

THE EMBEDDING PUZZLE:  
 CONSTRAINTS ON EVIDENTIALS  
 IN COMPLEMENT CLAUSES  
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## 1 Introduction

Languages vary in whether evidentials—that is, linguistic markers of information source (Aikhenvald 2004)—can appear in clausal complements. Embedding of evidentials is possible in some languages, such as Turkish (Turkic: Turkey; Şener 2011) (evidence for treating such clauses as instances of genuine embedding is provided in section 3).<sup>1</sup>

- (1) *Turkish*  
 Beste [dün kar yağ-**miş**] di-yor.  
 Beste [yesterday snow rain-**IND**] say-PROG  
 ‘Beste says that *allegedly* it snowed yesterday.’

In some other languages, such as Cuzco Quechua (Quechuan: Peru; Lefebvre and Muysken 1987), evidentials are banned from clausal complements.

- (2) *Cuzco Quechua*  
 \*[xuan=**mi** hamu-sqa-n-ta ] yacha-ni  
 [Juan=**DIR** come-NMLZ-3SG-ACC] know-1SG  
 Intended: ‘I know that *surely* Juan comes.’  
 (Lefebvre and Muysken 1987:19)

The semantic literature often views the variation in embeddability of evidentials as evidence for the semantic heterogeneity of evidentiality as a category (Faller 2002, 2007, Garrett 2001, Matthewson, Davis, and Rullmann 2007, McCready and Ogata 2007, Peterson 2010). Specifically, embeddability, and the contrast between (1) and (2), has been regarded as a diagnostic of the semantic status of respective markers. Embeddable evidentials, such as Turkish *miş* (Şener 2011), have been treated as epistemic modals. Nonembeddable evidentials, such as Cuzco Quechua *mi* (Faller 2002), have been analyzed as dealing with speech acts. However, the assumption that nonembeddability of evidentials indicates their speech act status can be chal-

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<sup>1</sup> Unless indicated otherwise, data come from my own work with consultants. Brackets have a representational status throughout and do not point to a specific syntactic analysis. Glosses: 1,2,3 = person; ◇ = possibility modal; ACC = accusative; COMP = complementizer; COP = copula; DIR = direct evidential; GEN = genitive; HAB = habitual; IND = indirect evidential; LOC = locative; NEG = negation; NMLZ = nominalization; NOM = nominative; PERF = perfect; PL = plural; POSS = possessive; PROG = progressive; PST = past; SG = singular. A more nuanced translation of (1) is ‘Beste says that, given what she heard/inferred, it snowed yesterday’. For the sake of simplicity, embedded evidentials will be translated with adverbials throughout. See Korotkova 2015, 2016, 2019, Sauerland and Schenner 2007, and Şener 2011 on the interpretation of evidentials in attitudes.

lenged on theoretical grounds alone. A growing body of syntactic (Aelbrecht, Haegeman, and Nye 2012, Haegeman 2012, 2014) and semantic (Krifka 2014) literature argues that speech act material is in fact not limited to root clauses, so the behavior of evidentials needs further scrutiny (see Korotkova 2017, Thomas 2014).

In this squib, I engage with the very idea of the semantic heterogeneity of evidentials, and the larger question of semantic variation (Bochnak 2013, von Stechow and Matthewson 2008, Matthewson 2001, 2013). I show that even though (non)embeddability is a matter of crosslinguistic variation, it is not a case of genuine semantic variation in evidentiality. This result provides further empirical support for the view that evidentials have a unified semantics across languages (Korotkova 2016, 2019, Matthewson 2011, 2012, Murray 2010, 2017). According to this view, the existing variation in evidentiality is not semantic. Drawing on data from Turkish, where evidentials can appear in tensed but not in nominalized complements, I propose that restrictions on the embedding of evidentials are due to the syntax of clausal complementation. It has been suggested before that (non)embeddability is due to morphosyntax (Matthewson 2012, Murray 2010, 2016, 2017), but this claim has not been argued for in detail. To this end, I offer the first detailed investigation of syntactic constraints on evidentials in clausal complements and put forth the following generalization: evidentials are embeddable only in those languages that have complements with enough structural space to host them. In Korotkova 2016, I discuss other arguments against the semantic heterogeneity view, as well as the fact that the variation is not unidimensional.

The next two sections present core data from Turkish. Section 2 provides a brief description of complementation strategies, and section 3 focuses on the distribution of evidentials across those strategies. Section 4 examines a broader crosslinguistic picture.

## 2 Clausal Complementation in Turkish

Like any Turkic language, Turkish has a variety of complementation strategies (George and Kornfilt 1981, Kornfilt 1997). The scope of this squib is restricted to tensed and nominalized complements, described in detail below (*tensed* and *nominalized* are descriptive labels; see section 3.2 on tense in nominalizations).<sup>2</sup> They differ both in morphological makeup and in clausal architecture, and there is no one-to-one mapping between those strategies and the embedding predicate's semantic type.

### 2.1 Tensed Complements with Nominative Subjects

Tensed complements with nominative subjects, exemplified in (3), are the closest counterpart of *that*-clauses in English. This complementa-

<sup>2</sup> I do not discuss parenthetical *ki*-clauses (Griffiths and Güneş 2014) or “subjunctive” nominalizations.

tion strategy is available to speech predicates, such as *demek* ‘say’ and *söylemek* ‘tell’, and to many predicates of mental attitude, such as *düşünmek* ‘think’ and *unmak* ‘hope’. In terms of external syntax, the complement, being an object, typically precedes the verb. The internal syntax is the same as in root clauses: (a) verb-final word order, (b) nominative-accusative case alignment, (c) full verbal morphology, including tense and agreement.

- (3) Natasha [sen gel-**di-n** (diye) ] bil-iyor.  
 Natasha [you.NOM come-PST-2SG (COMP)] believe-PROG  
 ‘Natasha believes that you came.’

