

Evidential meaning and (not-)at-issueness *

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Abstract Recent years have seen a lot of research on evidentiality within formal semantics and pragmatics. The near-consensus in the literature is that the type of evidence signalled by the evidential marker, which I will refer to as the *Evidential Requirement* (ER), is not asserted and should be analyzed as a conventional trigger of *Not-At-Issue* (NAI) content. By scrutinizing empirical diagnostics previously used to support the ER-as-NAI view, the paper aims at disentangling how different notions of (not-)at-issueness can be applied to evidentiality, and develops objections to the idea that evidentials always conventionally encode NAI content.

Keywords: evidentiality, not-at-issue meaning, cross-linguistic semantics, semantic theory, semantics/pragmatics division of labor

1 Introduction

Evidentials are expressions that signal the source of the semantically determined information conveyed by an utterance, such as perception, inference, or hearsay (Aikhenvald 2004, 2018). Consider Georgian, a language that grammatically marks indirect evidentiality (Boeder 2000):¹

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¹ Unless indicated otherwise, data come from my own work with consultants. Glosses: 3 person; COMP complementizer; COP copula; DAT dative; ERG ergative; GEN genitive; INF infinitive;

(1) Georgian (South Caucasian: Georgia)

ucvimia
 rain.IND.PST
 ‘It rained, I hear/infer.’

In (1), the verb form *ucvimia* signals that the speaker learned the scope proposition ‘It rained’ via inference or hearsay.² I will call this contribution of evidentials the *Evidential Requirement* (ER) and use the theory-neutral convention of translating it with parentheticals.

Since the pioneering work in [Izvorski 1997](#), the status of the ER has been at the forefront of research in semantics and pragmatics. In many unrelated languages (see the overview in [Murray 2017: 12-25](#)), the speaker is committed to having evidence of the relevant type when uttering an evidential sentence.³ The ER is therefore not a classical implicature. For example, (1) cannot be followed up by statements that explicitly cancel the indirect evidence requirement, such as *Actually, I witnessed it*.⁴ [Izvorski \(1997\)](#) models the ER in Bulgarian as a presupposition, an analysis adopted for a variety of languages and motivated by the following cross-linguistically robust similarities between the ER and classical presuppositions. First, the ER survives under negation. Second, just like presuppositions, the ER cannot be targeted by responses such as *That’s not true*. Such a response to (1) yields a disagreement with the scope proposition (*No, it didn’t rain*), but not with the speaker’s having indirect evidence for it (*No, you didn’t hear/infer that it rained*).

Another strand of research takes evidentials to contribute *Not-At-Issue* (NAI) content, much like various parenthetical constructions, and treats the ER as new, non-presupposed peripheral information. I will refer to this type of approach as the ER-as-NAI view, and will discuss two of its representatives: the assertion-based proposal in [Murray 2010, 2014, 2017](#) and the question-

INFER inferential evidential; IND indirect evidential; F feminine; N neuter; NEG negation; NOM nominative; PL plural; PRES present; PST past; Q question; REFL reflexive; REP reportative evidential; SG singular.

² Evidentiality in Georgian is part of the highly suppletive verbal complex ([Harris 1981](#)), so a morpheme-by-morpheme breakdown will not be provided.

³ I talk about the speaker’s evidence for simplicity, as the paper only considers root declaratives. In attitudes and questions evidentials are subject to perspectival shift ([Korotkova 2016b](#)).

⁴ Some evidential restrictions have been argued to arise pragmatically ([Bowler 2018, Mandelkern 2019](#)). Here I only consider those expressions that hard-wire the evidential signal.

based proposal in [Faller 2019](#).⁵ Note that presuppositional content is often regarded as a type of NAI content ([Simons et al. 2010](#), [Tonhauser et al. 2013](#)). One of the main arguments against presuppositional approaches to evidentiality, first brought up in [Faller 2002](#) for Cuzco Quechua, is that the ER does not behave as a precondition on the common ground. For example, evidentials in Paraguayan Guaraní ([Tonhauser 2013](#)) and Bulgarian ([Koev 2017](#)) can be used even if the speaker's evidence for the scope proposition has not been already established.⁶ Given that detailed comparisons between the ER and presuppositions have been made elsewhere ([Faller 2002](#), [Murray 2010](#) a.o.), I will not discuss this issue further.

The goal of this paper is to closely examine the overall ER-as-NAI tradition and its premises, drawing on novel data from Georgian as well as data from the literature. I focus on three empirical diagnostics: (A) NEGATION: the ER escapes the scope of clause-mate negation, (B) NON-CHALLENGEABILITY (also referred to as assent/dissent; [Papafragou 2006](#)): the ER resists direct denials such as *That's not true*, and (C) ANSWERHOOD: the ER does not answer direct questions. Properties A and B are shared by most, if not all, grammatical evidentials across languages and evidence types ([Korotkova 2016b](#), [Murray 2017](#)), and at first blush they seem to support the ER-as-NAI theories, given that those same properties are typically associated with NAI content at large ([Tonhauser 2012](#)). However, as I will show, the interaction of evidentials with negation likely has to do with scope, while non-challengeability has to do with constraints on propositional anaphora and may not be a good diagnostic of at-issueness at all ([Snider 2017](#)). In general, NAI content is not a homogeneous category and there are in fact fundamentally different notions of at-issueness ([Koev 2018](#)). The paper aims at disentangling how those notions can be applied to evidential meaning and shows that not all approaches to at-issueness derive the observed facts equally well. Thus, Property C, which so far has not been tested as extensively as the the other two, falls out naturally in QUD-approaches to evidentiality, such as [Faller 2019](#), but is not as straightforward in other approaches, such as [Murray 2010, 2014, 2017](#). Furthermore, as I show, this property may have pragmatic, rather than purely semantic, underpinnings. Overall, the paper challenges the widespread view according to which Properties A-C unanimously identify the ER as a specific

⁵ Even though it does not explicitly mention the NAI-AI distinction, the original proposal in [Faller 2002](#) can also be classified as belonging to the ER-as-NAI family ([Faller 2019: 14](#)).

⁶ To my knowledge, the analytical option that the ER is a special easy-to-accommodate presupposition (see [Schlenker 2021](#) on appositives) has not been pursued.

type of NAI content and stresses that those properties need not be seen as arising from a single underlying source. It also uncovers systematic empirical gaps, the filling of which will lead to a more articulated theory of evidential meaning.

The paper is organized as follows. Section 2 lays out the basics of two NAI-as-ER proposals, Murray 2010, 2014, 2017 and Faller 2019. Section 3 scrutinizes the diagnostics that have been argued to support the ER-as-NAI view. Section 4 concludes.

