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Evidence from Evidentials

Edited by:
Tyler Peterson and Uli Sauerland

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Evidence from Evidentials

Introduction

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Broadly speaking, evidentiality is the expression of the source of evidence for a proposition. Cross-linguistically, different morphological means are used to express evidentiality. For example, in English, evidentiality can be expressed by adverbial expressions (1), by modals (2), or by verbs (3).

(1) *Evidentiality expressed by adverbs:*

a. **Actually,** it's raining.
CONTEXT: speaker has direct perceptual evidence that it is raining

b. **Apparently,** it's raining.
CONTEXT: speaker has indirect inferential evidence that it is raining (e.g. speaker observes someone coming in with a wet umbrella)

c. **Reportedly,** it's raining.
CONTEXT: speaker has indirect hearsay evidence that it is raining

(2) *Evidentiality expressed by modal:* It **must** be raining.
CONTEXT: speaker has indirect inferential evidence that it is raining (e.g. speaker observes that street is wet and infers that it has rained)

(3) *Evidentiality expressed by verbs:*

a. I **hear** that it's raining.

(i.) CONTEXT: speaker has direct perceptual evidence that it is raining (e.g. speaker hears the rain hitting the roof).

(ii.) CONTEXT: speaker has indirect hearsay evidence that it is raining (e.g. someone has told speaker that it is raining).

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b. It **looks like** it's raining.
CONTEXT: speaker has visual evidence that it is raining (e.g. speaker sees people walking in with wet boots).

c. Lucy **told** me that it's raining.
CONTEXT: speaker has indirect hearsay evidence that it is raining.

In other languages modals aspectual morphology (Bulgarian, Turkish, Chechen, etc.) can take on evidential meaning and in some cases develop into an independent morphological paradigm. In Eastern dialects of Bulgarian, the 'perfect of evidentiality' (glossed as 'PE') has a reportative evidential interpretation and is distinguished from the aspectual perfect by auxiliary drop:

(4) Bulgarian (Sauerland & Schenner 2007: (4))

Todor imal červena kosa
Todor has-PE red hair
"Todor has red hair."
CONTEXT: The speaker was told that Todor has red hair.

Finally some languages have specialized evidential morphology in the form of verbal affixes or particles (Japanese, Quechua, Tibetan, etc.). For example, the reportative marker *-si* in Quechua indicates that the speaker heard the information expressed in the claim from someone else:

(5) Quechua (Faller 2002)

para-sha-n-si
rain-PROG-3-*si*
"It's raining."
CONTEXT: speaker was told that it is raining

The analysis of evidentials is a challenge for syntax, semantics, and pragmatics, but much progress has been made over the last decade or so. On the one hand, the analytic tools for investigating the syntactic, semantic, and pragmatic properties of evidentials have progressed to a point where they permit a granularity of analysis that wasn't possible before. On the other hand, we expect that, as more in-depth studies of evidentials in different languages are conducted, this will lead to a refinement of the models used to analyze evidentials.

Given the diversity of evidential expression, a question of overarching interest is whether there are any generalizations that hold for the conceptual category evidentiality across languages and the various forms evidentiality is expressed. At present there is little evidence for universal properties that could be glimpsed from basic descriptions of evidential expressions (cf. Aikenvald 2004). However, once a more fine-grained understanding of

aspects of evidentiality is adopted the picture may change. For example, the English indirect evidential *it looks like* in 3 does not share the scopal properties of the Bulgarian perfect of evidentiality in 4: Namely, only the former can take scope under negation. However, we don't know at present whether the correlation between scope and verbal/aspectual evidentiality holds more generally. We conclude that our general perspective on evidentiality is still justified, despite all the variation observed. What is needed then is a more fine-grained understanding of evidentiality in individual languages and a renewed investigation of cross-linguistic issues based upon this understanding.

Investigating evidentiality forces us to pay attention to how form, meaning and use integrated. This means that the following domains must be taken into account when developing a model of evidentiality:

Morphosyntax (form): How is evidentiality encoded? Are there any morphosyntactic regularities in the expression of evidentiality, either within a language or across languages? What is the significance of the absence of overt coding, i.e. can unmarked propositions have evidential force?

Semantic (meaning): What does evidentiality express? Does evidentiality reduce to a special kind of epistemic modality? Or is evidentiality a primitive in the grammar? Or is evidentiality the side-effect of the convergence of a number of different factors relating to knowledge base and perspective? Do we require a formal theory of evidentiality?

Pragmatics (use): How are evidentials used? What felicity conditions constrain their context-of-use? Which presuppositions (if any) are attached to evidentials. How are evidentials used to convey meanings at the speech act level such as mirativity and irony?

The Papers

The papers in this volume undertake analyses which focus on different aspects of the syntax, the semantics, and the pragmatics of evidentiality. The languages under investigation include Plains Cree (Cohen *et al.*), English (Remberger, Gilmour *et al.*), German (Remberger, Schenner), Gitksan (Littell *et al.*, Peterson), Japanese (Cheung *et al.*, McCready), St'át'imcets (Littell *et al.*), Quechua (McCready), Russian (Steriopolo), Tagalog (Schwager, Cohen *et al.*), Thompson (Littell *et al.*), Turkish (Peterson, Stott *et al.*), and Yorùbá (Brown).

Syntax

For the syntactic analysis of evidentials, the following questions arise:

(i.) How are evidentials integrated into clause structure?

(ii.) How do evidentials interact with scope-taking operators?

(iii.) How do evidentials interact with other syntactic positions?

The latter question is the focus of the papers in this volume. At the clause-typing level, we observe a competition between polarity-marking and evidential-marking at the right edge of the clause in Yorùbá (**Brown**). A different kind of parallelism is found in Russian, which we see that evidentials and expressives are functionally related in that they are both markers of epistemology, with expressives being merged as heads or modifiers (**Steriopolo**). Turkish reveals a different part of the puzzle: here we see that negation can be used as a diagnostic for distinguishing the aspectual versus evidential use of two nearly homophonous morphemes (**Stott, Smith, Chang, and Bond**).

Semantics

Regarding the semantics of evidentiality, we can identify four major themes:

(i.) Which aspects of the meaning of evidentials are specific to evidentiality?

(ii.) Which aspects of the meaning of evidentials interact with tense/aspect/mood systems?

(iii.) Which aspects of the meaning of evidentials are related to other categories such as epistemics, evaluatives, and speech acts?

(iv.) Which aspects of the meaning of evidentials can be attributed to other independent mechanisms, e.g. modality, aspect, perspectival information?

Evidentiality requires a source of evidence (which is the basis for a knowledge state) and a witness (which is the basis for a perspectival state). These two properties arguably define all evidential markers; as such, they can be considered to be "evidential universals" (**McCready**). While much work on evidentials focuses on their occurrence in root contexts, less attention has been paid to evidentials in embedded contexts (**Schenner**). Context is also important in the interpretation of the verb *wollen* in German (**Remberger**), where its future-oriented, volitional meaning is shifted to an evidential reading in certain contexts involving a past tense adverb, in what is called an *evidential shift*.

Reportative evidentials, which constitute the most familiar type of indirect evidence, differ along well-defined parameters (**Schwager**), including the strength of the report (strong vs. weak reportativity), the source of the report ("person parameter"), and the logical type of the reportative (propositional vs. illocutionary). Evidentials can also be used in questions: indirect evidentials have the effect of reducing the interrogative force a question to a 'wonder'-like statement. This is claimed to follow from modal status of evidentials in St'át'imcets, Gitksan, and Nɬeʔkepmxcín (**Littell, Matthewson, and Peterson**).

Pragmatics

Regarding the pragmatics of evidentiality, we can identify three major themes:

(i.) How is evidentiality used to code perspectival information?

(ii.) How is evidentiality used at the the speech act level?

(iii.) How is evidentiality used to implicate other meanings?

Evidentials code perspectival information in the same way as evaluative predicate: both require the presence of a contextually determined judge (**McCready**). Evidentials also have extended uses in discourse that express other kinds meanings. For example, English evidential expressions such as look like can be used to express irony (**Gilmour, Gonzales and Louie**), and in Gitksan there is a relation between the mirative and metaphorical uses of evidentials (**Peterson**), governed by whether a speaker knows a proposition embedded under an evidential to be true or false.

In addition to examining evidentials from the core linguistic domains of syntax, semantics and pragmatics, we can observe their distribution in different kinds of corpora, such as the distribution of evidentials in the description of dream sequences (**Cohen, Chuakaw, and Small**), and the statistical distribution of multiple evidential markers across different age groups (**Cheung, Leung, Yang, Xing, and Tse**).

Outlook

Studies on evidentiality from a typological or functional perspective have been largely shaped by the seminal collection of papers in the Chafe & Nichols (1986) volume *Evidentiality: The Linguistic Coding of Epistemology*, and more recently Aikhenvald's (2004) comprehensive study of evidentials in *Evidentiality*. Whereas the Chafe et al. volume presents a variety of papers looking at the functions of evidentials in a few languages (including descriptions of the extended meanings of evidentials, such as mirativity), Aikhenvald was the first to present an encompassing typology of evidential systems based on a large number of languages. However, one of the challenges facing typological studies of evidentiality is that, because there are so many descriptive studies for evidentials in various languages, the descriptions and terminology of different studies is not always consistent or rigorously verifiable. There is an emerging branch of research which approaches this problem by developing a more theoretically informed and testable methodology for investigating evidential categories (cf. Faller 2002; Matthewson et al. 2008). A result of this is that we are now better equipped with a range of tools derived in contemporary semantic and pragmatic theory that allow us to develop the kinds of field methodologies we need for both investigating and explaining evidential meaning. We hope this collection of papers contributes to this line of research.

Acknowledgments

The collection of papers in the present volume represents the convergence of two research communities who had the common goal of exploring the formal basis of evidentiality. In the fall of 2007, a research seminar focusing on the cross-linguistic typology of evidentials was held at UBC organized by Rose-Marie Dechaine. In the spring of 2008, GLOW hosted a workshop at the University of Newcastle on the semantics of evidentials organized by Uli

Sauerland. The broad goal of the workshop was to understand and explain what kind of category "evidentiality" is. This volume presents a selection of papers from both the seminar and the workshop. Originally it was planned that Rose-Marie Déchaine would also contribute to editing this volume, but because of other commitments her contributions were limited to parts of this introduction.

We thank the local organizing team at Newcastle University for making the 2008 workshop on evidentials at GLOW productive and pleasant, specifically the conference president, Anders Holmberg. We also thank the reviewers and the audience who played a crucial role in making the workshop a success. The workshop received financial support through the European Research Project CHLaSC (PIs M. Krifka and U. Sauerland), which was funded from the NEST program of the 6th Framework Program.