Although the complement in (3) resembles a root clause, it instantiates genuine subordination. This is evidenced by the interpretation of the in-situ *wh*-phrase in (4) as a matrix question, which would be ruled out if the bracketed clause were quoted or a parenthetical.

- (4) Ben [Beste kim-i sev-iyor (diye) ] bil-iyor.  
 Ben [Beste who-ACC like-PROG (COMP)] believe-PROG  
 ‘Who<sub>i</sub> does Ben believe that Beste likes *t<sub>i</sub>*?’

Other tests for the subordinate status of such clauses include long-distance licensing of polarity items and the availability of *de re* construals (Özyıldız 2012, Şener and Şener 2011). Optional with *bilmek* ‘believe’ and absent with *demek* ‘say’, the complementizer *diye*, derived from *demek* (Özyıldız, Major, and Maier to appear), is obligatory with some predicates, such as *düşünmek* ‘think’ and *duymak* ‘hear’. Its presence does not affect the syntax of the embedded clause.

## 2.2 Tensed Complements with Accusative Subjects

Tensed complements with accusative subjects, exemplified in (5), are reminiscent of English exceptional case-marking constructions. This complementation strategy is available to a subset of mental attitude predicates that take complements discussed in section 2.1, such as *unmak* ‘hope’ and *sanmak* ‘believe’. Speech predicates are excluded. Such complements, ungrammatical at the root level (6), precede the verb and have root temporal morphology, but, in contrast to the construction in (3), have accusative subjects and lack agreement.

- (5) Natasha [sen-i / \*sen gel-**di** ] san-ıyor.  
 Natasha [you-ACC / \*you.NOM come-PST] believe-PROG  
 ‘Natasha believes that you came’; ‘Natasha believes of you to have come.’
- (6) \*Sen-i gel-**di**.  
 you-ACC come-PST  
 Intended: ‘You came.’

The type of syntactic domain in such clauses, as well as the structural source of the accusative case, is a matter of debate (Aygen 2002, Kornfilt 1984, 1996, 2007, Zidani-Eroğlu 1997). For my purposes, it is sufficient to say that those are clausal complements with

a special syntactic status and, unlike their English counterparts, regular verbal tense.

### 2.3 Nominalizations

Turkish makes productive use of nominalizations (7), which differ substantially from root clauses in the following respects: they (a) are case-marked by the matrix verb, (b) have genitive, instead of nominative, subjects, and (c) have possessive agreement morphology.

#### (7) *Nominalized clause*

Natasha [Beste-**nin** gel-**diğ-in-i** ] söyl-üyor.  
 Natasha [Beste-GEN come-NMLZ-3SG.POSS-ACC] tell-PROG  
 ‘Natasha says that Beste came.’

Nominalizations are used with a wide range of predicates. For some, such as *bulmak* ‘discover’, nominalization is the only available complementation strategy. There are also many predicates that take both nominalized and tensed complements: for example, *ummak* ‘hope’, *söylemek* ‘tell’, *beklemek* ‘expect’. Some of those predicates (e.g., *bilmek* ‘think/know’ and *hatırlamak* ‘remember’) trigger what Özyıldız (2017) calls the *factivity alternation*: the interpretation is nonfactive with tensed complements (8a) and factive with nominalized ones (8b), as evidenced by the fact that nominalizations cannot follow up a contradicting claim.

#### (8) Context: Hillary didn’t win, but . . .

##### a. *Tensed complement*

✓ Tunç [Hillary kazan-dı] bil-iyor.  
 Tunç [Hillary win-PST ] know-PROG  
 No contradiction: ‘Tunç thinks that Hillary won.’

##### b. *Nominalization*

#Tunç [Hillary’nin kazan-diğ-in-i ] bil-iyor.  
 Tunç [Hillary-GEN win-NMLZ-3SG-ACC] know-PROG  
 Contradiction: ‘Tunç knows that Hillary won.’  
 (adapted from Özyıldız 2017)

For an analysis of the pattern, see Özyıldız 2017. Of importance here is the fact that nominalizations are inherently epistemically neutral. There are many predicates (e.g., *söylemek* ‘tell’ and *düşünmek* ‘think’) that do not participate in the alternation and produce no semantic difference between the tensed and the nominalized complement. For example, the factivity inference is absent in the noncontradictory example (9).

(9) Ayşe [Mars’ta su ol-duğ-un-u ]  
 Ayşe.NOM [Mars.LOC water COP-NMLZ-3SG-ACC]  
 düşün-üyor ama Mars’ta su yok!  
 think-PROG but Mars.LOC water NEG.COP  
 ‘Ayşe thinks that there is water on Mars but there is no water on Mars!’

### 3 Evidentials in Clausal Complements in Turkish

As is common in the Anatolia-Balkans-Caucasus region, evidentiality in Turkish is part of the tense system and is expressed by perfect morphology (Izvorski 1997). I concentrate on the behavior of *miş*, an indirect evidential denoting hearsay (10a) or inference (10b).

- (10) a. Context 1: The news on TV relating to the Beijing Olympics report.

*Hearsay*

Usain Bolt koş-**muş**.

Usain Bolt run-**IND**

‘Usain Bolt ran, *I hear*.’

- b. Context 2: Usain Bolt is all sweaty and tired.

*Inference*

Usain Bolt koş-**muş**.

Usain Bolt run-**IND**

‘Usain Bolt ran, *I infer*.’

(adapted from Şener 2011:12)

When used as a perfect, but not as an evidential, *miş* is incompatible with temporal frame adverbials such as ‘yesterday’ or ‘at five o’clock’, a typical property of perfects across languages (Klein 1992, Pancheva and von Stechow 2004). In what follows, I will use such adverbials to disambiguate between the aspectual and the evidential interpretation.