2 The ER as NAI content

Recent research on conversational dynamics argues for a distinction between two types of content: *At-Issue* content (AI) and *Not-At-Issue* content (NAI). Intuitively, AI content is the main point of an utterance, while NAI content constitutes peripheral, by-the-way information.⁷ NAI content includes presuppositions, but it can also be discourse-new information. The literature on evidentiality almost unanimously treats the ER as a vehicle for NAI content, much like it has been done for clausal and nominal appositives (Potts 2005, Anderbois, Brasoveanu & Henderson 2015), connectives (Scheffler 2013), expressives (McCready 2010, Gutzmann 2015), honorifics (Potts 2005), and slifting parentheticals (Potts 2005, Simons 2007).

As discussed in detail in Koev 2018, there is no uniform notion of at-issueness. As a result, an entailment that comes out as NAI according to one definition may end up as AI according to another. One of the goals of this paper is to call attention to this issue in the context of evidentiality. Apart from the debate on the ER's presuppositional vs. non-presuppositional nature, varied ways to model the ER as a NAI contribution have been left practically unaddressed in the literature. Below I discuss two distinct representatives of the ER-as-NAI view, each situated within a different framework of at-issueness: the assertion-based proposal in Murray 2010, 2014, 2017 and the question-based proposal in Faller 2019.

At-issueness and assertion One prominent view maintains that at-issueness is linked to assertion and updating the common ground (Potts 2005, Farkas & Bruce 2010, Anderbois, Brasoveanu & Henderson 2015 a.o.). A framework of

⁷ The AI-NAI distinction can be construed as a continuum rather than a binary divide (Tonhauser, Beaver & Degen 2018).

this type was first proposed for evidentiality in Murray 2010, 2014, 2017; see also Lee 2011, Koev 2017.

Murray advocates a view that all sentences, with evidentials or without, involve a series of updates that structure the context set and determine how AI and NAI information is handled. It is argued that assertion, a typical contribution of declaratives, is a proposal to update the common ground with the at-issue proposition. This contribution amounts to two updates: (i) creation of a discourse referent for the at-issue proposition p , and (ii) a proposal to update the context set with p -worlds. If the proposal is accepted, the new context set will contain only p -worlds.

Murray's framework is designed to capture the behavior of evidentials in Cheyenne (Algonquian: Montana, US) as well as across languages. Evidentials are placed in a larger context of natural language phenomena associated with NAI content, and the ER is treated in the same way as the contribution of nominal and clausal appositives, and slifting parentheticals.⁸ The ER (and other NAI contributions) is modeled as a direct update, which amounts to the automatic, non-negotiable reduction of the context set to the ER-worlds (much like presupposition accommodation; von Stechow 2008). In (1) the scope proposition 'It rained' is a proposal to update the common ground, which may or may not be accepted. Regardless of its acceptance, the new context set will be reduced to the ER-worlds, in which the speaker has indirect evidence for the scope proposition. A discourse referent is created only for the scope proposition, but not for the ER.

At-issueness and the QUD Another prominent view (Simons et al. 2010, Beaver et al. 2017) links at-issueness to general discourse principles and characterizes it in terms of relevance to the current *Question Under Discussion* (QUD) (Büring 2003, Ginzburg 2012, Roberts 2012). This approach to at-issueness is adopted for evidentials in Faller 2019.

The crux of this view is as follows. A proposition is at-issue iff the speaker intends to address the QUD with it, which can only be felicitous if the proposition is relevant to the QUD and entails a complete or partial answer to it. Faller proposes that in the case of evidentials at least in Cuzco Quechua

⁸ Special treatment is given to reportative evidentials and parentheticals with speech verbs (*I hear, they say*) that, unlike other evidentials or parentheticals with first-person mental attitude verbs (*I think, I gather*), allow lack of commitment on part of the speaker to the scope proposition. The difference between the presence vs. absence of commitment is reflected only in the modeling of the scope proposition, but not the NAI contribution.

(Quechuan: Peru) and possibly across languages, only the scope proposition is relevant to the QUD. The ER, on the other hand, is argued to be conventionally marked as QUD-irrelevant.

The cornerstone of Faller's proposal is the contrast between at-issue and asserted content, formalized in the modified system of [Farkas & Bruce 2010](#), [Northrup 2014](#). This distinction is essential in accounting for the behavior of Cuzco Quechua =*si* and other reportative evidentials that do not require the speaker's commitment to the scope proposition. Faller shows that the reported proposition, even though not asserted, is nonetheless at-issue, evidenced, for example, by its ability to resolve the QUD. In this framework, AI content is put on the Table, a discourse component registering issues. Crucially, propositions put on the Table need not be the ones the speaker is committed to and therefore proposes to add to the common ground, namely, to assert. Putting something on the Table *may* result in an assertion on the basis of pragmatic defaults. However, as Faller argues, assertion is not the only possible outcome and sometimes propositions are simply presented for discussion, as is the case with the scope proposition of reportative evidentials. In this framework, the scope proposition 'It rained' in (1) is QUD-relevant and is put on the Table, but not necessarily asserted. The proposition that the speaker has indirect evidence is simply added to the common ground without further ado. In general, the NAI status of the ER is only discussed in passing, and there is no direct analogy between the ER and classical NAI entailments.

Focusing on AI contributions, Faller is the first to emphasize that evidential at-issueness can be modeled in substantially different ways. The next section zooms in on purported evidential not-at-issueness, examining the predictions of Murray's assertion-based proposal and of Faller's question-based proposal. As points of comparison, I will use appositives and slifting parentheticals, as evidentials are explicitly paralleled to those constructions in Murray's framework.⁹ The main takeaway is that it is not a given that the ER should be classified as a conventional trigger of NAI content.

⁹ I will rely on English data, as there is little cross-linguistic work in this area (though see [Tonhauser 2013](#) on appositives in Guaraní and [Korotkova 2016a](#) on Turkish and Bulgarian).

3 Tests for at-issueness

3.1 Negation

One of the primary arguments in favor of the ER-as-NAI view has been the interaction of evidentials with negation. As discussed below, the negation diagnostic is not convincing. The behavior of evidentials with clause-mate negation can be easily explained by scope, and cross-linguistic data on external negation are lacking.

Clause-mate negation Cross-linguistically, in sentences like (2) the evidential is not interpreted in the scope of clause-mate negation (de Haan 1997: 146-170; Murray 2017: 28-31).

(2) Georgian

sup'i ar gauk'etebia
soup-NOM NEG make.IND.PST
'S/he didn't make soup, I hear/infer.'

Escaping the scope of negation and other other entailment-canceling operators is known under the name of projection and is a hallmark of presuppositions, more recently associated with NAI content at large (Simons et al. 2010, Tonhauser et al. 2013). The appositive in (3) illustrates.¹⁰

(3) Orcutt, a spy, doesn't smile.

LF: [\neg Orcutt smiles] \wedge [Orcutt is a spy]

Capitalizing on the perceived similarity between evidentials and classical NAI entailments, semantic literature often takes the interpretation in (2) as an instance of projection and uses it to support the ER-as-NAI view (Izvorski 1997, Matthewson, Davis & Rullman 2007, Koev 2017 a.o.). (This test is not used in Faller 2019, so I will not talk about that proposal here.) However, the interpretation in (2) is distinct from projection, as Tonhauser (2013) points out for Guaraní. To clarify, (4) provides logically possible interpretations for evidential sentences with negation.