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Evidentiality and polarity in Yorùbá*

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1. Introduction

There has been considerable work done on the left edge of clauses in Yorùbá (see especially Déchaine 2001a,b). The focus of the present paper is on right-edge phenomena in Yorùbá. There are 4 pragmatic particles that appear on the right edge:

(1) *iná* ***o***
fire Σ
'fire!' (fire outbreak)

(2) *iná* ***ò***
fire Σ
'fire!' (surprise)

(3) *mo* *jẹ* *é-**ẹ̀***
1sg. eat 3sg-Σ
'The truth is I didn't eat it'

(4) *o* *fẹ́* *ẹ-**ẹ***
2sg. want 3s-Σ
'You want it?!'

Phonologically, (1) can be characterized as an invariant mid toned /o/, (2) is a low toned /ò/, (3) is a copy of the preceding vowel with a fixed low tone, and (4) is a segment which copies both the vocalic and tonal features of a preceding vowel.

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The proposal of this paper is that (1) and (2) are evidentials, while (3) and (4) are polarity operators.[1] Furthermore, I propose that their restricted distribution (only on the right edge) is the result of phonological rather than syntactic constraints. Under this view, these particles are enclitics which are base-generated in a higher position, but which trigger movement by the clausal element in order to establish a suitable host.

In section 2 the evidentiality of particles (1) and (2) are explored, while in section 3 the status of the particles in (3) and (4) as polarity operators is established. Section 4 provides a brief outline of the phonology of the particles. Syntactic and phonological motivations for a movement analysis are outlined in Section 5, and a prosodic inversion analysis is adopted for the distribution of the particles. Section 6 provides a conclusion and a brief discussion of some issues surrounding the diachrony of the particles.

2. Evidentiality

The particles *o* and *ò* display many properties which indicate they are evidential markers. I will claim here that o is an affirmative marker, and that *ò* is a surprisal marker (or more generally an evaluative morpheme; see Rooryck 2001a,b). In a much more general sense, they express some form of speaker commitment to utterance truth, a hallmark of evidentiality (cf. Chafe & Nichols 1986).

2.1 Affirmative

The first of the right-edge particles, the affirmative or emphatic, is represented by a mid-toned /o/. That *o* is a marker of affirmation can be illustrated in examples (5-6) below.

(5) *mo* *jè*
1sg. eat
'I ate it.'

(6) *mo* *jè* *o*
1sg. eat Σ
'I ate it' (even though you thought I couldn't)

In (6), the particle *o* is additive to the simple declarative clause (5). The addition of the particle is used in contexts where the hearer doubted the ability of the speaker to accomplish the goal, or where a speaker was expected to fail at completing a task. The fact that the particle is not the main predicate falls under Anderson's criteria that "evidentials are not themselves the main predication of the clause, but are rather a specification added to a factual claim ABOUT SOMETHING ELSE [emphasis in original]." (1986:274). This particle also adheres to the generalization that "Evidentials have the indication of evidence … as their primary meaning, not only as a pragmatic inference" (274).

[1] What is entailed by this proposal is the related claim that contrary to popular opinion, these particles are linguistically relevant and have configurational properties (see Awoyale 1997).

Affirmatives also play a different function with imperatives. The addition of the affirmative particle makes the imperative a mandate, or necessity. This can be seen in the contrast below between simple imperatives (7a-10a) and those augmented with the affirmative (7b-10b).

(7) a. *je*
eat
'eat!'

b. *je o*
eat Σ
'It is necessary that you eat!'

(8) a. *lo*
go
'go!'

b. *lo o*
go Σ
'It is necessary that you go!'

(9) a. *wá*
come
'come!'

b. *wá o*
come Σ
'I implore you to come!'

(10) a. *sùn*
sleep
'sleep!'

b. *sùn o*
sleep Σ
'It is necessary that you sleep!'

Contexts for using the particle would include situations where the addressee needs to be reminded, or where the action is necessary.

The affirmative particle can also be used with bare nominals. In (11b) the function of the particle is emphatic, and this specific example could be used in a context where there is a fire outbreak and it must be announced. As for (12b), the particle would be used as an expression of pain.

(11) a. *iná*
fire

b. *iná* *o*
fire Σ
'fire!' (there's a fire outbreak)

(12) a. *oró*
poison

b. *oró* *o*
poison Σ
'expression of pain'

In all three cases, the factuality of the utterance plays a central role in the interpretation of the (b) sentences.[2]

2.2 Surprisals

The above particles can be contrasted with the 'surprise' particle, which is phonologically different in that it has a low tone /ò/, which signals extreme surprise (see Rooryck 2001a and Anderson 1986 on surprisals). For instance, the bare noun in (14a) can be augmented with the affirmative particle to derive (14b), which can be contrasted with (14c), the construction with the surprisal.

(14) a. ọmọ
'child'

b. ọmọ o
'where are you child?'

c. ọmọ ò
'child!' (surprise)

Like the affirmative, the surprisal indicates emphasis. Unlike the affirmative particle, the surprisal renders an interpretation where the state of affairs is not previously known to the speaker. For instance, in (15), the (a) example shows a regular declarative sentence where no danger is implied, the (b) example illustrates the 'announcement' function of the affirmative, where again no danger is implied, and the (c) example shows the surprisal, where the sentence now implies not only the surprise of the speaker, but also the implication that the context is dangerous.

[2]There are also cases where the function of the particle or the meaning of the construction is unclear. For example, adding the affirmative particle to the noun *owó* results in a sentence that is too difficult to gloss.

(13) a. owó
'money'

b. owó o

In this case, the particle would be used to express extreme shock at an unlikely event happening, such as a building collapsing (which the speaker has invested a lot of money in).

(15) a. ejò ń bọ̀
'The snake is coming' (no danger)

b. ejò ń bọ̀ o
Announcement (to audience): 'The snake is coming'

c. ej'o ń bọ̀ ọ̀
Danger & surprise: 'The snake is coming!'

These contrasts demonstrate that there are shared qualities between the affirmative and surprisal (such as speaker commitment to the content of a proposition), as well as differences.

There is also a subtle temporal difference between the two particles. For instance, in (16) the affirmative results in a reading where the fire is about to start, whereas in (17) the use of the surprisal indicates that the damage from the fire is already happening.[3]

(16) inà à
'fire!' (fire is about to start)

(17) inà ò
'fire!' (the damage is already happening)

The particles can also occur in conjoined clauses. For instance, in (18) and (20) the presence of a particle at the right edge of each clause signals a reading which stresses the importance of each individual event, whereas in (19) and (21), where there is an overt conjunction morpheme and only a single particle at the right edge of the sentence, signals a reading where the destruction from the events is viewed as more collective.

(18) *àrá* *o* *ìjì* *o*
thunderstrike Σ storm Σ
There was a thunderstrike and there was a storm!
(more emphatic – stress importance of each)

(19) *àrá* *àti* *ìjì* *o*
thunderstrike CONJ storm Σ
There was a thunderstrike and a storm!
(destruction is more collective)

(20) *àrá* *ò* *ìjì* *ò*
thunderstrike Σ storm Σ
There was a thunderstrike and a storm!
(separate destructions – more emphatic for each)

[3]The difference in vowel quality and tone in this example is exceptional.

(21) *àrá* *àti* *ìjì* *ò*
thunderstrike CONJ storm Σ
There was a thunderstrike and a storm!
(destruction might not be much, but it is visible; destruction is done collectively)

Both particles can also be embedded in quotative constructions, as in (22) and (23):

(22) *ó* *sọ* *pé* *iná* *ò*
3sg say COMP fire Σ
'S/he said "fire!"'

(23) *ó* *sọ* *pé* *iná* *o*
3sg say COMP fire Σ
'S/he said "fire!"'

The fact that the particles are restricted to the right edge of clauses in embedded contexts suggests that the right-edge effects are inviolable in Yorùbá.

As has been illustrated in the above sections, the affirmative and the surprisal particles express some form of speaker commitment to the content of a proposition. This differs slightly from the canonical definition of 'evidential' provided by Chafe & Nichols (1986) in that here the speaker commitment is to the content of a proposition, and not to the truth of a proposition. I propose (roughly following Anderson 1986) that the definition for evidentiality be extended to include these cases, so that what is being analyzed is not a different clause type *per se*, but rather two sets of particles that class together under a weaker definition of evideniality.

3. Polarity Operators

The final two particles can be considered polarity operators for various reasons to be discussed below. Ultimately, although they accomplish the function in different ways, they both serve to reverse the polarity of a proposition. The vowel copy + fixed low tone morpheme, which has been termed a 'denial of a false accusation' will for now be referred to as the simple 'polarity' item, whereas the vowel copy + tone copy morpheme will be referred to as the 'echo question' particle.

3.1 Polarity

The morphemes which have been termed 'denial of a false accusation' (see Déchaine 2001a) will be shown here to be polarity operators. The main function of these particles is to reverse the polarity of a proposition. The (a) examples show a simple declarative, while the (b) examples have the addition of the particle:

(24) a. *mo* *fẹ́*
1sg. want
'I want it'

b. *mo fẹ́ ẹ-ẹ̀*
1sg want 3sg-Σ
'The truth is I didn't want it'

(25) a. *mo gbà á*
1sg. take/receive 3sg.
'I took it'

b. *mo gbà á-à*
1sg. take/receive 3sg-Σ
'I didn't take it'

(26) a. *mo bú Adé*
1sg abuse Ade
'I abused Ade'

b. *mo bú Adé-è*
1sg abuse Adé-Σ
'I didn't abuse Ade'

(27) a. *mo na Adé*
1sg beat Ade
'I beat Ade'

b. *mo na Adé-è*
1sg beat Adé-Σ
'I didn't beat Ade'

(28) a. *mo jí iṣu*
1sg steal jam
'I stole jam'

b. *mo jí iṣu-ù*
1sg steal jam-Σ
'I didn't steal jam'

Although their function is relatively straightforward, their relationship to the echo question particle, to be discussed in the next section, is less clear.

3.2 Echo Questions

The vowel copy + tone copy particle also plays a polarity-changing function. As is illustrated by the data below, the addition of the echo question particle to a simple declarative results in something like a yes/no question:

(29) a. *o* *fẹ́* *e*
2sg want 3s
'You want it'

b. *o* *fẹ́* *ẹ-ẹ*
2sg want 3s-Σ
'You want it?!'

(30) a. *o* *rà* *á*
2sg buy 3s
'You bought it'

b. *o* *rà* *á-á*
2sg buy 3s-Σ
'You bought it?!'