- (11) (\*Dün) kar yağ-**miş**.  
yesterday snow rain-**PERF**  
‘It has snowed (\*yesterday).’

#### 3.1 Data

*Pace* Johanson 2000, *miş* can be embedded. In (1) and (12), the adverbial, which modifies the lower—but not the matrix—clause due to its tense, ensures the evidential interpretation.

- (12) a. Beste [sen dün hasta ol-**muş**-un diye ]  
Beste [you.NOM yesterday sick be-**IND**-2SG COMP]  
düşün-üyor.  
think-**PROG**  
‘Beste thought that you *allegedly* got sick yesterday.’
- b. Beste [sen-i dün hasta ol-**muş**] bil-iyor.  
Beste [you-ACC yesterday sick be-**IND**] believe-**PROG**  
‘Beste believes you to *allegedly* have gotten sick yesterday.’

The presence of *miş* does not affect the syntactic status of the clause ((13), (14)).<sup>3</sup> For example, *wh*-in-situ can be interpreted as a

<sup>3</sup> Complements without *diye*, omitted for reasons of space, also embed *miş* without syntactic changes.

matrix question in nominative-subject complements with *miş* (13) and without it (4). Likewise, accusative-subject complements are transparent for anaphor binding (Kornfilt 2007), and *miş* does not affect it (14).

- (13) Ben [Beste dün kim-i sev-miş diye ] düşün-üyor.  
Ben [Beste yesterday who-ACC like-IND COMP] think-PROG  
'Who<sub>i</sub> does Ben think that Beste *allegedly* liked yesterday  $t_i$ ?'
- (14) Öğrenci-ler<sub>i</sub> [birbir-lerin-i<sub>i</sub> sınav-ı geç-miş ]  
student-PL [each.other-3PL-ACC test-ACC pass-IND]  
san-ıyor-lar.  
believe-PROG-3PL  
'The students believe each other to have *allegedly* passed the test.'

However, in contrast with tensed clauses, *miş* is banned from nominalizations.

- (15) Natasha [dün kar yağ-(\*miş)-dıg-(*\*miş*)-ın-(*\*miş*)-  
Natasha [yesterday snow rain-(IND)-NMLZ-(IND)-3SG.POSS-  
ı-(*\*miş*) ] düşün-üyor.  
(IND)-ACC-(IND)] think-PROG  
Intended: 'Natasha thinks that *allegedly* it snowed yesterday.'

If the ungrammaticality of (15) were due to a morphological quirk, one would expect no embedding differences between the evidential and the aspectual guise of *miş*. This expectation is not borne out: *miş* can appear inside a nominalization as a perfect (16).<sup>4</sup>

- (16) Natasha [kar yağ-*miş* ol-duğ-un-u ]  
Natasha [snow rain-PERF be-NMLZ-3SG.POSS-ACC]  
düşün-üyor.  
think-PROG  
'Natasha thinks that it has snowed.'

### 3.2 Proposal

To recapitulate, the evidential *miş* can occur in tensed complements but not in nominalizations. Schenner (2010), the first to notice the ban on *miş* in nominalizations, advocates a semantic story in the spirit of Hooper and Thompson 1973. Evidentiality is argued to be semantically compatible only with nonfactive attitude predicates, which, according to Schenner, are the ones not taking nominalizations. This view assumes a strict mapping between the verb, complement type, and factivity. As demonstrated in section 2.3, there is no such mapping. The factivity inference with nominalized complements is present with

<sup>4</sup> There is a syntactic difference between (15) and (16) in whether *miş* is attached to the stem or the copula.

some, but not all, predicates. In particular, *düşünmek* ‘think’ does not give rise to it (9). The evidential *miş* is licensed inside tensed (12) but not nominalized (15) complements of *düşünmek*. The analysis in Schenner 2010 does not predict the observed contrast.

I propose a syntactic explanation of the pattern: nominalizations lack structural space to host evidentiality. To this end, I adopt Borsley and Kornfilt’s (2000) view of nominalizations in Turkish and remain agnostic about the *exact* location of the evidential *miş* in the clausal spine. It is sufficient to say that evidentiality must be introduced high.

Nominalizations across languages are traditionally described as verbal nouns. They are often analyzed as mixed categories headed by a nominal projection whose place in the structure determines the degree of “verbiness” of the entire complex (Kornfilt and Whitman 2011b and references therein). Turkish indicative nominalizations have been argued to be verbal all the way to TP, at which level a D head is introduced (Borsley and Kornfilt 2000, Kornfilt and Whitman 2011a). Arguments for this view are presented below.

First of all, the verbal spine cannot be truncated lower than vP, as evidenced by *object case* and *modifiers*. Turkish nominalizations, just like regular verbs, assign the accusative case to objects. They also take verbal modifiers, including temporal adverbials, such as *dün* ‘yesterday’, and adverbs, such as *dikkatlice* ‘carefully’, which cannot modify nouns (cf. *dikkatli(\*ce) insan* ‘careful(\*ly) person’). On the other hand, there is evidence from *agreement* and *subject case* that the nominalizing does not happen higher. Nominalizing morphology, *dik* (nonfuture) and *açak* (future), occupies the tense slot. Morphology that is linearly to the right of *dik* and *açak* is nominal. Importantly, just like regular nouns, nominalizations use possessive, and not verbal, agreement morphology. Turkish is a language where finiteness, understood as the ability to assign the nominative case, has been linked to agreement and/or mood (Aygen 2002, Kornfilt 2007). The lack of verbal agreement is thus responsible for the genitive, not nominative, subject case in nominalizations. Finally, the overall complex has the distribution of a noun. It can serve as an argument to postpositions, a property that regular tensed clauses do not have, and is case-marked. (17) illustrates these defining characteristics of Turkish nominalizations.