¹⁰ Slifting parentheticals usually resist embedding altogether (Ross 1973, Potts 2005) and are not discussed here.

- (4) Surface syntax: [\neg [EV p]]
- (i) Narrow scope of the evidential
LF: [\neg [EV p]]
 - (ii) Projection
LF: [$\neg p$] \wedge [EV p]
 - (iii) Wide scope of the evidential
LF: [EV [$\neg p$]]

The interpretation of (2) corresponds to the one in (4iii), wide scope of the evidential with respect to negation. The projective interpretation in (4ii) would yield, in parallel to (3), a different meaning for (2): *S/he didn't make soup, and I hear/infer s/he made soup*. Such interpretation is in fact not attested for evidentials.¹¹ The narrow scope interpretation in (4i) is not attested either.¹²

Murray (2010, 2014, 2017) argues that the projective profile of the ER is simply different from that of presuppositions, hence the difference in interpretation. The wide-scope interpretation in (4iii) is attributed to the fact that NAI content in general, including the ER, is semantically exempt from the scope of propositional operators.¹³ However, as noted in Murray 2017: 31-34, the scopal behavior of evidentials with respect to other propositional operators is subject to cross-linguistic variation. Thus, evidentials may take

¹¹ von Stechow & Gillies (2010) formulate the evidential component of epistemic *must* such that the speaker does not have direct evidence for p nor $\neg p$. It solves the projection problem, but, as von Stechow and Gillies themselves admit, is a placeholder.

¹² Aikhenvald (2004) cites two putative counter-examples to this generalization, Akha (Tibeto-Burman) and Warlpiri (Pama-Nyungan). While I lack access to Akha, Warlpiri's case is a misinterpretation.

(i) Warlpiri (Pama-Nyungan: Australia)

ngana-ngku mayi nganta paka-rnu
who-ERG Q REP hit-PST

Original translation: 'I do not know who they reckon hit her.'

Suggested translation: 'Someone (I don't know who) hit her, they reckon.'

(adapted from Aikhenvald 2004: 97)

The sentence above does not contain negation or 'know'. Instead, it features a *wh*-indefinite *ngana-ngku mayi* (Bowler 2017), and indefinites across languages frequently give rise to epistemic inferences as in *someone (I don't know who)* (Alonso-Ovalle & Menéndez-Benito 2013).

¹³ The effect is achieved by treating negation (and other propositional operators) as a relation between propositions that can selectively target constituents in its syntactic scope (cf. Stone & Hardt 1999).

narrow scope with tense (Gitksan, Rullman & Matthewson 2018) or modality (Tagalog, Kierstead 2015). If the ER, as a type of NAI content, is immune to the effect of propositional operators across the board, the possibility of narrow scope with respect to some, but not all, operators is not explained.

In line with de Haan's (1997) original observation, I suggest that wide scope has nothing to do with at-issueness. Evidentials behave like other operators that do not exhibit scope ambiguity with clause-mate negation. For example, many languages (English, Finnish, German, Tamil) have deontic modals that take obligatory wide scope with respect to clause-mate negation (de Haan 1997: 58-85). Iatridou & Zeijlstra (2013) provide a polarity-based explanation of the pattern. In another empirical domain, Sharvit (2015) argues that some readings of adjectival *only* are a result of movement to a higher position rather than projection. To sum up, an analysis of obligatory wide scope does not have to involve discourse status (cf. Schlenker 2021).

The behavior of evidentials lends itself to a syntactic explanation along the lines of Cinque 1999, Speas 2010. Assuming that (i) negation is always interpreted in its surface position (Horn 1989, Zeijlstra 2004) and that (ii) evidentials cross-linguistically are high in the clausal spine (Bhadra 2018, Korotkova 2021), one may argue that evidentials are higher than negation in the syntax. The point is that the explanation of the pattern needn't be grounded in at-issueness.

External negation Given that the behavior of an element with clause-mate negation can be obscured by scope-taking, it is instrumental to look at external negation (*It is not the case that*). Such negation can cancel presuppositions (Horn 1989), but it does not affect appositives, which is one of Potts's (2005) empirical arguments for treating conventional implicatures as a separate class of meaning. Consider (5). Like its counterpart in (3), it entails that Orcutt is a spy:¹⁴

- (5) It is not that case that Orcutt, a spy, smiles.
 LF: [\neg Orcutt smiles] \wedge [Orcutt is a spy]

Data of this sort have not been collected systematically for evidentials, and they might be impossible to obtain. For example, the Georgian evidential past is ungrammatical with any kind of negation in the higher clause, including under 'doubt' and 'not think'. In Turkish, external negation takes nom-

¹⁴ Some speakers allow the narrow scope construal of the appositive, but even for them the root level reading is always available (Potts 2005: 116-117).

inalizations (Beste Kamali, p.c.), which ban evidentials (Korotkova 2021). In Cheyenne, evidentials are banned from all subordinate clauses (Murray 2016), which will likely make the Cheyenne equivalent of (6) ungrammatical, and a number of languages ban evidentials in complement clauses (Korotkova 2021). But just the right type of example is provided for Japanese in McCready & Ogata 2007. In (6), the negative copula *janai* obligatorily outscopes the evidential.

(6) Japanese (isolate; Japan)

[konya ame-ga furi-soo] janai
 [tonight rain-NOM fall.INF-INFER] COP.NEG.PRES
 ‘It is not the case that it looks like it will rain.’
 LF: \neg [Ev p] (adapted from McCready & Ogata 2007: 170)

(7) Interpretations not attested for (6)

(ii) Projection

LF: [$\neg p$] \wedge [Ev p]

(iii) Wide scope of the evidential

LF: [Ev $\neg p$]

Analyses that treat appositives and the ER on a par (Murray 2010, 2014, 2017, Koev 2017) predict that the ER will be likewise unaffected by external negation. (6) is expected to have the interpretation in (7ii), in parallel to (5). Furthermore, if the ER always takes the at-issue proposition as its argument and is itself not affected by negation, we expect the interpretation in (7iii), in parallel to what is observed for clause-mate negation in (2). Those expectations are not borne out, which makes the ER-as-NAI view not justified at least for Japanese.¹⁵

Interaction with external negation may be subject to cross-linguistic variation, and there can be multiple ways to parameterize it, not necessarily involving at-issueness. For example, evidentials that do not allow the narrow scope reading can be analyzed as strong NEG raising predicates, while those that allow the narrow scope reading as weak ones (cf. Winans 2016 on in-

¹⁵ A reviewer notes that the narrow scope of the evidential in (6) can be taken as an argument for analyzing evidentials as epistemic modals, given that modals generally embed semantically (cf. Hacquard & Wellwood 2012). As discussed in detail in Korotkova 2015, 2016b, 2020, the narrow scope of evidentials in clausal complements is in principle allowed both in modal and non-modal approaches to evidentiality, so this does not play a role here.

ferential *will*). When such data become available for evidentials, they will undoubtedly inform theories of evidential meaning. In its current form the ER-as-NAI view relies on data from clause-mate negation, which can be explained by fixed scope, and the predictions of this view for external negation have not been tested.