(31) a. *o* *jẹ* *ẹ́*
2sg eat 3sg
'You ate it'

b. *o* *jeẹ* *ẹ́-ẹ́*
2sg eat 3s-Σ
'You ate it?!'

In each case, the particle turns a declarative clause into an echo question. Assuming with Inada and Imanishi (2003) that yes/no echo questions are not licit in out-of-the-blue contexts because they are not presuppositional, the negative contexts can be treated naturally by analyzing the particles as polarity operators.

(32) *ko* *wá*
NEG come
's/he didn't come'

(33) *ko* *wá* *á*
NEG come Σ
'Is it the case that he didn't come?'

Not only is there an echo question that is formed, but the polarity of the proposition seems to be reversed by the implication that is added by the particle.

(34) a. *kò* *fẹ́*
NEG want
'S/he didn't want it'

b. *kò* *fẹ́* *ẹ*
NEG want 3sg
'S/he didn't want it'

c. *kò* *fẹ́* *ẹ́*
NEG want Σ
'Is it the case that s/he didn't want it?'

(35) a. *ko* *lọ*
NEG go
'S/he didn't go'

b. *ko* *lọ* *ọ*
NEG go Σ
'Is it the case that s/he didn't go?' (Did s/he refuse to go?)

Not only does the particle serve as a polarity operator, it also serves an interrogative role.

3.3 Summary

Thus far we have seen the four different particles, and how they class together into sets of evidentials and polarity items. In recent work on polar questions, Hedberg (2004) has outlined an analysis of interrogative constructions with a focus on what role positive or negative polarity plays. Extrapolating some from Hedberg's analysis, there is reason to construct a typology of interrogatives that includes 'evidential'-type categories (what Hedberg calls 'contextual constraints' or 'contextual evidence', such as what evidence is available to participants). Future research in this direction (typology of clause types) may reveal that the two classes of particles in Yorùbá pattern alike in certain respects.

A brief note on the phonology of all four particles will be outlined in the next section.

4. A Note on the Phonology of Right-Edge Particles

These particles can be depicted along a dimension of segmental variance, whereby the top of the scale (in 36 below) is less variant/most specified, and the bottom is most variant/least specified in terms of featural/segmental content. The phonological behavior of each particle indicates that they are located in different phonological domains.

(36) a. o
invariant

b. ò
subject to assimilation

c. $\dot{\mu}$
vowel copy

d. μ
vowel + tone copy

4.1 Segmental Specification

Each particle differs from the others in the amount of material that is specified lexically. For instance, the affirmative particle is invariably a mid-toned vowel /o/.[4] In contrast, the surprisal particle has an additional marked feature, a low tone, and it is subject to slight variation. These particles maintain their vowel quality and tone, except when the preceding word ends in a [-ATR] vowel. (37) illustrates the contrast between the (a) regular declarative statement, (b) the affirmative statement with no variance in vowel quality, and (c) the surprise particle as the target of vowel harmony. Importantly, the harmony in this case is obligatory, as illustrated by (d).

(37) a. ejò ń bọ̀
'The snake is coming' (no danger)

b. ejò ń bọ̀ o
'Announcement (to audience): The snake is coming'

c. ejò ń bọ̀ ọ̀
Danger & surprise: 'The snake is coming!'

d. # ejò ń bọ̀ ò

In addition, it is only /ọ/ which triggers the harmony, and not /ẹ/:

(38) a. mo jẹ o
'I ate it' (even though you thought I couldn't)

b. mo jẹ ò
'I ate it' (surprise)

c. *mo jẹ ò

There are two facts about this 'harmony' which motivate further analysis: the direction of spreading and the existence of forms which follow a [-ATR] vowel and in which the harmony doesn't apply. According to Archangeli & Pulleyblank (1989) the direction of spreading in Yorùbá vowel harmony is from right to left. In the cases above, the spreading is from left to right. In addition, there are exceptional forms which don't trigger the harmony:

(39) ọmọ ò
'child!' (surprise)

(40) ọwọ́ ò/*ọ̀
'hand/arm'

(41) ọkọ ò/*ọ̀
'husband'

[4]The mid being unspecified for tone; see (Akinlabi 1985), Pulleyblank (1986).

(42) Ayọ̀ ò/*ọ̀
'Personal name' / 'joy'

The variable nature of this phonological effect, and the unexpected direction of spreading indicates that it is not undergoing the regular process of vowel harmony in the language, but rather, a very local process of assimilation. This would be a reason why the quality of the vowel must be identical to the particle in order to trigger to the process, and also for the effect being limited to only certain lexical items. If this is an assimilatory process that is becoming lexicalized, it is probably likely to proceed lexical item-by-lexical item.

The next particle on the scale of specification is the polarity particle. Phonologically, this particle is a single segment which is a copy of the preceding vowel. The vowel quality is unspecified, however, there is an invariant low tone feature which is specified for the particle.

(43) *mo fẹ́ ẹ̀-ẹ̀*
1sg want 3sg-Σ
'The truth is I didn't want it'

(44) *mo gbà á-à*
1sg. take/receive 3sg-Σ
'I didn't take it'

Perhaps the best way to characterize this morpheme phonologically is as a featureless mora which bears a low tone.

(45) Polarity particle
L
|
μ

In contrast with this is the 'echo question' particle, which mirrors the polarity particle in its vowel-copying quality; but in addition, this particle copies the tone of the preceding segment as well.

(46) *o fẹ́ ẹ̀-ẹ̀*
2sg want 3s-Σ
'You want it?!'

(47) *o rà á-á*
2sg buy 3s-Σ
'You bought it?!'

Following the analysis above of the polarity particle, the echo particle can be characterized as a mora completely unspecified for distinctive features, including tone.

(48) Echo question particle
μ

To summarize, the degree of segmental or featural variance across particles is schematized below:

(49) a. o
invariant

b. ò
subject to assimilation

c. $\dot{\mu}$
vowel copy

d. μ
vowel + tone copy

The concept of segmental variance is crucial to understanding what phonological domain is licensing each particle, which will be discussed in the following section.

4.2 Phonological Domains

According to Akinlabi & Liberman (2000b), the distribution of tones is governed by the behavior of higher-order tonal complexes, something akin to tonal feet.[5] The tonal properties of the particles are outlined below:

(50) a. o
fixed tone

b. ò
fixed tone

c. $\dot{\mu}$
fixed tone

d. μ
no fixed tone

Following Déchaine (2001a), the lack of a fixed tone on the echo question particle can be construed as meaning that the particle must be incorporated into the preceding foot. Furthermore, the tonal properties of the other particles indicates that since they are invariant, they must head their own feet (Déchaine 2001a).

As Déchaine (2001a) notes, the affirmative is downstepped after a mid tone in Standard Yorùbá. The downstepped mid tone (51a) (Awayole 1997, cited by Déchaine 2001a) can be contrasted with a true low tone (51b) and a regular mid tone (51c):[6]

[5] Also see Ọla 1995 for a metrical analysis of Yòrubá. Ọla provides an analysis based on the foot, as well.

[6] For a general discussion of the downstepped mid tone in Yorùbá, see Bamgboṣe (1966), Pulleyblank (1986:115-116).

(51) a. *mo fẹ́ẹ̀!o*
1sg want it Σ
'I want it'

b. *mo ffẹ́ẹ̀ò*
1sg want it Σ
'I want it'

c. *mo fẹ́o*
1sg want 3sg
'I want him/her'

This indicates that, as Déchaine suggests, the affirmative constitutes its own foot.

Finally, some mention must be made of the tonal OCP. As Akinlabi & Liberman (2001a) point out, in Yorùbá there is a general ban on similar tones being adjacent to each other across host-enclitic boundaries. There are a number of strategies employed by the language to circumvent this condition, however, the tonal OCP fails to apply in the cases of the pragmatic particles. Each particle appears grammatically outside of another clitic, however, the particles themselves are never affected by the OCP.

(52) *mo lọ oko o*
1sg go farm Σ
'I went to the farm (who told you I didn't go?)

(53) ejò ń bọ̀ ọ̀
Danger & surprise: 'The snake is coming!'

The very fact that the echo question particle is derived by copying the preceding tone indicates that it is immune to the OCP. Although the particles are located outside the domain of clitics, their behavior does not conform to that of regular enclitics.[7] These particles are probably best considered just that: independent particles. In the next section, the distribution of the combined set of particles will be outlined and two competing analyses will be explored.

5. Right-Edge Effects

The most immediate question concerning both the proposed evidentials and polarity items is their distribution: Why are these particles restricted to the right edge of clauses? There are two proposals that might be considered in light of this: that a right-edge distribution is either syntactically conditioned, or it is phonologically conditioned. I propose an analysis based on the latter.

The two competing analyses to be discussed here are remnant movement and prosodic inversion. In both analyses the CP is raised above the particles; the remnant movement

[7] Although it remains to be tested how these particles will differ with the strong pronoun/clitic distinction (Pulleyblank 1986b).

analysis motivates the movement by scope, while the prosodic inversion analysis motivates the movement by phonological constraints. In both cases, it is assumed that the particles head an Evidential Phrase external to CP (Cinque 1999; see also Blaine & Déchaine n.d.).

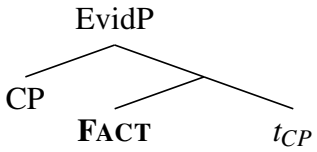
5.1 Remnant Movement

A syntactic analysis for the right-edge effects in Yorùbá would be based largely on movement. In general, this type of analysis states that VP (or CP, etc.) raises to the spec of some higher projection, such as CP or higher (EvidP: see Cinque 1999, and also Rizzi 1997 for left periphery phenomena). In essence, the analysis has its roots in older models of movement such as Quotative Inversion (Collins & Branigan 1997), and Slifting (Ross 1973, Davison 1975).

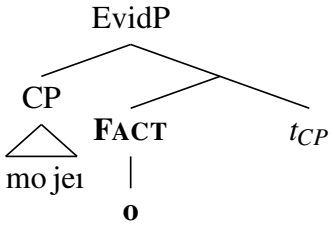
The specific analysis that will be considered here is remnant movement (Kayne 1994, 2003, Lee 2002). Whereas head movement, which is restricted to head positions, fails to capture the facts in Yorùbá, remnant movement centers around phrasal movement into specifier positions. The movement of entire phrases seems more suitable to account for the Yorùbá data, as entire CPs are subject to the inversion phenomena.

The basic phrase structure assumed for the remnant movement analysis is given in (54), with the details fleshed out in (55). Both of these examples illustrate the inversion of a CP with the evidential head.