- (17) [Beste-**nin** dikkatlice ağaç-**a** dik-**tiğ-in-i** ]  
 [Beste-GEN carefully tree-ACC plant-NMLZ-3SG.POSS-ACC]  
 keşfet-ti-m.  
 discover-PST-1SG  
 ‘I discovered that Beste carefully planted the tree.’

The nominalization in (17), formed by the marker *dik*, exhibits the following verbal properties: (a) object case (*ağaç-a* (ACC), not *ağaçın* (GEN)) and (b) modifiers (*dikkatlice* (adverb), not *dikkatli* (adjective)). Its nominal properties are (a) agreement (possessive *in*, not verbal  $\emptyset$ ) and (b) subject case (*Bestenin* (GEN), not *Beste* (NOM)). The nominalization also bears the accusative case assigned by the matrix verb.

This discussion of Turkish nominalizations makes the following point: nominalizations have some, but crucially not all, structural layers of root clauses. I argue that this is critical to understanding the distribution of the evidential *miş* in clausal complements. I propose that the behavior of *miş* can be explained if its syntactic position is taken into account and that nominalizations lack precisely those layers where *miş* is introduced.

The argument proceeds as follows. First, following Speas (2004, 2010), I assume that evidentiality, and point of view in general (Speas and Tenny 2003, Sundaresan 2018, Zu 2018), is part of the left periphery.<sup>5</sup> Second, the analysis of Turkish nominalizations presented above entails that they lack the left periphery because the cutoff of the verbal spine happens lower. I propose that the evidential *miş* is banned from nominalizations because they lack structural space to host it. The contrast between Turkish nominative-subject complements and nominalizations falls out naturally under this proposal. Only the former have the internal structure for evidentiality. It is expected that *miş* is licensed in nominalizations in its aspectual guise (16): being below TP, aspect is preserved in nominalizations.

The contrast between nominative-subject tensed complements and nominalizations may suggest that the evidential *miş* is only licensed in finite clauses. Such a claim would be inaccurate. Nonfinite accusative-subject complements also license *miş* (12b). The correct empirical generalization is that *miş* is only licensed in tensed complements, both with nominative and with accusative subjects. Leaving an articulated syntactic analysis of evidentiality in Turkish for the future, I draw the following theoretical conclusion: *miş* is introduced high in the structure, and high layers are only present in tensed complements.

Evidence that both types of tensed complement share at least some high projections, absent from nominalizations, comes from epistemic modality. Epistemic but not root (e.g., deontic and ability) modals are often argued to be structurally high (Cinque 1999, Hacquard 2010; though see Rullmann and Matthewson 2018). The Turkish possibility modal *ebil* can have both a root and an epistemic interpretation. In embedded clauses, the latter is available in tensed complements with nominative (18a) and accusative subjects (18b), but not in nominalizations (19). Both (18a) and (18b) can have an ability interpretation ('Estragon thought that Godot was able to come') and an epistemic one ('Estragon thought that Godot would possibly come'). In nominalizations, only the ability interpretation is available.

<sup>5</sup> *Point of view* is an umbrella term covering phenomena from spatial deixis to logophoricity, and I assume here that such information, if represented in the syntax at all, occupies the topmost levels of the clausal spine (Cinque 1999, Rizzi 1997).

- (18) a. *Nominative-subject complement*  
 Estragon [Godot gel-**ebil**-ir ]  
 Estragon.NOM [Godot.NOM come-◇-HAB]  
 san-ıyor-du.  
 believe-PROG-PST
- b. *Accusative-subject complement*  
 Estragon [Godot'yu gel-**ebil**-ir ]  
 Estragon.NOM [Godot.ACC come-◇-HAB]  
 san-ıyor-du.  
 believe-PROG-PST
- (19) Estragon [Godot'nun gel-**ebil**-eçēğ-in-i ]  
 Estragon [Godot.GEN come-◇-NMLZ-3SG.POSS-ACC]  
 söyle-di.  
 tell-PST  
 Ability: ✓ 'Estragon said that Godot would be able to come.'  
 Epistemic: # 'Estragon said that Godot would possibly  
 come.'

As with *miş* (16), this is not a morphological quirk. *Ebil* can show up as a root but not as an epistemic modal in the same morphosyntactic environment. These facts illustrate that nominalizations lack certain layers that are present in both types of tensed complement. A proper understanding of what those layers are requires more research on the fine-grained structure of the left periphery in Turkish. Below I outline several analytical options.

One possibility is that evidentiality in Turkish is introduced at the same layer as speech act information, which would be a syntactic counterpart of Faller's (2002) analysis of evidentials as speech act modifiers. Another possibility is that evidentiality has a designated projection lower than the speech act layer, as Cinque (1999) proposes (see Simeonova and Zareikar 2015 on an implementation for Azeri, Bulgarian, and Persian). Recent research also argues for syntactic encoding of perspective above TP but below speech acts; see, for example, Zu 2018 on egophoric agreement in Newari (Tibeto-Burman: Nepal) and Sundaresan 2018 on perspectival anaphora in Tamil (Dravidian: India). To this end, it may be the case that the syntax of evidentiality is similar to that of other perspectival expressions, as Speas and Tenny (2003) argue (see Irimia 2018 for an implementation of this view for Romanian). Finally, evidentiality and epistemic modality may be structurally bundled together, which is compatible with Şener's (2011) account of Turkish and which would be a syntactic correlate of Izvorski's (1997) analysis of evidentials as epistemic modals.

Given that *miş* can occur in accusative-subject complements, it is unlikely to be introduced at the topmost layer, as such complements do not have the full verbal spine. At the same time, under any of the above options it would not be surprising that *miş* only appears in complements of speech and doxastic predicates. Such predicates are known to be more permissive in general: many phenomena are more likely to appear in their complements than in the complements of

factives, for example; see the implicational hierarchy in Cristofaro 2003, Culy 1994, and Noonan 1985. In the cartographic tradition, this translates into the presence of higher projections in the complements of speech predicates and doxastics but not in the complements of other clause-taking predicates (cf. Deal 2017, Sundaresan 2018, Zu 2018).