Before I proceed, a note on projection. According to the influential account in Simons et al. 2010, Beaver et al. 2017, Tonhauser, Beaver & Degen 2018, projection and not-at-issueness go hand in hand. However, there is mounting evidence against this view. For example, appositives project but can be classified as AI under some definitions. And unlike the situation with negation, the behavior of evidentials with other entailment-canceling operators varies cross-linguistically. Thus, in conditionals evidentials may take wide scope (Bulgarian, Koev 2017), narrow scope (Japanese, McCready & Ogata 2007), or both, in addition to projecting (Tagalog, Kierstead 2015). Murray (2017: 26-43) attributes this variation to constraints on evidentials in embedded clauses. However, if evidentials and appositives belong to the same NAI family, we expect a uniform behavior in conditionals and other embedded environments at least in those languages that license the syntactic embedding of evidentials. This expectation is not borne out.

3.2 Non-challengeability

Another diagnostic frequently used to support the ER-as-NAI view is non-challengeability. Thus, both the ER in Georgian (8) and sentence-medial nominal appositives in English (9) cannot be targeted by *That's not true*:

- (8) a. kalifornia-s k'anonieri gauxdia marihuan-is
 California-DAT legal make.IND.PST marijuana-GEN
 gamoq'eneba
 usage.NOM
 'California legalized marijuana, I hear/infer.'
- b. ar aris martali
 NEG be.3SG.PRES true
 'That's not true.'
 ✓scope proposition (= 'California didn't legalize marijuana.')
- # ER (= 'You didn't hear/infer that.')

- (9) a. Orctutt, a spy, smiles.
 b. That's not true.
 ✓ main clause (=Orctutt doesn't smile.)
 # appositive (=Orctutt isn't a spy.)

Non-challengeability is often used in drawing the AI-NAI line (Amaral, Roberts & Smith 2007; Diagnostic 1 in Tonhauser 2012). The idea is that one can only agree or disagree with the main point of an utterance. Most, if not all, evidentials studied within formal semantics exhibit the pattern in (8) (Korotkova 2016a,b, Murray 2017), and the ER has been argued to be NAI based on this test. Below I discuss non-challengeability in a larger context of propositional anaphora and argue, following Snider 2017, that it does not correlate with at-issueness in the frameworks that have been applied to evidentiality so far.

Anaphoric potential and disagreement *That's not true* tests two things: *that*-anaphora, which needn't be a disagreement (Jasinskaja 2016), and disagreement, which needn't include *that* (Korotkova 2016a). When the two come apart, the ER may be targeted by *that*-anaphora.

Self-attributions of a mental state (*I am in pain, I hope*) ban disagreement regardless of its linguistic shape, because normally the addressee is not in a position to contest privileged information about the speaker (Bar-On 2004 a.o.). Korotkova 2016a,b, 2020 argues that evidentials across languages are self-attributions, which would then explain their non-challengeability on epistemological grounds.¹⁶ However, from the standpoint of propositional anaphora, there should be no difference between disagreement and expressing, say, surprise, frustration or anything else (Jasinskaja 2016, Snider 2017). If evidentials are allergic to disagreement rather than anaphora, it is expected that the ER, just like, for example, *I hope*, can be targeted by non-denying anaphora. The prediction is borne out for Bulgarian, as (10) demonstrates.

- (10) Bulgarian (South Slavic: Bulgaria)
 a. Ana se ozheni-l-a.
 Ana REFL marry-IND-F
 'Ana got married, I hear/infer.'

¹⁶ Self-attributions can be targeted by *That's not true* if the speaker is suspected of insincerity or incompetence. Korotkova argues that the ER, too, can be directly challenged in those circumstances.

- b. Tova e stranno. Tja mi kaza da go pazja v
that be.3SG.PRES weird.N she me say.PST COMP it keep in
tajna.
secret
'That's surprising. She told me to keep it a secret.'

(adapted from Korotkova 2016a: 72)

In (10), the surprise is not about Ana's getting married but about the speaker's being told about it, and it is the ER that is targeted by the anaphor *tova*.¹⁷ If anaphoric potential is indicative of at-issueness, then the ER in (10) is AI. The data as in (10) have not been systematically collected for evidentials, so it would be premature to make any conclusions about the anaphoric availability of the ER across the board. For one thing, some languages (Georgian, Turkish) don't have an exact counterpart of *that*-anaphora due to constraints on overt pronouns. Importantly, such data, when available, will bear on the question of the ER's discourse status not under all definitions of at-issueness.

Anaphoric potential and at-issueness Snider (2017) and Koev (2018) demonstrate that availability for anaphora, including direct disagreement by means of *That's not true* or response particles (treated as propositional anaphors; Krifka 2013, Roelofsen & Farkas 2015),¹⁸ cannot be used as a blanket diagnostic of at-issueness. For example, slifting parentheticals, typically argued to contribute NAI information, may be challenged (11). The same holds for

¹⁷ A reviewer brings up the question of grammatical evidentials (language-specific) vs. evidential norms of assertion (arguably universal), and points out that the discourse in (10) can be reproduced in English:

- (i) a. You guys, Ana got married.
b. That's weird, she told me to keep it a secret.

This example, to the extent that it is felicitous (my consultants prefer *It's weird that you say it*), shows that evidential restrictions in English introduce a discourse referent, otherwise *that* wouldn't be able to target them (see discussion and references in Snider 2017). This, in turn, supports the inclusion of evidential commitments into the general model of discourse for *any* language, with or without grammatical evidentials (Northrup 2014, Faller 2019). The relation between such commitments and norms of assertion is a separate issue, which I am not going to address here, given that assertion norms have been postulated without taking languages with evidentials into account (cf. Benton & von Elswyk 2020) and that the overall status of such norms is controversial (Pagin 2016).

¹⁸ Though see Wiltschko 2018 on other functions of response particles.

appositives (12) when they are sentence-final (Anderbois, Brasoveanu & Henderson 2015, Syrett & Koev 2015).

- (11) a. Ellen is a passionate cook, her fiancé claimed.
 b. No, he didn't. (Koev 2018: 11)

- (12) a. He took care of his husband, who had prostate cancer.
 b. No, he had lung cancer.
 (Anderbois, Brasoveanu & Henderson 2015: 115)

If availability for anaphora is a diagnostic of at-issueness, then both slifting parentheticals and appositives can be AI. However, Snider (2017) argues that anaphoric potential is indicative of the (N)AI status only in salience-based approaches to at-issueness (Hunter & Asher 2016, Jasinskaja 2016) and that the two notions should be kept separate in other types of approaches. This spells the following consequences for the two ER-as-NAI proposals I discuss in this paper.