(54)



(55)

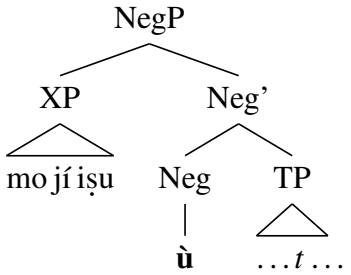


Under this view, obligatory movement is motivated by scope. If the evidential takes scope over the entire clause, CP must raise above the evidential (Lee 2002). This scopal relationship is then licensed by movement.

The same analysis can be applied to the polarity operators. If they are assumed to head a negation phrase which dominates TP, remnant movement will invert the TP and polarity item. The motivation for this type of movement would again be for scope or checking reasons (following Lee 2002):[8]

[8] Assuming that there is an operator in the spec of CP would also be a valid.

(56)



A prediction of the remnant movement analysis is that adverbial elements high up in the tree can block movement of the CP into the spec of EvidP. This prediction proves correct in languages like Zapotec where there are adverbial elements available to block movement (see Lee 2002); however, the prediction is wrong for the Yorùbá data. Examples (57-60) illustrate this:

(57) *mo jé‘ kíákíá o*
1sg eat quickly Σ
'Truly I ate it quickly'

(58) *kíákíá ni mo jé‘ o*
quickly FOC 1sg eat Σ
'Quickly, I ate it'

(59) *kíákíá o mo jé‘

(60) *kíákíá ni o / o ni mo jé‘

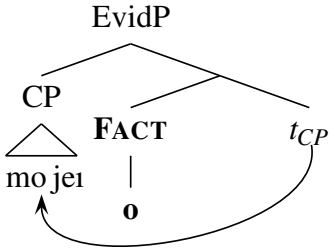
In (57) the evidentially-marked declarative is shown, and in (58) the adverbial is moved into a focused position and the focus marker is introduced. In this case, the evidential morpheme remains on the right edge, and supposed movement of the CP is not blocked by the presence of an adverbial which fills the spec of the evidential phrase. It is ungrammatical to leave the CP in situ (59), and it is likewise ungrammatical with the focus marker in pre- or post-evidential position (60).

5.2 Prosodic Inversion

The incorrect predictions that the Remnant Movement analysis makes forces us to consider other motivations for the right-edge effects. There must be some motivation for the particles to obligatorily be on the right edge, and one possibility is that there is a phonological reason for the restricted distribution of the particles. Following Halpern (1995), I propose that the right-edge effects in Yorùbá are the result of prosodic inversion, whereby the particles are clitics which require a phonological host to their left. More specifically, the right-edge particles are base-generated or sub-categorized as enclitics; a PF operation inverts the particle with the string on its right so that it has a proper phonological host. Under this analysis, the clitic must always be on the right because the phonological constraint will not allow it to function as a proclitic.

The prosodic inversion analysis is schematized below:

(61)



The claim that the right-edge particles are clitics is supported by distributional evidence. Right-edge particles are found in the domain of clitics (outside of the pronominal clitics).

(62) *mo* *je* ∅ *o*
1sg. eat 3sg. Σ
'I ate it' (even though you thought I couldn't)

(63) *o* *rà* *á-á*
2sg. buy 3s-Σ
'You bought it?!'

(64) *mo* *jẹ* *ẹ́-ẹ̀*
1sg. eat 3sg-Σ
'The truth is I didn't eat it'

As (62-64) illustrate, the particles appear outside of the domain of pronominal clitics. The drawback of the remnant movement analysis was that it made predictions that were not true for the Yorùbá data. The prosodic inversion analysis, on the other hand, makes predictions about the obligatory right-edge distributions of both the evidentials and polarity items that hold true across-the-board in the language. The requirement that clitics be subcategorized for being on the right of a phonological host forces all instances of these particles to appear on the right edge without exception.

5.3 Linearization

The only thing left to explain is why the particle must encliticize to the entire string rather than to just the first element (syntactic constituent or prosodic word; i.e. second position phenomena). This is explained quite naturally if the operation is viewed as nothing more than one of linearization.[9]

[9]An alternative to the linearization account proposed here would be to rely completely on phonological constraints to derive the surface ordering of strings. One such approach would be Optimality Theory (Prince & Smolensky 1993), whereby the relative rankings of faithfulness constraints and alignment constraints would result in a full typology of first position, second position, final position and (perhaps less

Here I will adopt Williams' (2003) notion of mapping between various levels within a language. For instance, Williams has shown that much of syntax is due to shape preservation, or certain economy principles regarding shape. Williams posits a fixed number of levels in grammar, each which can possibly map onto another. When an optimal mapping is not available, the most economical form is selected. This results in some things being "not a real movement, but a displacement that arises from the mismatch of two levels" (Williams 2003:119). The levels suggested by Williams are Case Structure, Theta Structure, Quantification Structure, Surface Structure, Focus Structure, and Accent Structure (and possibly others such as Predicate Structure, etc.). I will assume that for the prosodic reasons outlined above, an additional structure PrS (Prosodic Structure) must exist, and there must be a mismatch resulting from the mapping of PrS onto another structure (where $\dashrightarrow$ indicates a mapping relation from one structure onto another).

(67) PrS $\dashrightarrow$ SS

In this case PrS maps onto Surface Structure in order to derive the surface effects of prosodic inversion. Although each of the particles would be at the left edge at Surface Structure, the mapping of PrS would force them onto the right edge, resulting in a 'mismatching'.

Although adopting a representational view doesn't solve the inherent problem of why nothing can appear to the right of the particle, it does provide a framework that will correctly map the input structure to the output structure. In order to address that problem, we must further stipulate that in addition to being subcategorized for a host on the left, these clitics must also be subcategorized NOT to have an element on the right.

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desirably) penultimate position clitics. The rankings of LINEARITY and a faithfulness constraint on subcategorization ('FAITH': clitic = suffix) will derive a typology of non-movement opposed to movement:

(65) Movement Typology
no movement: LINEARITY » FAITH
clitic movement: FAITH » LINEARITY

In order to get the landing position of clitics, additional constraints are needed, including generalized alignment constraints (McCarthy & Prince 1993) of both the 'right' and 'left' orientations (where alignment violation is defined by each misaligned element in a string).

(66) Position Typology
2nd position clitics: FAITH » ALIGN L » LINEARITY, ALIGN R
string-final clitics (Yorùbá): FAITH » ALIGN R » LINEARITY, ALIGN L
2nd position clitics: FAITH » LINEARITY » Align L » Align R
string-final clitics (Yorùbá): FAITH » LINEARITY » Align R » Align L
clitics in situ: LINEARITY » FAITH, ALIGN L, ALIGN R
clitic always initial (ALL clitics): ALIGN L » FAITH, LINEARITY, ALIGN R
clitic always final (ALL clitics): ALIGN R » FAITH, LINEARITY, ALIGN L

Interestingly, in each case, ALIGN R has to outrank ALIGN L in Yorùbá in order to properly account for the behavior of the clitics. I leave this position open for future research.

6. Conclusion and Discussion

This paper has shown that the right-edge particles in Yorùbá play a configurational role in the grammar of the language, and that the entire set of particles breaks down into a dichotomy of evidentials and polarity items. Furthermore, the right-edge effects in the Yorùbá pragmatic particles boil down to a prosodic requirement of clitics which triggers an inversion of elements in the surface structure. The configurational properties of the right-edge particles seems to support recent work by Speas (2003) and Speas and Tenny (2004) that pragmatic elements have a representation in syntax.

There still remain questions about the set of right edge particles, and in particular their interactions with each other. For instance, what exactly is the relationship between the evidentials and polarity operators? Can the two separate sets interact with each other? One further remaining question concerning the pragmatic particles is their diachronic development. Lord (1976) has suggested that bleached verbs tend to evolve into functional categories in Kwa languages. It may be the case that the particles at hand may have undergone the same type of development. There is, however, another possible explanation, namely that the particles derived from grammaticalized pronominals (Rooryck 2001). At least for the evidentials, this seems to be a plausible explanation, as the segmental content of both forms is identical to some of the pronominal clitics that currently exist in the language. The exact historical developments, and the diachrony of the polarity items will be left for future research.

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Variation in Restrictions on Multiple Evidential Markers in Japanese by Speaker Age

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1. Introduction

Evidentiality is the linguistic marking of the source of information of a proposition. In some languages, multiple markers of evidentiality can co-occur in a sentence for various functions, such as to accredit different sources (Aikhenvald, 2004:67). Japanese is one language in which multiple evidential markers are permitted, but not all such combinations are permitted. This paper examines restrictions on multiple evidential markers in Japanese sentences and the variation of these restrictions by speaker age. Our hypothesis is that speakers would differ in their restrictions on evidential marker usage depending on age. This hypothesis stems from an example from Aoki (1986:225) illustrating the use of the evidential morpheme *garu*, in which it is claimed that "sentences involving third person experiencers are ungrammatical without *garu*." The example sentences that Aoki uses to illustrate this statement are as follows:

(1) **Kare ha atu-i*
he T.M. hot-NP
"He is hot."

(2) *Kare ha atu-gatteiru*
he T.M. hot-EVID.stative
"He is hot."
(Aoki, 1986:225)

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University of British Columbia Working Papers in Linguistics, volume 28. Vancouver, Canada, 2010.

One of the authors, a native speaker of Japanese in her twenties, remarked that she found sentence (1) to be grammatical even when the *garu* morpheme was omitted[1]. The study in this paper is a first attempt to investigate whether this disagreement about the grammaticality of sentences like (1) is widespread among younger speakers, whether there might be wider changes in the distribution of evidentials in Japanese, and whether there are more restrictions on the evidentiality system as the age of the speaker increases. To test this hypothesis, we gathered primary data from native speakers of Japanese by conducting interviews in which we solicited grammaticality judgments of sequences of evidential markers in isolation. We also asked for responses to situations that we designed where we think multiple evidential markers are warranted, and recorded the actual choices of evidential markers that respondents made. In addition to the *garu* marker, we also examine the evidentials *mitai*, *souda*, *youda*, and *rasii*. We find that there is evidence of differences in the restrictions of multiple evidential markers by speaker age, and suggest that a larger-scale study be conducted to confirm this finding.

2. Overview of the Japanese Evidentiality System

Haruo Aoki's (1986:223) chapter "Evidentials in Japanese" defines five main Japanese evidential markers and their distributions, and groups them into three main classes of meaning connected with these evidentials. The first class involves the marker *garu*, which distinguishes the sensations experienced by the speaker from those experienced by a non-speaker, or listener. The second class of meaning involves the evidential *no*, which portrays restricted information that is not accessible to the listener. The third class involves hearsay or inferential evidentials involving the markers *souda* "they say', *youda* "appear', and *rasii* "seem'. The choice of evidential may depend on the speaker's involvement with the information (Mushin, 2001:1377). Our paper deals with the marker *garu* and the third group of evidentials presented here, in addition to the marker *mitai* "it looks like'.