To establish the structural position of *miş*, one needs to look at other phenomena with limited distribution in embedded environments. In English, such phenomena include high adverbs (*frankly*, *sincerely*) and the so-called root transformations, such as negative inversion and argument fronting (Haegeman 2012). In Turkish, one case of interest would be constraints on indexical shift (Özyıldız, Major, and Maier to appear; see also Major 2019 on the genetically related Uyghur). Crucially, if one were to argue that *miş* occupies the same projection as speech act modifiers, epistemics, or other perspectival expressions, independent evidence on the syntactic distribution of those high elements would be needed.

#### 4 A New Outlook on the Crosslinguistic Picture

The data from Turkish offer a new perspective on the crosslinguistic variation in embeddability of evidentials. I argue above that the distribution of the evidential *miş* in embedded environments is due to the syntax of clausal complementation. In this section, I generalize this proposal to other languages, unrelated genetically and geographically.

I propose that embeddability of evidentials in a given language depends on the availability of complements that can host them. For example, it is possible to recast in syntactic terms the nonembeddability of Cuzco Quechua evidentials, long considered to be rooted in their semantics (Faller 2002, 2011). Languages of the Quechuan family only have nominalized complements (Cole and Hermon 2011, Lefebvre and Muysken 1987). Their syntax is similar to the syntax of Turkish nominalizations: Quechua nominalizations do not have the full verbal spine (Cole and Hermon 2011). I conjecture that the ungrammaticality of (2) is explained not by semantics (*pace* Faller), but along the lines advocated for Turkish in section 3.2: Quechua nominalizations lack layers where evidentials are introduced. The contrast in embeddability of evidentials in Turkish and Cuzco Quechua is then due to the fact that Turkish, but not Cuzco Quechua, has a counterpart of *that*-clauses.<sup>6</sup>

The following languages, like Turkish, allow evidentials in clausal complements (ALLOW-languages): Bulgarian (South Slavic: Bulgaria; Sauerland and Schenner 2007), Georgian (South Caucasian: Georgia; Boeder 2000, Korotkova 2012), Standard Tibetan (Tibeto-Burman: China and Nepal; Garrett 2001), St'át'imcets (Salish: British Columbia, Canada; Matthewson, Davis, and Rullmann 2007), Tagalog (Austronesian: Philippines; Kierstead 2015, Schwager 2010). All these

<sup>6</sup> Some Quechua varieties have constructions featuring two juxtaposed clauses with root morphology. These constructions can have evidentials, but are syntactically opaque (Cole and Hermon 2011).

languages have complements with the morphosyntactic makeup of root clauses. On the other hand, a preliminary investigation of BAN-languages—ones that have been reported to ban evidentials in clausal complements—reveals that complements in such languages have a dedicated morphosyntax. For example, only nominalizations are available in Ecuadorian Siona (Western Tucanoan: Ecuador; Bruil 2014) and Tariana (North Arawak: Brazil; Aikhenvald 2003, 2006). Furthermore, in some BAN-languages complements feature verb forms with dependent mood marking or reduced categorial distinctions—for example, in Abkhaz (Northwest Caucasian: Abkhazia (de facto and partially recognized) / Georgia; Chirikba 2003), West Greenlandic (Eskimo-Aleut: Greenland, Denmark; Fortescue 2003), and Maricopa (Yuman: Western United States; Aikhenvald 2004, Cristofaro 2013). In the Algonquian language Cheyenne (Montana, United States), evidentials in fact occupy the same slot as dependent moods and are thus banned not just from complements, but from all subordinate clauses (Murray 2016).

Summing up, the BAN-languages simply lack complements that would have high projections. The contrast between BAN-languages and ALLOW-languages is then best defined as a difference in the inventory of complementation strategies.<sup>7</sup> Note that it is not a given that evidentials occupy the same structural position across languages (see Blain and Déchaine 2006, 2007) or even within one language (Speas 2004). Their embeddability would still depend on the availability of suitable embedders. That is, if an evidential is introduced at XP, the language needs to have complements with XP to embed it. In this scheme, X may vary across languages. This is not to say that constraints on evidentials in complement clauses lack semantic underpinnings altogether. For example, evidentials may turn out to be sensitive to the semantics of the matrix predicate (see Anand and Hacquard 2013 on the distribution of epistemics in attitudes). However, for the type of data I discuss, we can get a lot of mileage out of syntactic facts alone.

Much empirical research is needed on the crosslinguistic behavior of evidentials in embedded environments. In this squib, I show that the crosslinguistic variation in embeddability of evidentials may be reduced to the variation in the syntax of clausal complementation. By offering a syntactic solution to the puzzle that has often been viewed as semantic, I make a larger point: semantic theories will be ultimately simpler when the variation is attributed to external, independently motivated factors. As a parallel, consider modal stacking in Germanic. Combinations like *must can*, restricted in English (Collins and Singler 2015, Hasty 2012), are standard in German. The difference is parameterized in the syntax (Wurmbrand 2003), not the semantics, of modal-

<sup>7</sup> Even though evidentiality in matrix clauses has been linked to finiteness (Bhadra 2018 on Bangla), it is debated whether finiteness is a crosslinguistically valid category (Adger 2007, Cristofaro 2007). It would be premature to map the difference between ALLOW- and BAN-languages onto the presence vs. absence of finite complementation.

ity. Showing that there is no need to postulate semantic heterogeneity to explain the embedding facts, this squib argues for a similar division of labor between syntax and semantics in the evidential domain.