In Murray's assertion-based account in its current form at-issueness is formally linked to anaphoric potential. *That* and response particles can only target AI contributions, including the scope proposition of evidentials, because those are the only propositions assigned a discourse referent. However, one can preserve the core of the system — AI content as a proposal to update the common ground vs. NAI content as a direct update — without mapping the AI-NAI distinction onto anaphoric availability (Snider 2017: 279). Instead, discourse referents can be assigned to each type of contribution, which would make the data in (10-12) fully compatible with the formalism without treating the ER as an AI contribution.

In Faller's question-based system, disagreement is argued to be about the QUD resolution. Only those propositions that are relevant to the QUD, such as the scope proposition of evidentials, are put on the Table and can be agreed or disagreed with in the discourse. The ER, on the other hand, is treated as QUD-irrelevant, therefore off the Table. However, there is nothing in the formalism that relies on propositional anaphora. Furthermore, as discussed in the next section, relevance to the QUD and anaphoric potential do not correlate, therefore, the non-challengeability diagnostic should not be relied on in question-based frameworks.

The bottom line for the ER is that its anaphoric potential needn't be derived from at-issueness in assertion-based or question-based frameworks. Should the data like (10) become available for more languages, they will bear

on the N(AI) status of the ER only insofar as one adopts a salience-based view on evidentiality within the framework in [Hunter & Asher 2016](#), [Jasin-skaja 2016](#), something that has not been done so far.

3.3 Answerhood

The final test for at-issueness that I discuss in this paper is answerhood, the ability to address the QUD via answering explicit or implicit questions (Diagnostic 2 in [Tonhauser 2012](#)). According to this test, slifting parentheticals (13) and appositives, both sentence-medial (14a) and sentence-final (14b), come out as NAI:¹⁹

- (13) *What did she do next?*
Her husband was a real sweetheart, she announced. ([Koev 2018: 11](#))
- (14) *Who is Margaret's cousin?*
- a. #Pauline, who is Margaret's cousin, was interviewed by Food Network.
 - b. #Food Network interviewed Pauline, who is Margaret's cousin.
([Snider 2017: 255](#))

The answerhood diagnostic has been used in the literature on evidentiality only occasionally. However, for those evidentials it has been applied to, the ER comes out as NAI, as (15) illustrates for Georgian (see also [Faller 2019](#) on Cuzco Quechua, [Bary & Maier 2019](#) on Gitksan and [Lee 2011](#) on Korean).

- (15) Georgian
#*Question 1: What makes you think there is a new metro line in LA?*
✓*Question 2: Any news on public transportation in LA?*

los-anzeles-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.'

The ER contributed by the Georgian evidential past cannot address the QUD (Question 1), while the scope proposition can (Question 2), which makes the ER a NAI contribution according to the answerhood diagnostic.

¹⁹ Appositives can answer *why*-questions ([Syrett & Koev 2015](#)), but, as [Snider](#) argues, this does not truly indicate at-issueness. See also [Esipova 2018](#) on coordinated questions and responses.

Answerhood is central to the QUD definition of at-issueness (Simons et al. 2010, Beaver et al. 2017), and the data in (15) fall out naturally in the proposal in Faller 2019, which explicitly appeals to the QUD structure. The scope proposition is conventionally marked as QUD-relevant while the ER is marked to be QUD-irrelevant, which explains the pattern. However, neither the data in (15), nor the behavior of slifting parentheticals and appositives in (13)-(14) directly follow from Murray’s assertion-based proposal. Murray’s framework construes the AI-NAI distinction as a difference between updates of the common ground and makes no formal reference to the QUD structure.²⁰ As discussed in detail in Koev 2018, there is no straightforward way to reconcile the proposal-centric and the question-centric notions of at-issueness. Therefore, Faller’s question-based proposal is better suited to explain the inability of at least some evidentials to answer questions. Below I provide another empirical argument for a question-based view on evidential not-at-issueness.

The QUD definition of at-issueness is ultimately pragmatic and does not require that some content is always not-at-issue. For example, Simons et al. (2017) argue that the veracity entailment of factive verbs, traditionally analyzed as a lexical presupposition, arises instead due to pragmatic reasoning about the QUD and thus may disappear under the right conditions (though see Anand & Hacquard 2014, Djärv 2019). If the ER at least in some languages is QUD not-at-issue, as diagnosed by examples such as (15), we can expect that sometimes the ER can also be at-issue. This expectation is borne out for Dutch in (16).

(16) Dutch (Germanic; Netherlands)

Question: What makes you think it will rain?

- a. #Het schijnt te regenen.
 this seem:REP.3SG.PRES INF rain
 Intended: ‘It’s said that it will rain.’
- b. ✓Het [SCHIJNT]_F te regenen.
 this seem:REP.3SG.PRES INF rain
 ‘It’s [SAID]_F that it will rain.’

In (16a), the ER of the Dutch raising verb *schijnen* (≈‘to be said that’) does not answer the question. Like its English translation, (16a) is judged uninformative. However, focus, realized as prosodic prominence, significantly im-

²⁰ The answerhood diagnostic is mentioned in Murray 2017: 16, but the test is not applied to evidentials and it is not discussed how to incorporate QUDs into the formal system.

proves the acceptability of the sentence and its translation (16b). The data in (16b) show that in Dutch the ER can be QUD at-issue when the evidential is prosodically focused. (16b) further shows that the infelicity of (15) and (16a) may have pragmatic, rather than purely semantic, underpinnings. In question-based approaches to information structure (see discussion in [Velleman & Beaver 2016](#)), focus marks question/answer congruence: content addressing the QUD must be focused (but not all focused content addresses the QUD; [Esipova 2019](#)). If, for some reason, evidentials are typically focally backgrounded, then the QUD not-at-issueness of the ER in (15) and (16a) can be related to this. And placing focus would override this default and make the ER at-issue, similarly to the effect observed for co-speech gestures and some presuppositions, but not appositives, which remain NAI regardless of focus ([Esipova 2019](#)).²¹ The pattern in (16) can be easily explained in a question-based approach to evidential not-at-issueness, such as [Faller 2019](#), the only difference from Faller's actual proposal being that the ER need not be treated as a conventional trigger of NAI content. The main idea is that at-issueness — when understood in terms of QUDs — is related to information structure and may change as the discourse changes.

Needless to say, there are many open questions. First, it is not clear why the ER should be backgrounded by default. One possibility is that usually something else in the sentence is focused and the information-structural status of the ER is the givenness effect of focus (cf. [Abrusán 2013](#) on quasi-presuppositions), but this hypothesis needs extensive testing before any conclusions can be drawn. Second, the interaction of evidentiality and information structure is uncharted territory. Focus marking varies greatly across languages, and in some cases data like (16) may be impossible to obtain because evidentials cannot be focused. For example, evidentials in Cuzco Quechua are themselves syntactic markers of focus ([Faller 2002](#)). And in some languages that realize focus prosodically, evidentials cannot be accented due to independent constraints (Turkish, [Kamali 2011](#); German inferential *wohl*, [Zimmerman 2008](#)). However, the data in (16) present an argument, at least for Dutch, against the strict ER-as-NAI view, according to which evidentials, like appositives, are conventional triggers of NAI meaning. In contrast, in theories where information structure reflects the architecture of discourse, the ER may be construed as NAI or AI depending on its information-structural

²¹ I am not aware of any systematic work on focus in slifting parentheticals, and my consultants judge the slifting counterpart of (16b) as infelicitous.

properties (see also [Horn 2016](#) for related discussion on other types of triggers).