3. Method

Interviews were conducted with ten native speakers of Japanese of varying ages. The interview was split into three parts. In the first part, sentences with multiple evidential markers attached to the verb *taberu* 'to eat' were presented to the consultants and they were asked if they felt that the given sentence was grammatical, and whether they themselves would personally use it. If they responded that they would personally use this combination, they were also asked for a context in which they would use this sentence. Two combinations thought to be obviously ungrammatical due to syntactic restrictions were included, *mitai-mitai* and *souda-rasii*. To control for the register difference between written and spoken Japanese, all the sentences were presented in written form. Consultants were also asked to say the sentence aloud.

The second part tested the consultants' choices of evidentials in a given situation. Due to the highly pragmatic and context-dependent nature of evidential markers, we

[1]In the sense of "He is feeling hot," not in the sense of hot being a property of the subject.

wished to test the use of multiple evidential markers in context. In the interview, a context was provided to the consultants in Japanese along with two choices of sentences with multiple evidential markers, as well as an option of providing their own sentence if they felt that neither of the choices was appropriate in this context, in order to test the consultants' willingness to employ multiple evidentials in a more spontaneous manner in a given situation, as they may not be able to conjure up an appropriate context and situation when presented with the sentence by itself as in the first part.

The third part was similar to the first two parts of the study, except that the questions and contexts were geared towards testing for the retreat of the *garu* morpheme.

Lastly, we asked consultants for personal demographic information to control for various ways in which variation in the distribution of the morphemes may arise, including age, gender, number of years in Canada, and level of education (Section 6.1). These questions were asked after the consultation, so that our consultants would feel less self-conscious about their use and knowledge of Japanese, which might cause them to provide more normative answers. A complete copy of the questionnaire that we used in the study is included in Section 6.2.

4. Results and Discussion

We separate speakers into three age groups: younger speakers are defined to be speakers in the age range of 20 to 30; middle-aged speakers are in the age range of 30 to 60; and older speakers are in the range of 60 and above. We will now discuss the results of each of the three parts of the study.

4.1 Part I: Grammaticality testing of multiple evidential markers

In part I (Table 1 in the appendix), the evidential combinations *rasii-mitai*, *mitaida-youda*, and *rasii-youda* were generally used by the middle-aged speakers and not by younger or older speakers. The combination *mitaida-souda* and *rasii-souda* were generally used by all speakers. However, with these two combinations, the younger and older speakers indicated they would not use it themselves, whereas the middle-aged speakers would use them. *Mitai-mitai* and *souda-rasii* were rejected by all speakers as expected. There were also several instances where the speaker rejected an evidential as ungrammatical, but claimed to use it personally. Also of note is that the middle-aged and older speakers were more uncertain with their responses than the younger speakers, who were more decisive.

Our results for part I were unexpected, and our prediction that the leniency in the distribution of multiple evidentials would decrease with age proved to be incorrect, as younger speakers almost had as many restrictions as the older speakers, whereas middle-aged speakers had the fewest restrictions. Speaker 4 (age 36) displayed as many if not more restrictions than the older speakers, though his knowledge of the Okinawan dialect may have had an impact on his responses. Judging from Table 1, the younger and older speakers have a more restricted system, only allowing the combinations of {*mitaida*, *rasii*} + *souda*. This is in contrast to the middle-aged speakers' less restrictive system, where the possible combinations are *rasii* + {*souda*, *mitai*, *youda*}and *mitaida* + *souda*.

For some speakers in this age group, *mitaida + youda* is also acceptable.

Consultants were asked to provide contexts for evidential combinations that they thought they would personally use. There were no clear differences in the contexts provided by the consultants; most of the speakers agreed that these evidential combinations mark second and sometimes third-hand information. One pattern of note is that many speakers provided percentages that indicated how certain or reliable the speaker was of the sentence with the evidentials, and often these percentages agreed between the speakers for a given evidential combination. For instance, speakers 3 (age 33), 5 (age 40) and 7 (age 51) all indicated that *mitaida-souda* has a certainty value of 80%, and speakers 3 and 7 also agreed that *rasii-souda* was less certain than *mitaida-souda* at 60% certainty. This suggests that the usage of evidential combinations among the speakers whose evidential systems allow them does not differ greatly.

4.2 Part II: Responses in context using multiple evidential markers

In part II (see Table 2 in the appendix), there was a narrow range of responses when the consultants gave their own response after deeming both provided responses inappropriate for the given context. Most of the middle-aged speakers chose one of the provided options. However, speaker 6 (age 45) appears to be an outlier among the middle-aged speakers, as she gave her own response for all the situations except one, and for all the situations she used the same evidential marker, *rasii*. The older and younger speakers gave their own response for most of the situations, using only one evidential marker as opposed to two in the provided sentences, and in one case (speaker 1, age 23), the verb was omitted. Furthermore, the evidentials volunteered by the older speakers and younger speakers were not in agreement; that is, the older speakers would use one evidential for the given situation, and the younger speakers would use a different evidential for the same situation, yet the older speakers shared the same evidential, as well as the younger speakers also sharing the same evidential.

Results for part II show that the restrictions of the evidentiality system of the middle-aged speakers are breaking down, which can be seen from the fact that they allowed more combinations of evidential markers, whereas the older speakers only chose one of the provided responses if forced to, preferring instead to give their own answers. This trend supported what we first suspected; that the age of the speaker correlates with acceptance of different combinations of evidentials. However, the responses given by the younger speakers disagreed with our hypothesis, which was the case with part I as well, as the younger speakers also preferred to provide their own responses. Furthermore, speaker 1 (age 23) gave a response (3) that does not contain one of the expected evidentials, but rather the shortened form *n* of the evidential *no*, and the volunteered responses of younger speakers differed from each other, as (4a) and (4b) show.

(3) Situation 4, Speaker 1 (age 23)
Tabe-ru-n-jyan?
eat-VERB.ENDING-EVID-NEG.Q
“She is going to eat, isn’t she?”

(4) a. Situation 6, Speaker 2 (age 25)
Tabe-ru-rasii.
eat-VERB.ENDING-EVID
"It seems that she will eat."

(4) b. Situation 6, Speaker 10 (age 66)
Tabe-ru-mitai.
eat-VERB.ENDING-EVID
"It looks like she will eat."

These results suggest that the distribution of evidential markers of younger and older speakers are not identical, and younger speakers have reintroduced restrictions on multiple evidential markers, but in a different way from the older speakers.

4.3 The *garu* marker

Our testing of the *garu* morpheme revealed that the three youngest speakers were the most permissive in allowing the omission of the morpheme. The next three younger speakers found the omission odd, but were still receptive to its omission, and the older speakers rejected the omission of *garu* as ungrammatical, confirming the initial observation which led to this study.

4.4 Limitations

We encountered several problems that may explain some of the unexpected results we received. Our results may have been affected by dialectal variation, as four of our speakers were not from the Kantou region of Japan, which is the region in Japan that encompasses Tokyo and neighbouring cities and suburbs. In particular, results for speaker 4 (age 36), who rejected all the combinations in part I as ungrammatical, might be better explained by this speaker's origin from Okinawa.

Another problem we discovered in our data was that some speakers rejected a particular evidential combination, but also indicated that they might or would use this combination themselves, which seems to be a contradiction. This suggests a confusion of what grammaticality means, though we do not think that their ungrammaticality judgments are a result of prescriptivism, as this pattern of multiple evidentials is not singled out or stigmatized in the school system.

Our small sample size of ten speakers makes it difficult to control for all of these different parameters such as place of origin, gender, and register. A study involving more speakers will need to be conducted to confirm our initial findings.

5. Conclusion

Contrary to our initial hypothesis, we discovered that younger and older speakers have more restrictive systems of evidentiality, whereas the middle-aged speakers were more

permissive. However, there do seem to be differences in the evidential choices of the younger and older speakers' usage of evidentials. What appears to be happening is that the younger speakers are reinterpreting the evidentiality system that the older speakers used, resulting in differences in the semantic interpretations of the evidentials in Japanese. We were correct in predicting that the treatment of the evidentials would differ amongst the age groups, but the difference was not only morphological, but also semantic. These results could lead to several possibilities for further research, such as a reanalysis of the semantics of the evidentials in Japanese, and they suggest that a distributional change in an evidential system could lead to a semantic change in the meanings of the evidentials.

6. Appendices

6.1 Biographical information of consultants

Speaker Number	*Age*	*Name*	*Place of Birth/Origin*	*Time in Canada (years)*	*Gender*	*Level of Education*	*Other Languages Spoken*
1	23	SH	Shizuoka	2	m	university	none
2	25	EM	Ibaraki-ken	3	f	college	none
3	33	HM	Tokyo	4	f	university	none
4	36	HS	Okinawa	3	m	high school	Okinawan
5	40	MA	Tokyo	10	m	high school	none
6	45	ET	Ibaraki-ken	14	f	university	none
7	51	KY	Tokyo	27	f	high school	none
8	53	HA	Tokyo	27	m	university	none
9	62	NO	Hokkaidou	37	m	high school	none
10	66	MO	Shizuoka	30	f	high school	none

Although most consultants claimed no knowledge of other languages, most spoke some English or were in the process of learning English. We felt, however, that this was unlikely to affect our results.

6.2 Questionnaire

6.2.1 Part I

1. たべる　みたい　らしい
   taberu　mitai　rasii
   eat　EVID　EVID
   “It seems apparently (he/she) will eat.”

2. たべる　みたい　みたい
   taberu　mitai　mitai
   eat　EVID　EVID
   “It seems it seems (he/she) will eat.”

3. たべる　みたいだ　そうだ
   taberu　mitaida　souda
   eat　EVID　EVID
   “It seems (I) heard (he/she) will eat.”

4. たべる　らしい　みたい
   taberu　rasii　mitai
   eat　EVID　EVID
   “Apparently it seems (he/she) will eat.”

5. たべる　みたいだ　ようだ
   taberu　mitaida　youda
   eat　EVID　EVID
   “It seems (that) it appears (he/she) will eat.”

6. たべる　らしい　そうだ
   taberu　rashii　souda
   eat　EVID　EVID
   “Apparently (he/she) will eat, I heard.”

7. たべる　そうだ　らしい
   taberu　souda　rasii
   eat　EVID　EVID
   “I heard apparently (he/she) will eat.”