### References

- Adger, David. 2007. Three domains of finiteness: A Minimalist perspective. In *Finiteness*, ed. by Irina Nikolaeva, 23–58. Oxford: Oxford University Press.
- Aelbrecht, Lobke, Liliane Haegeman, and Rachel Nye, eds. 2012. *Main clause phenomena: New horizons*. Amsterdam: John Benjamins.
- Aikhenvald, Alexandra Y. 2003. Evidentiality in Tariana. In *Studies in evidentiality*, ed. by Alexandra Y. Aikhenvald and R. M. W. Dixon, 131–164. Amsterdam: John Benjamins.
- Aikhenvald, Alexandra Y. 2004. *Evidentiality*. Oxford: Oxford University Press.
- Aikhenvald, Alexandra Y. 2006. Complement clause types and complementation strategies in Tariana. In *Complementation: A cross-linguistic typology*, ed. by R. M. W. Dixon and Alexandra Y. Aikhenvald, 178–203. Oxford: Oxford University Press.
- Anand, Pranav, and Valentine Hacquard. 2013. Epistemics and attitudes. *Semantics and Pragmatics* 6(8):1–59. <http://dx.doi.org/10.3765/sp.6.8>.
- Aygen, Gülşat. 2002. Finiteness, case and clausal architecture. Doctoral dissertation, Harvard University, Cambridge, MA.
- Bhadra, Diti. 2018. Evidentials are syntax-sensitive: The view from Bangla. *Glossa* 3(1), 106. <https://doi.org/10.5334/gjgl.449>.
- Blain, Eleanor M., and Rose-Marie Déchaine. 2006. The evidential domain hypothesis. In *Proceedings of the Workshop on the Structure and Constituency of the Languages of the Americas 11*, ed. by Atsushi Fujimori and Maria Amélia Reis Silva, 12–25. University of British Columbia Working Papers in Linguistics 19. Vancouver: University of British Columbia.
- Blain, Eleanor M., and Rose-Marie Déchaine. 2007. Evidential types: Evidence from Cree dialects. *International Journal of American Linguistics* 73:257–291. <https://doi.org/10.1086/521728>.
- Bochnak, M. Ryan. 2013. Cross-linguistic variation in the semantics of comparatives. Doctoral dissertation, University of Chicago, Chicago, IL.
- Boeder, Winfried. 2000. Evidentiality in Georgian. In *Evidentials: Turkic, Iranian and neighbouring languages*, ed. by Lars Johanson and Bo Utas, 275–328. Berlin: Mouton de Gruyter.
- Borsley, Robert D., and Jaklin Kornfilt. 2000. Mixed extended projections. In *The nature and function of syntactic categories*, ed. by Robert D. Borsley, 101–131. San Diego, CA: Academic Press.
- Bruil, Martine. 2014. Clause-typing and evidentiality in Ecuadorian Siona. Doctoral dissertation, Leiden University.

- Chirikba, Viacheslav. 2003. Evidential category and evidential strategy in Abkhaz. In *Studies in evidentiality*, ed. by Alexandra Y. Aikhenvald and R. M. W. Dixon, 243–272. Amsterdam: John Benjamins.
- Cinque, Guglielmo. 1999. *Adverbs and functional heads: A cross-linguistic perspective*. Oxford: Oxford University Press.
- Cole, Peter, and Gabriela Hermon. 2011. Nominalization and case assignment in Quechua. *Lingua* 121:1225–1251. <https://doi.org/10.1016/j.lingua.2011.01.010>.
- Collins, Chris, and John Singler. 2015. Double modals beyond the South: Would might. Ms., New York University. <https://ling.auf.net/lingbuzz/002678>.
- Cristofaro, Sonia. 2003. *Subordination*. Oxford: Oxford University Press.
- Cristofaro, Sonia. 2007. Deconstructing finiteness: Finiteness in a functional-typological perspective. In *Finiteness*, ed. by Irina Nikolaeva, 91–114. Oxford: Oxford University Press.
- Cristofaro, Sonia. 2013. Utterance complement clauses. In *The world atlas of language structures online*, ed. by Matthew S. Dryer and Martin Haspelmath. Leipzig: Max Planck Institute for Evolutionary Anthropology. <https://wals.info/chapter/128>.
- Culy, Christopher. 1994. Aspects of logophoric marking. *Linguistics* 32:1055–1094.
- Deal, Amy Rose. 2017. Shifty asymmetries: Universals and variation in shifty indexicality. Ms., University of California, Berkeley.
- Faller, Martina. 2002. Semantics and pragmatics of evidentials in Cuzco Quechua. Doctoral dissertation, Stanford University, Stanford, CA.
- Faller, Martina. 2007. Evidentiality above and below speech acts. Ms., University of Manchester. [goo.gl/tzvgql](http://goo.gl/tzvgql).
- Faller, Martina. 2011. A possible worlds semantics for Cuzco Quechua evidentials. In *Proceedings of SALT 20*, ed. by Nan Li and David Lutz, 660–683. <http://dx.doi.org/10.3765/salt.v20i0.2586>.
- von Fintel, Kai, and Lisa Matthewson. 2008. Universals in semantics. *The Linguistic Review* 25:139–201. <https://doi.org/10.1515/TLIR.2008.004>.
- Fortescue, Michael. 2003. Evidentiality in West Greenlandic: A case of scattered coding. In *Studies in evidentiality*, ed. by Alexandra Y. Aikhenvald and R. M. W. Dixon, 291–306. Amsterdam: John Benjamins.
- Garrett, Edward John. 2001. Evidentiality and assertion in Tibetan. Doctoral dissertation, UCLA, Los Angeles, CA.
- George, Leland, and Jaklin Kornfilt. 1981. Finiteness and boundedness in Turkish. In *Binding and filtering*, ed. by Frank Heny, 105–128. London: Croom Helm.
- Griffiths, James, and Güliz Güneş. 2014. Ki issues in Turkish: Parenthetical coordination and adjunction. In *Parenthesis and ellipsis: Cross-linguistic and theoretical perspectives*, ed. by Mar-

