a fundamental split between eventive and evidential reports. On our analysis evidential reports don't introduce a speech event of which they can then specify the form. A closer look at a sample of the languages that are claimed to have such quotatives, however, strongly suggests that they are purely eventive speech reports, without any evidential component.

Let's start with Plains Cree, an Algonquian language, spoken mostly in Saskatchewan and Alberta (Canada). Plains Cree is said to have a quotative evidential marker *itwê* in addition to reportative, nonfactual and dubitative ones (Blain & Déchaine 2007). An example is given in (39) (Kâ-Nîpitêhtêw (1998: 52, line 14); via Blain & Déchaine 2007):

- (39) "â, namôy," itwêw, "môy êwako ê-wî-atoskâtamân," itwêw.
well NEG QUO NEG *that* CONJ-FUT-engage.in(1) QUO
 '... , "Well, no," he said, "I am not going to engage in that," he said.'
[Plains Cree]

However, when we look at the larger context in which the example occurs, it becomes clear that we're really dealing not with an evidential but with a description of a speech event, including reference to a specific source, time and conversation:

- (40) Today, for example, when I spoke to this one [in the audience], I asked him

¹⁰ To avoid confusion: this is not the only use of the term *quotative* in the evidential literature. The term is also often used as a synonym for the whole class of reportative evidentials (e.g. in Waldie 2012) and for reportative evidentials that specify the source of the report as in English *according to* (Krawczyk 2012). Aikhenvald (2004) uses the word *quotative* in multiple ways (as reportatives that specify the source (p. 25), as reportatives that involve direct quotation (p. 423), and sometimes both criteria are required to be a quotative (p. 64)). When we conclude below that quotatives are not evidentials in the semantic sense, this primarily concerns constructions that specify the form of a reported speech act.

about these six things, whether he was going to engage in them; and when I asked him the first time, for example, he said “Well, no, I am not going to engage in that.” [Kâ-Nîpitêhtêw 1998: 52]

In no sense does the actual speaker use *itwê* to provide evidence for a scope proposition (given by the reported words). What’s more, morphosyntactically, the quotative is the odd one out in this language: whereas the other evidentials in this language are particles, *itwê* is a verb (Blain & Déchaine 2007: 261): it can be inflected for first-, second-, or third-person subject agreement, and it occurs with tense/aspect. It also seems to be the only one that allows recursive embedding (*John said: ‘Mary said ‘...’*). We take these facts to suggest that we’re not really dealing with an evidential, but with a purely eventive report construction, with the person, tense and quote each specifying features of a reported speech event – on a par with the English direct speech construction.

In languages where the quotative marker is not a verb but a clitic or particle we also find strong evidence that these are not evidentials in our semantic sense. In the evidential systems of these languages, quotatives are the only ones that can occur with imperatives (see Boye 2012:204-206 on West Greenlandic and Kannada, and Korotkova 2017 on Mbyá and Tagalog). The incompatibility of evidentials with imperatives is expected since the notion of providing evidence to a scope proposition is not applicable in the case of non-propositional speech acts. An eventive analysis, by contrast, allows quotatives in any speech act types, just as we can quote questions and imperatives in direct speech in English.

On the basis of these data we conclude that quotatives are not evidentials in the semantic sense. This is in line with Boye’s (2012) considerations to exclude quotatives as evidential markers, and with Korotkova’s (2017) analysis of quotative evidentials as “the only true cases of illocutionary evidentials”, likewise setting them apart from other evidentials and actually arguing that they are more closely related to other, non-evidential quotative particles and other (eventive) speech report constructions. So-called quotative evidentials thus actually corroborate the split that we argue for. As soon as one specifies the form of a speech event, the contribution to the discourse can no longer be an evidential one: instead of providing evidence for the scope proposition, the speaker is describing a speech event.

3.3 Eventives marked as not-at-issue

We established above that evidential content in typical evidential constructions was not-at-issue. Eventive reports have roughly the same two propositional components: someone said that *p*, and *p* itself. In the cases above the reportative component is clearly at-issue, but we could imagine eventive reports where the eventive report

contribution is somehow marked as secondary to the embedded proposition, similar to evidential reports but with the supplement playing the role of event description rather than evidence marking. As we'll show in this section, languages indeed offer this option.

First, consider the information structural effects of parentheticalization. In general, as we saw with appositives and hearsay evidentials (parenthetical *I hear*) in 2.1, parentheticalization marks something as not-at-issue (Potts 2005). Hence, in a parenthetical direct or indirect report, the reportative meaning component is backgrounded, independently of the eventive–evidential distinction. This explains why a parenthetical eventive report is ill-suited to directly answer a question about a saying event (cf. de Vries 2006):

- (41) A: What happened next? Did anyone dare say anything?
 B: Mary said in her thick New York accent that John did it/“John did it”.
 B' :?{John did it/“John did it”}, Mary said in her thick New York accent

Here, the speech event modification (*in his thick New York accent*, and the quotation marks in the direct speech variant), unambiguously indicates that these are eventive rather than evidential constructions, yet the infelicity of B' shows that the speech reporting component is not-at-issue.

Sometimes the same structure is forced by discourse structure rather than a syntactic device like parentheticalization. This happens for instance in canonical indirect discourse in discourses like (42) (e.g. Simons 2007, Hunter 2016):

- (42) A: Why is Mary not at the meeting?
 B: John said that she is pregnant

Here it's the information in the complement that answers the question. The reportative component merely signals that the speaker's source for this information is John. The felicity of the discourse thus shows that a canonical indirect discourse complement, although not syntactically marked as at-issue, can still be made at-issue by discourse structure.