8. たべる　らしい　ようだ
   taberu　rasii　youda
   eat　EVID　EVID
   “Apparently it appears (that he/she) will eat.”

6.2.2 Part II

The version presented to the consultants is solely in Japanese. The English translations are provided for this paper. Consultants were presented with two choices containing multiple evidential markers, and could provide their own option of what they would say in the given context.

Situation 1
朝ご飯を食べ損ねたA子がまだ早いけど我慢できずご飯を食べるとB男に言った。少し経ち、C子がB男にA子は何をしているかを訪ねる。B男は「 A子はご飯を食べるらしい」とC子に伝える。後ほどD男に会ったC子はA子の事を聞かれ「 A子はご飯を…よ」とD男に教える。

Girl A, who missed her breakfast this morning, could no longer wait for lunch time, said to Boy B that she's going to eat her lunch right now, although it's still early morning. After a while Girl C asks Boy B what Girl A is doing. Boy B tells Girl C, "Girl A is apparently going to eat her lunch." Later on, Girl C meets Boy D who is asking about Girl A and tells him that "Girl A is …"

i. たべるらしいそうだ
"..eating her lunch apparently, I heard."
ii. たべるらしいようだ
"..eating her lunch apparently, it appears."

Situation 2
桃が大好きなA子がデザートの桃ゼリーを食べないのでB男が理由を聞くと後で食べるのだとA子はB男に伝える。A子から離れ、途中でC子に会ったB男は桃ゼリーを食べていないA子を不思議に思うC子に「 後で食べるみたい」と教える。A子のその場を実はD男も見ていて後ほどC子に会ったD男はその事をC子に言う。するとC子は「 後で…よ」とD男に教えてあげた。

Girl A who's favourite fruit is peach hasn't touched her peach jello, so Boy B asks why; she tells him that she saving it to eat later. On his way out, Boy B meets Girl C who also wonders why Girl A isn't eating her dessert, so Boy B tells her, "it seems she's eating it later." Boy D who also was present, wondered the same thing. Later on, when he met up with Girl C he wondered about it to her and she filled him in that "..Girl A will…"

i. たべるみたいだようだ
"It appears…eat her dessert later, it seems."
ii. たべるみたいらしい
"Apparently…eat her dessert later, it seems."

Situation 3
最近忙しいA子。そんなA子が心配なC子は今さっきまでA子と話してたB男に「 A子、ちゃんとご飯食べてるかな」と不安そうに問う 。励ますように「 これから食べるみたいだよ」とB男はC子に教える 。後ほど同じ不安を持つD男に会ったC子は心配しているD男に「 大丈夫。これから…よ」と伝える。

Girl A is very busy lately. And Girl C is worried that she hasn't been eating well. When she shares her concern of Girl A with Boy B, he reassures her by telling her, "don't worry, it seems she's going to eat now." Later on Girl C meets Boy D who is also concerned about Girl A; she tells him, " no worries. ..Girl A is going to…"

i. たべるみたいだそうだ
"It seems…eat now, I heard'
ii. たべるみたいだようだ
"It seems…eat now, it appears."

Situation 4
休み時間になったらご飯を食べる事をC子に伝えてとA子に頼まれたB男は休み時間中C子に会い、「 A子はこれからご飯を食べるらしいよ」と教える。食堂の前でD男にばったり会ったC子は「 A子は？」と聞かれ、中でご飯を買っているA子を指し、「 ご飯を…よ」と答える。

Girl A asked Boy B to tell Girl C that she's going to go eat. When Boy B sees Girl C he tells her, "Girl A is going to go eat now, apparently." In front of the cafeteria, Girl C sees Boy D who asks her where Girl A is. She peaks into the cafeteria and sees Girl A buying food; she points to her and tells Boy D, "Girl A is going to…"

i. たべるらしいようだ
"..eat apparently, it appears."
ii. たべるらしいそうだ
""..eat apparently, I heard."

Situation 5
ランチタイム姿を消したA子を探しているC子はB男と会い「 今から食べるみたいだよ」と教えてもらう。廊下で食堂に入る所A子を見かけ通りかかったD男に「 A子は今からご飯を…ね」と話をかけられる。

Girl C is looking for Girl A, who suddenly disappeared at lunch time. She sees Boy B who tells her, "she's going to eat now." Girl C and Boy D meets in the hallway, and sees Girl A going into the cafeteria; Boy D tells her, "..Girl A is going to…"

i. たべるみたいだそうだ
"It seems…eat now, I heard."
ii. たべるみたいだようだ
"It seems…eat now, it appears."

Situation 6
好き嫌いが多いA子もD男の前では頑張り屋さん。C子と三人で一緒に食堂でご飯中、A子の頼んだうな重に大嫌いなかつおぶしが。周りのみんなはこれは食べないなと確信。でも先に食べ終わって来たC子から聞くとかつおぶしがあっても食べるらしい。後から来たB男も同じ確信でみんなに話しかけると「A子、…」と教えてあげる。

Girl A has many likes and dislikes when it comes to food, but she tries her very best when she's around Boy D. With Girl C, the three of them are having lunch in the cafeteria when Girl A discovers that there is bonito flakes, that she hates, in her BBQ rice bowl. Everyone in the cafeteria sees this and are sure until Girl C comes over and tells them that she's going to eat it, apparently. Just then, Boy B comes in and also is sure that Girl A won't eat it but is told by everyone that, "..Girl A is…"

i. たべるらしいようだ
"Apparently…eating it, it appears."
ii. たべるらしいみたい
"Apparently…eating it, it seems."

6.3 Tables

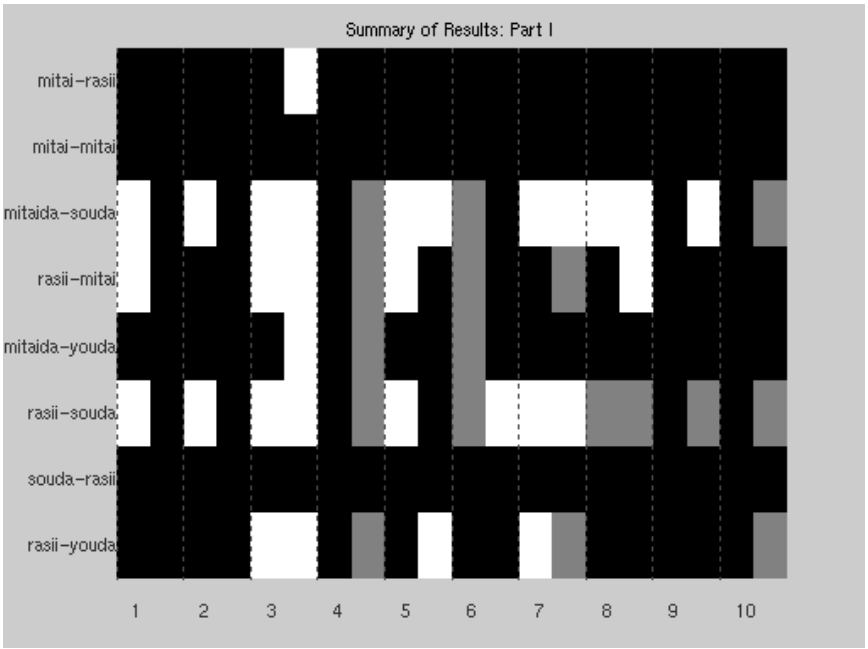

Table 1: Results for Part I

Each column represents a speaker, arranged by increasing age; each row a sentence with two evidentials. Left-hand half of column represents speakers' answer to "Do you think the following sentence is grammatical?", right-hand half represents answers to "Do you personally use this combination of evidentials?". White represents acceptance of the combination or stating that the consultant uses the combination. Black represents rejection of the grammaticality and use of the combination. Grey means that the consultant was unsure.

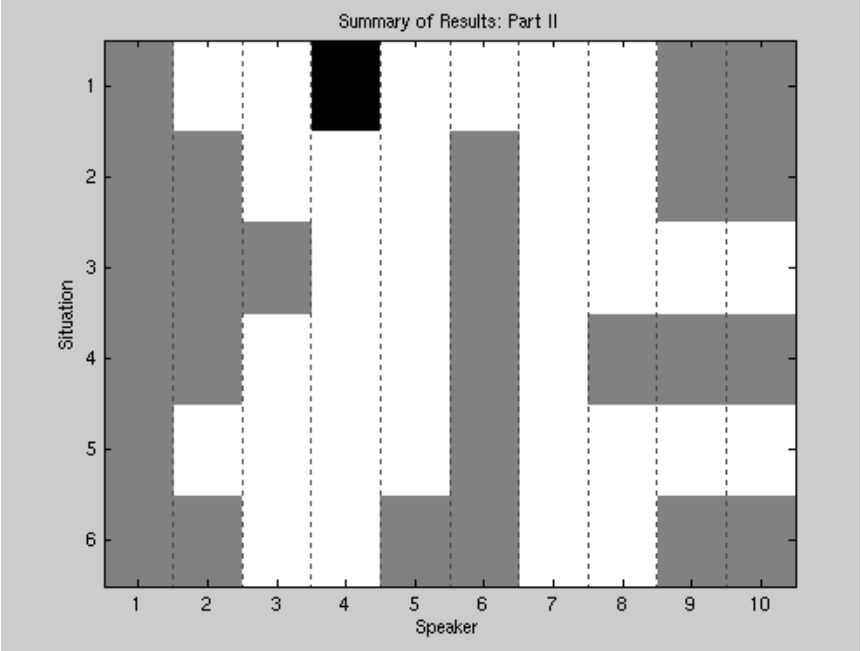

Table 2: Results for Part II

Each column represents the responses from one consultant. Each row represents the answers for one situation. White means the speaker chose the sentence with two double evidential markers that we expected. Black means the speaker chose the sentence with two evidential markers that we did not expect. Grey means the speaker provided their own alternative, which was mostly a single evidential in place of the two evidentials in the provided sentences.

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Waking the Language of Dreamers: A Survey of Evidentiality in Dreams

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1. Introduction

This paper focuses on the use of evidentials in dream narratives. Evidentiality, under a broad definition, refers to the linguistic encoding of information source and the speaker's attitude towards that information. Consequently, many treat evidentials as part of epistemic modals. Under a narrow definition, evidentiality is defined only as the codification of information source. However evidentiality is defined, the core concept, coding information source, remains.