- lies Kluck, Dennis Ott, and Mark de Vries, 173–217. Berlin: Mouton de Gruyter.
- Hacquard, Valentine. 2010. On the event relativity of modal auxiliaries. *Natural Language Semantics* 18:79–114.
- Haegeman, Liliane. 2012. *Adverbial clauses, main clause phenomena, and the composition of the left periphery*. Oxford: Oxford University Press.
- Haegeman, Liliane. 2014. West Flemish verb-based discourse markers and the articulation of the Speech Act layer. *Studia Linguistica* 68:116–139.
- Hasty, J. Daniel. 2012. We might should oughta take a second look at this: A syntactic re-analysis of double modals in Southern United States English. *Lingua* 122:1716–1738. <https://doi.org/10.1016/j.lingua.2012.09.005>.
- Hooper, Joan B., and Sandra A. Thompson. 1973. On the applicability of root transformations. *Linguistic Inquiry* 4:465–497.
- Irimia, Monica Alexandrina. 2018. Pragmatics or morpho-syntax? The encoding of indirect evidentiality in Romanian. *Journal of Pragmatics* 128:148–160.
- Izvorski, Roumyana. 1997. The present perfect as an epistemic modal. In *Proceedings of SALT 7*, ed. by Aaron Lawson, 222–239. <https://journals.linguisticsociety.org/proceedings/index.php/SALT/issue/view/102>.
- Johanson, Lars. 2000. Turkic indirectives. In *Evidentials: Turkic, Iranian and neighbouring languages*, ed. by Lars Johanson and Bo Utas, 61–88. Berlin: Mouton de Gruyter.
- Kierstead, Gregory. 2015. Projectivity and the Tagalog reportative evidential. Master's thesis, Ohio State University, Columbus.
- Klein, Wolfgang. 1992. The present perfect puzzle. *Language* 68: 525–551.
- Kornfilt, Jaklin. 1984. Case marking, agreement, and empty categories in Turkish. Doctoral dissertation, Harvard University, Cambridge, MA.
- Kornfilt, Jaklin. 1996. NP-movement and restructuring. In *Current issues in comparative grammar*, ed. by Robert Freidin, 121–147. Dordrecht: Kluwer.
- Kornfilt, Jaklin. 1997. *Turkish*. London: Routledge.
- Kornfilt, Jaklin. 2007. Verbal and nominalized finite clauses in Turkish. In *Finiteness*, ed. by Irina Nikolaeva, 305–332. Oxford: Oxford University Press.
- Kornfilt, Jaklin, and John Whitman. 2011a. Afterword: Nominalizations in syntactic theory. *Lingua* 121:1297–1313.
- Kornfilt, Jaklin, and John Whitman, eds. 2011b. Nominalizations in linguistic theory [Special issue]. *Lingua* 121:1159–1314.
- Korotkova, Natasha. 2012. Evidentiality in the Georgian tense and aspect system. Ms., UCLA, Los Angeles, CA.
- Korotkova, Natalia [Natasha]. 2015. Evidentials in attitudes: Do's and don'ts. In *Proceedings of Sinn und Bedeutung 19*, ed. by Eva Csipak and Hedde Zeijlstra, 340–357. <https://semanticsarchive.net/Archive/TVIN2I2Z/sub19proc.pdf>.

- Korotkova, Natasha. 2016. Heterogeneity and universality in the evidential domain. Doctoral dissertation, UCLA, Los Angeles, CA.
- Korotkova, Natasha. 2017. Evidentials and (relayed) speech acts: Hearsay as quotation. In *Proceedings of SALT 25*, ed. by Sarah D'Antonio, Mary Moroney, and Carol Rose Little, 676–694. <http://dx.doi.org/10.3765/salt.v25i0.3969>.
- Korotkova, Natasha. 2019. The subjective heart of evidentiality. Ms., University of Konstanz.
- Krifka, Manfred. 2014. Embedding illocutionary acts. In *Recursion: Complexity in cognition*, ed. by Tom Roeper and Margaret Speas, 59–88. Dordrecht: Springer.
- Lefebvre, Claire, and Pieter Muysken. 1987. *Mixed categories: Nominalizations in Quechua*. Dordrecht: Kluwer.
- Major, Travis. 2019. Revisiting the syntax of monsters in Uyghur. Ms., UCLA, Los Angeles, CA.
- Matthewson, Lisa. 2001. Quantification and the nature of crosslinguistic variation. *Natural Language Semantics* 9:145–189. <https://doi.org/10.1023/A:1012492911285>.
- Matthewson, Lisa. 2011. On apparently non-modal evidentials. In *Empirical Issues in Syntax and Semantics* 8, ed. by Olivier Bonami and Patricia Cabredo Hofherr, 333–357. Paris: CNRS.
- Matthewson, Lisa. 2012. Evidence about evidentials: Where fieldwork meets theory. In *Empirical approaches to linguistic theory: Studies in meaning and structure*, ed. by Britta Stolterfoht and Sam Featherston, 85–114. Berlin: Mouton de Gruyter.
- Matthewson, Lisa. 2013. On how (not) to uncover cross-linguistic variation. In *NELS* 42, ed. by Stefan Keine and Shayne Sloggett, 323–342. Amherst: University of Massachusetts, Graduate Linguistic Student Association.
- Matthewson, Lisa, Henry Davis, and Hotze Rullmann. 2007. Evidentials as epistemic modals: Evidence from St'át'imcets. In *Linguistic variation yearbook* 7, ed. by Jeroen van Craenenbroeck, 201–254. Amsterdam: John Benjamins. <https://doi.org/10.1075/livy.7.07mat>.
- McCready, Eric, and Norry Ogata. 2007. Evidentiality, modality and probability. *Linguistics and Philosophy* 30:147–206. <https://doi.org/10.1007/s10988-007-9017-7>.
- Murray, Sarah E. 2010. Evidentiality and the structure of speech acts. Doctoral dissertation, Rutgers University, New Brunswick, NJ.
- Murray, Sarah E. 2016. Evidentiality and illocutionary mood in Cheyenne. *International Journal of American Linguistics* 82:487–517. <https://doi.org/10.1086/688604>.
- Murray, Sarah E. 2017. *The semantics of evidentials*. Oxford: Oxford University Press.
- Noonan, Michael. 1985. Complementation. In *Complex constructions*, ed. by Timothy Shopen, 42–140. Cambridge: Cambridge University Press.