There may be yet other sources of not-at-issueness in speech reports. Consider for instance the Ancient Greek optative mood in examples like the following:

- (43) Μετὰ ταῦτα ἐδίδοτο λέγειν τῷ βουλομένῳ· καὶ ἔλεγον πολλοὶ ... ὅτι παντὸς ἄξια λέγοι Σεύθης· χειμῶν γὰρ εἶη καὶ οὔτε οἴκαδε ἀποπλεῖν τῷ τοῦτο βουλομένῳ δυνατόν εἶη, ... [Xenophon, *Anabasis* 7.3.13]
 After this the opportunity to speak was offered to any one who desired it; many said ... that Seuthes said things of supreme importance; for the season was winter, and it was impossible to sail back home, ...

In (43), the first reportative optative (underlined λέγοι) is in the complement clause under the verb of saying ἔλεγον. The two following optatives (also underlined) are no longer part of the same sentence (as shown by the presence of the particle γάρ, see Bary 2018). Still, the optative morphology is used to mark that the clause is a continuation of the report and hence to be interpreted as offering more content of this specific speech event, anaphorically linking back to a particular conversation. In other words, the speech report is eventive rather than evidential. The usual diagnostics for not-at-issueness discussed in 2.1 are difficult to apply to a dead language. Still, there is some strong evidence for the backgrounded status of the reportative information in cases like (43). First, the first optative, the one that is part of the complement clause, is not interpreted as part of the content the (highest) reported speech act (as in *they said that they/someone said that Seuthes said things of supreme importance*) but rather seems to be somehow bound by (or concordant with) the overt reporting verb.¹¹ Second, discourse relations are established at the level of the reported content, without discourse interference from the verb of saying (see Haug et al. 2018 for a similar phenomenon in Latin, Bary 2018 for Ancient Greek).

Additional support comes from the German reportative subjunctive (Konjunktiv), which resembles the Greek optative in many respects, for instance in the use of the reportative morphology in continued indirect speech reports:

- (44) Er sagte sie sei schön. Sie habe grüne Augen.
he said she be-SUBJ pretty she have-SUBJ green eyes
 ‘He said she’s pretty. She has green eyes, he said.’ [Jäger 1971]

Following our familiar not-at-issue test, we can now see that the reportative subjunctive, cannot be used to answer a question that asks about a speech event:

- (45) A: Was ist dann passiert? Hat jemand es gewagt etwas zu sagen?
what is then happened has someone it dared something to say
 ‘What happened then? Did anyone dare say anything?’
 B: Jan hat gesagt, dass Marie verrückt ist.
Jan had said that Marie crazy be
 ‘Jan said that Marie is crazy’
 B’: Marie sei verrückt.
Marie be-SUBJ crazy

We conclude that the reportative mood does somehow contribute or presuppose information about a speech event, but from the contrast in (45) that it only does so at a not-at-issue dimension.

¹¹ We will leave the question of whether the apparent vacuousness of the embedded optative is best analysed in terms of presupposition binding or as a kind of concord for another occasion.

The position of these ancient Greek and German reportative moods within the landscape of speech reporting is now clear: the reportative contribution is both eventive and not-at-issue. There are still various options for turning this insight into a full-fledged semantic analysis. We refer to Fabricius-Hansen & Sæbø (2004), Bary & Maier (2014) and Solberg (2017) for proposals that analyze what we have just diagnosed as the not-at-issue eventive report component as a presupposition.

4 Conclusion

We often refer to what other people have said. And we do so for different reasons. When we're telling a story we might want to vividly describe certain aspects of the speech event itself, e.g. focusing on the actual words, the manner of speaking, or the content expressed. In such cases we'll want to use an eventive report construction, such as direct or free indirect speech. In other situations we only refer to the fact that something was said by someone as a way of indicating the evidential source of some other, primary content we wish to convey – or perhaps just put on the table but distance ourselves from. In such cases we'll want to use an evidential report construction, like a reportative modal or adverb.

In this paper we have argued that these two types of reporting warrant fundamentally different semantic analyses. Eventive reports refer to a speech event, presupposing a particular conversational setting. We've proposed a compositional, Neo-Davidsonian semantics in which speech events can have a content and a form, expressed by a complement clause or quotation, respectively, as well as various other properties expressed by arguments and modifiers. Evidential reports do not introduce a speech event but indicate instead that the speaker has hearsay evidence, modeled as an intensional operator.

By definition, evidentials have a multi-dimensional semantics: the scope proposition is at-issue (which we modeled as a proposal to update the common ground), while the reportative proposition is backgrounded (which we modeled as a non-negotiable pre-update). Canonical eventives, like direct discourse, typically do not have such a hardwired information structure, but there is quite some variety there: there are eventive report constructions with parentheticalized (and hence not-at-issue) report frames, or with lexically specified presuppositional report components.

Failure to distinguish the two types of reporting has led to confusion in the literature. For instance, despite what the label suggests, 'quotative evidentials' turn out to be eventive – not evidential. Our distinction also sheds new light on the position of reportative mood in the landscape of speech reports as eventive, but not-at-issue, speech reports markers.

At a high level of abstraction, eventive and evidential reports all share the same two propositional components: someone said that p , and p itself. But they differ

in how they put these components to work. In this paper we have tried to pinpoint exactly what eventive and evidential reports share and where they differ, and how those differences explain various observations in the literature on speech reporting, evidentiality, and quotation.

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