4 Conclusions

Evidentials, much like appositives and slifting parentheticals, have been argued to be conventional triggers of NAI content. This prevalent ER-as-NAI view rests on a series of empirical diagnostics for (not-)at-issueness that are often viewed as a package: negation, non-challengeability, answerhood. I have shown that each diagnostic should be evaluated on its own merits:

- Wide scope with clause-mate negation does not automatically indicate the not-at-issueness of evidentials, and the existence of AI operators with fixed wide scope is well-known. Systematic data on evidentials and external negation, which would be more indicative, are lacking.
- Propositional anaphora, constraints on which often determine whether a contribution is directly challengeable, only constitutes a good diagnostic of the (N)AI status under the salience-based definition of at-issueness, which has not been applied to evidentiality. Anaphoric potential is conceptually independent of at-issueness otherwise ([Snider 2017](#)).
- The diagnostic of answerhood is the most reliable one, but it has received little attention in the literature on evidentiality. For those languages where it has been checked, the ER turns out to be NAI according to this test. However, those results directly follow only from the question-based proposal in [Faller 2019](#), but not from the assertion-based proposal in [Murray 2010, 2014, 2017](#), which makes no reference to the QUD structure.

Once the ability of evidentials to answer questions and their interaction with information structure are better studied across languages, we will be in a better position to model the ER. One possible outcome is that evidentials do not conventionally encode NAI meaning but often happen to be backgrounded for pragmatic reasons. To this end, consider the following hypothesis.

Discourse relations that introduce justification for previously made claims do not push the discourse forward, which makes information introduced by those relations *pragmatically* not-at-issue ([Hunter & Asher 2016](#), [Hunter & Abrusán 2017](#)). If so, it would not be surprising for grammatical evidentials,

whose typical function is to provide grounds for claims, to become backgrounded in the discourse by default. This view would make evidentials similar to attitude reports that can function parenthetically in the discourse (Simons 2007, Hunter 2016).

- (17) ✓ *Question 1: Where is Ana?*
✓ *Question 2: What does Miriam think?*
Miriam thinks she moved to Massachusetts.

In (17), the attitude report has a variable AI status: it can be NAI, with the complement constituting the main point (as evidenced by the sentence's ability to answer Question 1), but it may also be AI (as evidenced by its ability to answer Question 2). Unlike the situation with slifting parentheticals, (17) has no dedicated syntactic or prosodic marking of not-at-issueness, and what counts as the main point depends solely on context. Evidentials have been argued to not exhibit such at-issue variability (Murray 2017, Faller 2019), but the Dutch data in (16) suggest otherwise. As (17) shows, attitude verbs can be AI without focus, which suggests that there might be pragmatic defaults that only affect evidentials but can be overridden by focus, as in (16b). The hypothesis that evidentials are not conventional triggers of NAI meaning may significantly simplify semantic theories of evidentiality while offloading the work to the pragmatics (see also Roberts 2019 on epistemic modals). More data are needed in order to validate it, and I leave an articulated analysis of evidentiality along those lines for future research.

References

- Abrusán, Márta. 2013. A note on quasi-presuppositions and focus. *Journal of Semantics* 30(2). 257-265. <https://doi.org/10.1093/jos/ffso10>.
- Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford: Oxford University Press.
- Aikhenvald, Alexandra Y. (ed.). 2018. *The Oxford handbook of evidentiality*. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780198759515.001.0001>.
- Alonso-Ovalle, Luis & Paula Menéndez-Benito. 2013. Two views on epistemic indefinites. *Language and Linguistics Compass* 7(2). 105-122. <https://doi.org/10.1111/lnc3.12009>.
- Amaral, Patricia, Craige Roberts & E. Allyn Smith. 2007. Review of *The Logic of Conventional Implicatures* by Chris Potts. *Linguistics and Philosophy* 30(6). 707-749. <https://doi.org/10.1007/s10988-008-9025-2>.

- Anand, Pranav & Valentine Hacquard. 2014. Factivity, belief and discourse. In Luka Crnić & Uli Sauerland (eds.), *The art and craft of semantics: A Festschrift for Irene Heim*, 69–90. Cambridge, MA: MITWPL.
- Anderbois, Scott, Adrian Brasoveanu & Robert Henderson. 2015. At-issue proposals and appositive impositions in discourse. *Journal of Semantics* 32(1). 93–138. <https://doi.org/10.1093/jos/fft014>.
- Bar-On, Dorit. 2004. *Speaking my mind: expression and self-knowledge*. Oxford: Clarendon Press.
- Bary, Corien & Emar Maier. 2019. The landscape of speech reporting. Ms., Radboud University Nijmegen & University of Groningen. <https://ling.auf.net/lingbuzz/003526>.
- Beaver, David I., Craig Roberts, Mandy Simons & Judith Tonhauser. 2017. Questions under discussion: Where information structure meets projective content. *Annual Review of Linguistics* 3(1). 265–284. <https://doi.org/10.1146/annurev-linguistics-011516-033952>.
- Benton, Matthew & Peter von Elswyk. 2020. Hedged assertion. In Sanford Goldberg (ed.), *The Oxford handbook of assertion*, 245–263. Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780190675233.013.11>.
- Bhadra, Diti. 2018. Evidentials are syntax-sensitive: the view from Bangla. *Glossa: A Journal of General Linguistics* 3(1). 1–39. <https://doi.org/10.5334/gjgl.449>.
- Boeder, Winfried. 2000. Evidentiality in Georgian. In Lars Johanson & Bo Utas (eds.), *Evidentials: Turkic, Iranian and neighbouring languages*, 275–328. Berlin & New York: Mouton de Gruyter.
- Bowler, Margit. 2017. Quantification in Warlpiri. In Denis Paperno & Edward Keenan (eds.), *Handbook of quantifiers in natural language*, vol. 2, 963–994. Cham: Springer. https://doi.org/10.1007/978-3-319-44330-0_19.
- Bowler, Margit. 2018. *Aspect and evidentiality*. University of California, Los Angeles dissertation. <https://escholarship.org/uc/item/6pk1s5ts>.
- Büring, Daniel. 2003. On D-trees, beans, and B-accent. *Linguistics and Philosophy* 26(5). 511–545. <https://doi.org/10.1023/A:1025887707652>.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press. 275.
- Djäv, Kajsa. 2019. *Factive and assertive attitude reports*. Philadelphia, PA: University of Pennsylvania dissertation. <https://repository.upenn.edu/e-dissertations/3645>.
- Esipova, Maria. 2018. QUD-addressing appositives don't have to be clause-final. *Snippets* 33. 7–8. <https://doi.org/10.7358/snip-2018-033-esip>.