Aikhenvald (2004) examines dream accounts marked with obligatory evidentials and discovers that each language approaches dreams differently. Some languages consider the dream world as subconscious realization of the real world (e.g., Wanka Quechua, Amdo Tibetan), and mark dream accounts with a direct or visual evidential. On the other hand, some languages distinguish the dream world from the real world (e.g., Cree / Montagnais / Naskapi, Yukaghir, Shipibo-Konibo, Jarawara); therefore, the conventionalized evidential for dream accounts is a reportative or a non-visual. Aikhenvald presents a dream account in Jarawara where all the verbs are marked with a non-visual evidential (see section 2.3 sentence (11)). The implication is that the way a culture chooses to perceive dreams must be rigidly followed throughout the entire narrative; the narrator must continually reinforce that they are recounting a dream. To address this issue, we collected dream accounts from Tagalog and Cree speakers. The corpus of data presents evidence that shows how the nature of the dream itself permits deviation from the conventionalized evidential. Section 1 discusses the evidential systems of Tagalog and Cree. Section 2 examines how speakers can manipulate evidentials and consequences of doing so. Sections 3 and 4 discuss the dream narratives collected in detail.

2. The evidential systems of Tagalog and Plains Cree

In this section, we present sentences that illustrate the function of each evidential found in the corpus of data. To our knowledge, little has been said about the evidential system

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of Tagalog; therefore, we attempt to construct its evidential system.[1] Subsequent sections present the Plains Cree evidential system and briefly discuss the Evidential Domain Hypothesis and its relevance to both Tagalog and Cree.

2.1 Building the evidential system of Tagalog

Like many other Indo-European languages, Tagalog has no grammaticized evidentials. Similar to English, evidentiality is marked by means of lexical items, adverbial expressions and embedding verbs with parenthetical usage. Based on the data collected, Tagalog is a system that has a three-way distinction of encoding information source: direct knowledge, inferred, and reported. Both inferred and reported are part of indirect knowledge. The evidentials discussed in the subsequent sections are non-exhaustive.

Marking direct knowledge Direct knowledge refers to any information obtained through sensory devices: hearing, smelling, seeing, and feeling; or to the speaker's internal state: emotions, thoughts, and memories. To mark this type of knowledge, Tagalog uses perception verbs such as *rinig* 'to hear', *kita* 'to see', and *ramdam* 'to feel'; cognition verbs such as *akala* 'to think' and *alala* 'to remember'; adverbs such as *para* 'seemingly, like' and *ganoon/ganyan* 'like that'; and phrases of thinking such as *sa isip* 'in the mind'. Sentences (1) illustrate the function of the direct evidential.[2]

(1) a. *Tapos nakita ko iyong kapitbahay namin, iyong kapatid niyang bunso*
then saw I DEM neighbour our DEM sibling her
youngest
"Then, I saw our neighbour, the youngest one."

b. *Tapos akala ko mas mura*
then thought I more cheap
"Then, I thought it was cheaper."

c. *Tapos parang nakabilog sila*
then like encircle they
"Then, it looks like they were in a circle."

Marking inferred knowledge The inferred knowledge refers to conclusions based on visual evidence or mental reasoning. In Tagalog, so far, only conclusions based on visual evidence is attested. To mark this type of information source, Tagalog uses *yata* 'it seems, perhaps', *siguro* 'perhaps', and *pala* 'apparently'. Sentences (2) illustrate the function of the inferred evidential.

[1] All the sentences used in this section are from the dream data.

[2] COMP=complementizer, DAT=dative, DEM= demonstrative, DIM=diminutive, LNK=link, nf=non-feminine, NOM=nominalizer, NONFIRSTH=non-firsthand evidential, NONVIS=non-visual, PL=plural, QUES=question particle, REM.P=remote past, TOP.NON.A/S=topical non-subject case

(2) a. *Siguro* *namatay* *na* *ako*
perhaps die already I
"Perhaps, I had died already."

b. *Hindi* *pala* *against* *sa* *amin* *iyong* *nanay* *ko*
Not seem against DAT us DEM mom my
"Apparently, my mom was not against us."

Marking reported knowledge Tagalog marks reported knowledge with the reportative *raw* 'so they say'. It is used to indicate that the information is obtained from somebody else (see also Schwager, this volume). Sentence (3) illustrates this:

(3) *Nagsasalita* *raw* *ako*
Talk reportedly I
"Reportedly, I was talking (in my sleep)."

Reported speech In Tagalog, the verb *sabi* 'to say' has the same function as its English counterpart. It can be used both in direct speech or quotations and indirect speech. Similar to the reportative, it marks knowledge acquired through somebody else. Is it appropriate to group together reported speech with the reportative? It seems more appropriate to group direct speech with the direct evidentials, and the indirect speech with the reportative. Both types of reported speech are employed to pass along information obtained from somebody else. However, direct speech is self-effacing; while with indirect speech, the speaker is passing on a sort of paraphrase of the report. Therefore, for the purpose of this paper, direct speech is taken to be a source of direct knowledge and indirect speech of reported knowledge.

2.2 Plains Cree evidential system

Evidentials in Plains Cree are not obligatory but they are grammaticized. The evidential system is divided into major modes and minor modes. The major modes are the grammaticized evidentials while lexical items with evidential-like functions are the minor modes. Cree has a three-way distinction of information source: direct or quotative, dubitative and reportative. Dubitative and reportative are part of indirect knowledge. The only minor mode attested in the corpus is *tapiskoc* 'apparently'.

The direct evidential Direct speech is marked with the quotative *itwe-*. Since it is a verb, it can be inflected for person, number, tense, and agreement. It is described as "a verb of 'thus-ing"' (Blain and Déchaine 2005). Exmaple (4) shows the function of this evidential:

(4) *Maka* *otanisa* *e-itwet* *"pihtikwe* *nimiyawehiten* *e-takohteyin"*
But his.daughter she.said come.in I.am.glad/happy that.you.arrived
"But his daughter said, 'Come in. I am glad that you arrived."'

The Indirect Evidentials The dubitative and reportative evidentials are markers of indirect source of information. According to Wolfart, dubitative marks personal inference while the reportative marks events that are not personally witnessed or experienced (Blain and Déchaine 2005). This is illustrated in sentence (5).

(5) *Niki pawataw kikawinaw ekwa kohtawinaw e-kistepoh*
I had.dreamt of.our.mother and our.father a.feast.was.going.on
esa
reportedly
"I had dreamt of our mother and father. Apparently/Reportedly, there was a feast."

Tapiskoc is a lexical item functioning as an evidential. In English, it can be translated as 'apparently'; however, from the data gathered, the dreamer ascribes a different meaning for the word. In the dream account, it means 'for example', as seen in sentence (6).

(6) *e-miyawatakik tapiskoc nista*
they.were.enjoying.it.there just.like myself
"They were enjoying it there just like I was myself."

2.3 The Evidential Domain Hypothesis

Blain and Déchaine (2005) propose that evidential markers "can be introduced in a number of different positions in the clause", and identify four such clausal domains: clause-typing, temporal, aspectual, and predicate. Each evidential is distinguished depending on which clause they attach to, as (7) shows.

(7) Evid [CP ... Evid[IP ... Evid[AspP ... Evid[VP ...]]]]

The relationship presented in (7) between clausal domains and evidentials predicts that co-occurrence of evidentials is permitted. For instance, an evidential in the CP-domain can co-occur with an evidential in the IP-domain.[3] Blain and Déchaine have argued convincingly for the evidential domain hypothesis in Plains Cree. Certainly, co-occurrence of evidentials is attested in our Cree data. Although little is known about the Tagalog evidential system, the Tagalog data also present cases where two evidentials co-occur.

(8) Cree:

Omisi ***ki-itwew*** *"Ote nikan* ***etikwe***
This what.she.had.said over.here in.the.future maybe
e-wiwapahtaman..."
you.will.see...
"This is what she said, "Maybe, in the future, you are going to see..."'

[3] We are not going into the finer details of the hypothesis and instead, refer the reader to the relevant paper.

(9) Tagalog:

Tapos ***sabi****, "Kasi ang ibig sabihin noon, ano* ***daw****,*
Then say because NOM mean to.say DEM what so.they.say,
magiging..."
will.become
"Then someone said, "Because it means, so they say, that it will become..."'

3. The narrative genre

This section focuses on the function of evidentials not only in dream accounts but also in the whole narrative genre. Languages with obligatory evidentials have an established, conventionalized evidential marker for specific types of narratives. Narratives that are culturally grounded such as folktales and fairytales are almost always cast in the reportative, while stories that are tied to the speaker such as accounts of past experiences use the direct evidential. Dream accounts are personal narratives and are anchored to the dreamer, the narrator. However, they differ from true personal accounts in that some cultures do not consider them as part of personal experiences.

3.1 Disregarding convention

Although a conventionalized evidential is available, this is by no means the only evidential one can use in narrating. Narrators can deviate from the conventionalized evidential bringing about different stylistic effects such as distancing. Personal experiences are usually cast in the direct evidential. Deviating from this has an effect of distancing the narrator from the event. Consider the sentence in Salar below:

(10) Salar Aikhenvald (2004: 316)

daxən ***ixua***
wear not+NONFIRSTH
"No, we didn't wear (the veil)."

A young man asks an old woman whether she used to cover her head with a veil in her younger years. Sentence (10) is the old woman's reply. Nowadays, Salar women have to have their heads covered. Therefore, the old woman's use of non-firsthand evidential allows her to distance herself from her response, since that it is no longer the custom. The opposite effect is in play when a direct evidential is used in place of the customary indirect evidential, making the "whole account sound personal" Aikhenvald (2004: 319); the narrator is more involved with the narrative. The distancing and nearing effects are by-products of the narrator's choice of stance.

3.2 Narrator's stance

When the narrator chooses to represent the information source differently from the actual source, this is the narrator's choice of "stance" with respect to the information. The narrator may choose to take a stand in which s/he is more involved in the event, or in which s/he is as distant as possible. Mushin (2001) hypothesized five types of narrative stance:[4] personal experience (private and perceptual), reportative, inferential, factual and imaginative. These can all be arranged according to their degree of subjectivity, as Figure 1 shows.

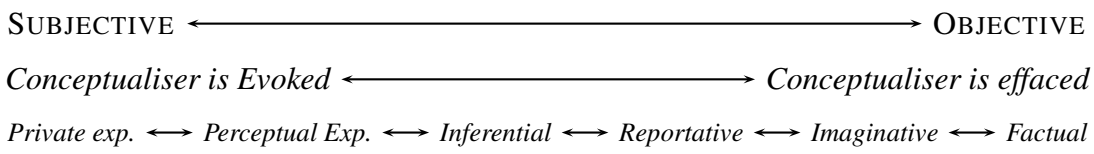

Figure 1: Degrees of subjectivity

The degree to which the narrative embodies the narrator's 'self' depends on the choice of stance.