- Özyıldız, Deniz. 2012. When *I* is not me: A preliminary case study of shifted indexicals in Turkish. Ms., École Normale Supérieure, Paris.
- Özyıldız, Deniz. 2017. Attitude reports with and without true belief. In *Proceedings of SALT 27*, ed. by Dan Burgdorf, Jacob Collard, Sireemas Maspong, and Brynhildur Stefánsdóttir, 397–417. <https://journals.linguisticsociety.org/proceedings/index.php/SALT/issue/view/158>.
- Özyıldız, Deniz, Travis Major, and Emar Maier. To appear. Communicative reception reports as hear-say: Evidence from indexical shift in Turkish. In *WCCFL 36: Proceedings of the 36th West Coast Conference on Formal Linguistics*.
- Pancheva, Roumyana, and Arnim von Stechow. 2004. On the present perfect puzzle. In *NELS 34: Proceedings of the 34th annual meeting of the North East Linguistic Society*, ed. by Keir Moulton and Matthew Wolf, 469–484. Amherst: University of Massachusetts, Graduate Linguistic Student Association.
- Peterson, Tyler. 2010. Epistemic modality and evidentiality in Gitksan at the semantics-pragmatics interface. Doctoral dissertation, University of British Columbia, Vancouver.
- Rizzi, Luigi. 1997. The fine structure of the left periphery. In *Elements of grammar*, ed. by Liliane Haegeman, 281–337. Dordrecht: Kluwer.
- Rullmann, Hotze, and Lisa Matthewson. 2018. Towards a theory of modal-temporal interaction. *Language* 94:281–331. <https://doi.org/10.1353/lan.2018.0018>.
- Sauerland, Uli, and Matthias Schenner. 2007. Embedded evidentials in Bulgarian. In *Proceedings of Sinn und Bedeutung 11*, ed. by Estella Puig-Waldmüller, 525–539. <https://semanticsarchive.net/Archive/TVkNTE2O/sub11proc.pdf>.
- Schenner, Mathias. 2010. Evidentials in complex sentences: Foundational issues and data from German and Turkish. In *Evidence from evidentials*, ed. by Tyler Peterson and Uli Sauerland, 183–220. Vancouver: University of British Columbia. <https://lingpapers.sites.olt.ubc.ca/files/2018/01/EvidenceFromEvidentials.pdf>.
- Schwager, Magdalena. 2010. On what has been said in Tagalog: Reportative *daw*. In *Evidence from evidentials*, ed. by Tyler Peterson and Uli Sauerland, 221–246. Vancouver: University of British Columbia. <https://lingpapers.sites.olt.ubc.ca/files/2018/01/EvidenceFromEvidentials.pdf>.
- Şener, Nilufer. 2011. Semantics and pragmatics of evidentials in Turkish. Doctoral dissertation, University of Connecticut, Storrs.
- Şener, Nilufer, and Serkan Şener. 2011. Null subjects and indexicality in Turkish and Uyghur. In *Proceedings of the 7th Workshop on Altaic Formal Linguistics*, ed. by Andrew Simpson, 269–284. MIT Working Papers in Linguistics 62. Cambridge, MA: MIT, MIT Working Papers in Linguistics. doi:10.13140/2.1.4907.1367.

- Simeonova, Vesela, and Gita Zareikar. 2015. The syntax of evidentials in Azeri, Bulgarian, and Persian. In *Proceedings of the Annual Conference of the Canadian Linguistic Association*, ed. by Santa Vinerte, 1–10. <http://cla-acl.ca/actes-2015-proceedings>.
- Speas, Margaret. 2004. Evidentiality, logophoricity and the syntactic representation of pragmatic features. *Lingua* 114:255–276.
- Speas, Margaret. 2010. Evidentials as generalized functional heads. In *Edges, heads and projections: Interface properties*, ed. by Anna Maria Di Sciullo and Virginia Hill, 127–150. Amsterdam: John Benjamins.
- Speas, Margaret, and Carol Tenny. 2003. Configurational properties of point of view roles. In *Asymmetry in grammar*, ed. by Anna Maria Di Sciullo, 315–343. Amsterdam: John Benjamins. <https://doi.org/10.1075/la.57.15spe>.
- Sundaresan, Sandhya. 2018. Perspective is syntactic: Evidence from anaphora. *Glossa* 3(1), 128. <https://doi.org/10.5334/gjgl.81>.
- Thomas, Guillaume. 2014. Embedded imperatives in Mbyá. In *NELS 43: Proceedings of the 43rd annual meeting of the North East Linguistic Society*, ed. by Hsin-Lun Huang, Ethan Poole, and Amanda Rysling, 181–194. Amherst: University of Massachusetts, Graduate Linguistic Student Association.
- Wurmbrand, Susanne. 2003. *Infinitives: Restructuring and clause structure*. Berlin: Mouton de Gruyter.
- Zidani-Eroğlu, Leyla. 1997. Exceptionally case-marked NPs as matrix objects. *Linguistic Inquiry* 28:219–230.
- Zu, Vera. 2018. Discourse participants and the structural representation of the context. Doctoral dissertation, New York University.