- Esipova, Maria. 2019. Focus on what's not at issue: Gestures, presuppositions, appositives under contrastive focus. In Uli Sauerland & Stephanie Solt (eds.), *Sinn und Bedeutung (SuB)* 22, vol. 1, 385–402. Berlin: ZAS. <https://ojs.ub.uni-konstanz.de/sub/index.php/sub/article/view/97>.
- Faller, Martina. 2002. *Semantics and pragmatics of evidentials in Cuzco Quechua*. Palo Alto, CA: Stanford University dissertation. <https://personalpages.manchester.ac.uk/staff/Martina.T.Faller/documents/Thesis.pdf>.
- Faller, Martina. 2019. The discourse commitments of illocutionary reportatives. *Semantics and Pragmatics* 12(8). 1–46. <https://doi.org/10.3765/sp.12.8>.
- Farkas, Donka & Kim Bruce. 2010. On reacting to assertions and polar questions. *Journal of Semantics* 27(1). 81–118. <https://doi.org/10.1093/jos/ffp010>.
- von Fintel, Kai. 2008. What is presupposition accommodation, again? *Philosophical Perspectives* 22(1). 137–170. <https://doi.org/10.1111/j.1520-8583.2008.00144.x>.
- von Fintel, Kai & Anthony S. Gillies. 2010. Must ...stay ...strong! *Natural Language Semantics* 18(4). 351–383. <https://doi.org/10.1007/s11050-010-9058-2>.
- Ginzburg, Jonathan. 2012. *Interactive stance*. Oxford: Oxford University Press.
- Gutzmann, Daniel. 2015. *Use-conditional meaning: Studies in multidimensional semantics*. Oxford: Oxford University Press.
- de Haan, Ferdinand. 1997. *The interaction of modality and negation: A typological study*. New York: Garland Publishing.
- Hacquard, Valentine & Alexis Wellwood. 2012. Embedding epistemic modals in English: A corpus-based study. *Semantics and Pragmatics* 5(4). 1–29. <https://doi.org/10.3765/sp.5.4>.
- Harris, Alice. 1981. *Georgian syntax: A study in relational grammar*. Cambridge: Cambridge University Press.
- Horn, Laurence. 1989. *A natural history of negation*. Chicago: University of Chicago Press.
- Horn, Laurence. 2016. Information structure and the landscape of (not-)at-issue meaning. In Caroline Féry & Shinichiro Ishihara (eds.), *The Oxford handbook of information structure*, 108–127. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199642670.013.009>.
- Hunter, Julie. 2016. Reports in discourse. *Dialogue and Discourse* 7(4). 1–35. <https://doi.org/10.5087/dad.2016.401>.

- Hunter, Julie & Marta Abrusán. 2017. Rhetorical structure and QUDs. In Mihoko Otake, Setsuya Kurahashi, Yuiko Ota, Ken Satoh & Daisuke Bekki (eds.), *New frontiers in artificial intelligence*, 41–57. Cham: Springer. https://doi.org/10.1007/978-3-319-50953-2_4.
- Hunter, Julie & Nicholas Asher. 2016. Shapes of conversation and at-issue content. *Semantics and Linguistic Theory (SALT)* 26. 1022–1042. <https://doi.org/10.3765/salt.v26i0.3946>.
- Iatridou, Sabine & Hedde Zeijlstra. 2013. Negation, polarity and deontic modals. *Linguistic Inquiry* 44(4). 529–568. https://doi.org/10.1162/LING_a_00138.
- Izvorski, Roumyana. 1997. The present perfect as an epistemic modal. *Semantics and Linguistic Theory (SALT)* 7. 222–239. <https://doi.org/10.3765/salt.v7i0.2795>.
- Jasinskaja, Katja. 2016. Not at issue any more. Ms., University of Cologne. http://dslc.phil-fak.uni-koeln.de/sites/dslc/katja_files/jasinskaja_any_more.pdf.
- Kamali, Beste. 2011. *Topics at the PF interface of Turkish*. Cambridge, MA: Harvard University dissertation.
- Kierstead, Gregory. 2015. *Projectivity and the Tagalog reportative evidential*. Columbus, OH: Ohio State University MA thesis.
- Koev, Todor. 2017. Evidentiality, learning events and spatiotemporal distance: The view from Bulgarian. *Journal of Semantics* 34(1). 1–41. <https://doi.org/10.1007/s11049-016-9344-x>.
- Koev, Todor. 2018. Notions of at-issueness. *Language and Linguistics Compass* 12(12). 1–16. <https://doi.org/10.1111/lnc3.12306>.
- Korotkova, Natasha. 2015. Evidentials in attitudes: do’s and dont’s. *Sinn und Bedeutung (SuB)* 19. 340–357. <https://doi.org/10.18148/sub/2015.v19i0.237>.
- Korotkova, Natasha. 2016a. Disagreement with evidentials: a call for subjectivity. *JerSem: The 20th Workshop on the Semantics and Pragmatics of Dialogue*. 65–75. http://events.illc.uva.nl/sem-dial/proceedings/sem-dial2016_jersem_proceedings.pdf.
- Korotkova, Natasha. 2016b. *Heterogeneity and universality in the evidential domain*. University of California, Los Angeles dissertation. <https://escholarship.org/uc/item/4om5f2f1>.
- Korotkova, Natasha. 2020. The subjective heart of evidentiality. Talk at the workshop “Semantic Universals in the Modal and Attitudinal Domain”, GLOW 43, <https://osf.io/6xzg4/>.

- Korotkova, Natasha. 2021. The embedding puzzle: constraints on evidentials in complement clauses. *Linguistic Inquiry* 52(1). 210-226. https://doi.org/10.1162/ling_a_00363.
- Krifka, Manfred. 2013. Response particles as propositional anaphors. *Semantics and Linguistic Theory (SALT)* 23. 1-18. <https://doi.org/10.3765/salt.v23i0.2676>.
- Lee, Jungmee. 2011. *Evidentiality and its interaction with tense: Evidence from Korean*. Columbus, OH: Ohio State University dissertation. http://rave.ohiolink.edu/etdc/view?acc_num=osu1306940284.
- Mandelkern, Matthew. 2019. What 'must' adds. *Linguistics and Philosophy* 42(3). 225-266. <https://doi.org/10.1007/s10988-018-9246-y>.
- Matthewson, Lisa, Henry Davis & Hotze Rullman. 2007. Evidentials as epistemic modals: Evidence from St'át'imcets. In Jeron van Craenenbroeck (ed.), *Linguistic variation yearbook* 7, 201-254. Amsterdam: John Benjamins. <https://doi.org/10.1075/livy.7.07mat>.
- McCready, Elin. 2010. Varieties of conventional implicature. *Semantics and Pragmatics* 3(8). 1-57. <https://doi.org/10.3765/sp.3.8>.
- McCready, Elin & Norry Ogata. 2007. Evidentiality, modality and probability. *Linguistics and Philosophy* 30(2). 147-206. <https://doi.org/10.1007/s10988-007-9017-7>.
- Murray, Sarah E. 2010. *Evidentiality and the structure of speech acts*. New Brunswick, NJ: Rutgers University dissertation. <http://www.semanticsarchive.net/Archive/WViOGQxY/>.
- Murray, Sarah E. 2014. Varieties of update. *Semantics and Pragmatics* 7(2). 1-53. <https://doi.org/10.3765/sp.7.2>.
- Murray, Sarah E. 2016. Evidentiality and illocutionary mood in Cheyenne. *International Journal of American Linguistics* 82(4). 487-517. <https://doi.org/10.1086/688604>.
- Murray, Sarah E. 2017. *The semantics of evidentials*. Oxford: Oxford University Press.
- Northrup, Oliver. 2014. *Grounds for commitment*. University of California, Santa Cruz dissertation. <https://doi.org/https://escholarship.org/uc/item/1ps845ks>.
- Pagin, Peter. 2016. Problems with norms of assertion. *Philosophy and Phenomenological Research* 93(1). 178-207. <https://doi.org/10.1111/phpr.12209>.
- Papafragou, Anna. 2006. Epistemic modality and truth conditions. *Lingua* 116(10). 1688-1702. <https://doi.org/10.1016/j.lingua.2005.05.009>.

- Potts, Christopher. 2005. *The logic of conventional implicatures*. Oxford: Oxford University Press.
- Roberts, Craige. 2012. Information structure in discourse: Towards an integrated formal theory of pragmatics. *Semantics and Pragmatics* 5(6). 1-69. <https://doi.org/10.3765/sp.5.6>.
- Roberts, Craige. 2019. The character of epistemic modality: Evidential indexicals. Ms., The Ohio State University, asc.ohio-state.edu/roberts.21/Roberts.EpistemicModality.pdf.
- Roelofsen, Floris & Donka Farkas. 2015. Polarity particle responses as a window onto the interpretation of questions and assertions. *Language* 19(2). 359-414. <https://doi.org/10.1353/lan.2015.0017>.
- Ross, John Robert. 1973. Slifting. In Maurice Gross, Morris Halle & Marcel-P. Schützenburger (eds.), *The formal analysis of natural languages*, 133-169. Berlin & Boston: De Gruyter. <https://doi.org/10.1515/9783110885248-009>.
- Rullman, Hotze & Lisa Matthewson. 2018. Towards a theory of modal-temporal interaction. *Language* 94(2). 281-331. <https://doi.org/10.1353/lan.2018.0018>.
- Scheffler, Tatjana. 2013. *Two-dimensional semantics*. Berlin & Boston: De Gruyter.
- Schlenker, Philippe. 2021. Supplements without bidimensionalism. *Linguistic Inquiry*. Advance publication. https://doi.org/https://doi.org/10.1162/ling_a_00442.
- Sharvit, Yael. 2015. The onliest NP: Non-definite definites. *West Coast Conference on Formal Linguistics (WCCFL)* 32. 171-190. <http://www.lingref.com/cpp/wccfl/32/paper3168.pdf>.
- Simons, Mandy. 2007. Observations on embedding verbs, evidentiality, and presupposition. *Lingua* 117(6). 1034-1056. <https://doi.org/10.1016/j.lingua.2006.05.006>.
- Simons, Mandy, David Beaver, Craige Roberts & Judith Tonhauser. 2017. The best question: Explaining the projection behavior of factives. *Discourse Processes* 54(3). 187-206. <https://doi.org/10.1080/0163853X.2016.1150660>.
- Simons, Mandy, Judith Tonhauser, David Beaver & Craige Roberts. 2010. What projects and why. *Semantics and Linguistic Theory (SALT)* 20. 309-327. <https://doi.org/10.3765/salt.v20i0.2584>.
- Snider, Todd. 2017. *Anaphoric reference to propositions*. Ithaca, NY: Cornell University dissertation. <https://ling.auf.net/lingbuzz/003710/current.pdf>.

- Speas, Margaret. 2010. Evidentials as generalized functional heads. In Anna Maria DiSciullo & Virginia Hill (eds.), *Edges, heads and projections: Interface properties*, 127–150. Amsterdam: John Benjamins. <https://doi.org/10.1075/la.156.1ospe>.
- Stone, Matthew & Daniel Hardt. 1999. Dynamic discourse referents for tense and modals. In Harry Bunt & Reinhard Muskens (eds.), *Computing meaning*, vol. 2, 301–319. Dordrecht: Kluwer. https://doi.org/10.1007/978-94-011-4231-1_15.
- Syrett, Kristen & Todor Koev. 2015. Experimental evidence for the truth conditional contribution and shifting information status of appositives. *Journal of Semantics* 32(3). 525–577. <https://doi.org/10.1093/jos/ffu007>.
- Tonhauer, Judith. 2012. Diagnosing (not-)at-issue content. *Semantics of Under-Represented Languages in the Americas (SULA)* 6. 239–254.
- Tonhauer, Judith. 2013. Reportative evidentiality in Paraguayan Guaraní. In Hannah Greene (ed.), *Semantics of Under-Represented Languages in the Americas (SULA)* 7, 189–204. Amherst, MA: GLSA Publications.
- Tonhauer, Judith, David Beaver, Craige Roberts & Mandy Simons. 2013. Towards a taxonomy of projective content. *Language* 89(1). 66–109. <https://doi.org/10.1353/lan.2013.0001>.
- Tonhauer, Judith, David I. Beaver & Judith Degen. 2018. How projective is projective content? gradience in projectivity and at-issueness. *Journal of Semantics* 35(3). 495–542. <https://doi.org/10.1093/jos/ffy007>.
- Velleman, Leah & David Beaver. 2016. Question-based models of information structure. In Caroline Féry & Shinichiro Ishihara (eds.), *The Oxford handbook of information structure*, 86–107. Oxford: Oxford University Press. <https://doi.org/10.1093/oxfordhb/9780199642670.013.29>.
- Wiltschko, Martina. 2018. Response particles beyond answering. In Laura R. Bailey & Michelle Sheehan (eds.), *Order and structure in syntax I: Word order and syntactic structure*, 241–279. Berlin: Language Science Press. <https://doi.org/10.5281/zenodo.1117726>.
- Winans, Lauren. 2016. *Inferences of “will”*. University of California, Los Angeles dissertation. <https://escholarship.org/uc/item/34c8644s>.
- Zeijlstra, Hedde. 2004. *Sentential negation and negative concord*. University of Amsterdam dissertation. https://www.lotpublications.nl/Documents/101_fulltext.pdf.
- Zimmerman, Malte. 2008. Discourse particles in the left periphery. In Benjamin Shaer, Philippa Cook, Werner Frey & Claudia Maienborn (eds.), *Dislocated elements in discourse*, 200–231. New York & London: Routledge.

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