The narrator's choice of stance affects their distance to the narrative. For instance, a narrative that requires an indirect evidential when cast in a direct evidential implies that the narrator chooses to take a personal experience stance; it presupposes the direct involvement of the narrator. The narrator could be personalizing an event or empathizing with the information source. On the other hand, when a narrative is unexpectedly cast in the indirect, the narrator may be taking the reportative stance. The narrator could be aiming on toning down their involvement in the event. This distancing/nearing effect is pervasive in narratives of languages with obligatory evidentials.

3.3 Evidentials in dreams

Aikhenvald (2004) reports that some cultures have established conventionalized evidentials in talking about dreams depending on how each culture treats dreams – as an extension of the real world or as a make-believe world. Cultures that treat dreams as personal observable experiences mark their description of dreams in firsthand or visual evidentials. Oppositely, those who treat dreams as 'unseen' cast them in non-firsthand or non-visual evidentials. For instance, in Jarawara, descriptions of dreams are cast in non-visual evidential. Sentence (11) below, part of a long description of dreams, illustrates this.

[4]Mushin (2001) labels this as epistemological stance.

(11) Jarawara Aikhenvald (2004: 312)

Nese-nuku *nuha* *nu-sadu* *nu-enipe-tupe*
Then-TOP.NON.A/S I 1SG-wife 1SG-children-DIM:PL
Waka-mhana *karakawhya* *di-uka-mhana*
1PL+arrive-REM.P.NONVIS place 3SGnf-arrive-REM.P.NONVIS
"Then, I, my wife and small children, we arrived (at the airport: in my dream), the plane arrived (in my dream)."

Since dream accounts are narratives, we expect that deviation from the conventionalized evidential is also permissible. The distancing/nearing effects caused by the narrator's stance toward the information source should be attested in dream accounts as well. These are the foci of the remaining parts of the paper.

4. Analysis of Cree and Tagalog dreams

We now examine dream accounts in Tagalog and Cree.[5] We will discuss the use of evidential markers in Tagalog dream accounts; the evidential markers in Cree dream accounts; and finally, integrate all the generalizations that emerge from the analyses.

4.1 Dreaming in Tagalog

The Tagalog dream accounts are elicited face-to-face, tape-recorded and transcribed accordingly. Table 1 provides approximate frequency counts of evidentials in Tagalog dreams.

Dreamer/Dream	# of Words	# of Evidentials	Direct Evidential	Reportative	Inferential
K/1	228	26 (11%)	15 (58%)	11 (42%)	0
/2	114	11 (10%)	8 (73%)	3 (27%)	0
C/1	323	14 (4%)	13 (93%)	0	1 (7%)
/2	405	15 (4%)	9 (60%)	1 (7%)	5 (33%)
/3	480	29 (6%)	25 (86%)	2 (7%)	2 (7%)
AC/1	111	5 (5%)	5 (100%)	0	0
/2	72	5 (7%)	4 (80%)	1 (20%)	0
/3	153	10 (7%)	9 (90%)	1 (10%)	0
L/1	915	77 (8%)	63 (82%)	10 (13%)	4 (5%)
UA/1	174	11 (6%)	7 (64%)	0	4 (36%)
N/1	127	5 (4%)	3 (60%)	1 (20%)	1 (20%)

Table 0.1: Frequency counts of Tagalog evidential markers in dreams.

Tagalog has neither grammaticized nor obligatory evidentials. Overall, speakers use evidentials less than 10% of the time when recounting their dreams.

[5] See Appendix for the complete Tagalog transcription. Unfortunately, a compete Cree transcription was not available.

The presence of the direct evidential Each subject tends to use the direct evidential, which can be explained by the nature of the dream. According to the subjects, their dreams seem very real. One subject related that her dream was so real that she woke up crying. Another one, who was talking in her dream, was told by her husband that she was actually talking in her sleep. The use of direct speech can also account for this phenomenon. For instance, K/1 and K/2 contain a higher number of direct evidentials by the fact that the dreamer is presenting what someone has told her in her dreams using direct speech.

Perhaps, Filipino culture sees dreams as extensions of the real world. This can certainly account for the frequent usage of the direct evidential. However, at this point, this conclusion cannot be supported. Nevertheless, if one assumes that the Filipino culture does not regard dreams as an extension of the real world, the use of direct evidentials signals the narrator's wish to take a personal experience stance; these dreams, although in the dream world, affected the narrator greatly in the real world.

The presence of the indirect evidential The indirect evidential is subdivided into inferred and reportative. The inferred evidential very rarely occurs in these dream accounts. From Table 1, it can be noted that there is a relatively higher occurrence of the inferred evidential in UA/1 and C/2. This can be explained by each dream's context. In UA/1, the dreamer buys some things in the mall only to find out later that the things he bought are cheaper in other malls. In C/2, the dreamer finds out that her mom was not an evil person. Both dreams involve conclusions based on visual evidence.

There is only one instance where the reportative evidential makes its presence known. In K/1, the reportative evidential appears as frequently as the direct evidential. The dreamer remarks that when she was relating the dream, she was just narrating, with no personal involvement. Here, one can see the distancing effect of the evidential in play.

Reportative evidential within a direct speech There is one instance where the reportative *raw* is within the scope of the direct evidential *sabi*. In AC/2, the narrator was relating a dream interpretation told to her by a woman in her dream. She first used the direct evidential to index the source of the direct speech to the woman and subsequently used the reportative, which indexes the content of the dream interpretation to somebody else (neither the narrator nor the woman).

4.2 Dreaming in Plains Cree

All the dreams in Cree are obtained by means of e-mail. Table 2 shows the frequency counts for each evidential marker.

The presence of evidentials The nature of the dream influences the use of evidentials. For the most part, LC's dream account is devoid of evidentials. However, when she was quoting her mother's interpretation of the dream, she used a quotative marker to introduce the direct speech, while the dream interpretation itself was marked with a dubitative. To present what was seen in the dream, MSB used the reportative evidential. Although MSB

Dreamer/Dream	# of Words	# of Evids.	Direct/Quot.	Dubitative	Reportative	tâpiskôc
LC	70	2 (3%)	1 (50%)	1 (50%)	0	0
MSB	38	3 (8%)	0	0	2 (67%)	1 (33%)
CB	47	2 (3%)	2 (100%)	0	0	0

Table 0.2: Frequency counts of Cree evidentials in dreams.

also used the minor mode *tâpiskôc* 'apparently', it should be noted that in the dream context, the marker loses its evidential meaning; instead, it means 'for example'. Finally, CB used the quotative marker to present what was said to her in her dream.

4.3 Uniting Tagalog and Plains Cree

(12) Tagalog generalizations:

a. The direct evidential is often used in realistic dreams.

b. To present dreams and downplay personal involvement, the reportative is used.

c. The dreamer uses the direct evidential when quoting someone from the dream.

d. In dream interpretation, when the narrator is quoting someone else's interpretation, the utterance is cast in the direct evidential and the interpretation is marked with the reportative.

(13) From the Plains Cree data, the generalizations are as follows:

a. When just plainly relating a dream, the reportative is used.

b. When relating what someone else has said in a dream, the quotative is used.

c. In dream interpretation, when the narrator is quoting someone else's interpretation, the whole speech is in quotative and the interpretation is cast in the dubitative.

With the exception of (12)a., the same generalizations emerge in both Tagalog and Cree dreams.

5. What to do with these generalizations

After this preliminary analysis of Cree and Tagalog evidentials in dream narratives, it is clear that there are more pieces to the puzzle that need to be worked through. The generalizations that follow from the Cree and Tagalog dream data collected present an interesting starting point to find answers to many more questions. Although these generalizations are only attested in languages without obligatory evidentials, we propose a broader assumption that they also apply to languages with obligatory evidentials.

5.1 The nature of the dream and evidential marker

The data in this paper presents three different types of dream accounts: an account of what was seen in the dream, an account of a conversation in a dream and a dream interpretation. Each type of dream displays different evidential markings in both Cree and Tagalog. To better test the validity of this relationship, the next step is to formulate an experiment that goes through each of these different types of dreams and observe how evidentials are manipulated. We propose a simple test such as in Table 3. We expect the dreamer to manipulate the evidential markers in some manner, which will depict the differences in each dream. The follwing is a sample experiment to test how the evidential correlates with the nature of dream

> CASE STUDY: what is seen in dreams, conversations in dreams, presenting other people's dream interpretation Task: The experimenter describes a short scene or event to the subject. The experimenter then asks the subject to pretend that this is a dream of theirs. Then, the subject is asked to pretend that the event is (1) seen in the dream, (2) told to them by someone in their dream,1 and (3) someone else's dream interpretation.

We expect the evidentials used in this experiment to follow the predicted pattern. If this is the case, the results would attest the pattern we have generalized. This generalization is not limited to Cree dreams, as similar evidence was found in the Tagalog data, making the experiment one that could be posed in any language with evidentials. But, one should keep in mind that the best results would appear in languages with obligatory evidentials and also if the experimenter makes use of pictures, which will minimize the manipulation of the responses due to their language.

5.2 The dreamer's narrative stance

Another test to further our understanding of evidentials related to dream narratives is to play with different possible perspectives. It would be interesting to see how subjectivity and objectivity is interwoven in dreams. Table 4 presents a sample experiment to observe perspective shift:

> CASE STUDY: Speaker's narrative stance.
>
> > *Task 1.*: The experimenter presents a scene, an event, or a personal dream and asks the subject to pretend that this is their own dream.
> >
> > *Task 2.*: The experimenter relates a dream to the subject and makes clear to the subject that the dream is the experimenter's. Afterwards, the experimenter asks the subject to retell the dream, keeping in mind that it is the experimenter's (narrative retelling)

Task (1) is a subjective experience while task (2) is very objective. We expect that the subject will use more direct evidentials in task (1), and only reportative evidentials will surface in task (2). Task (1) will also show us if it is possible for the subject to empathize

with the dreamer or if dreams are too personal to be taken on that way. In some languages this may be very easy to accomplish depending on the kinship relation between the dreamer and the subject of the task. People who live in the same household often consider each other close enough to be participants in their actions. They are therefore allowed to use visual or direct evidentials for circumstances in which they personally had no involvement. This is a trait of the Tsafiki evidential system (Aikhenvald 2004).

6. Conclusion

This paper presents the use of evidentials in the context of dream narratives. The survey of Tagalog data initiates a primary attempt at establishing its evidential system. The discovery that the conventionalized evidential is not necessarily the one used in retelling dream narratives attests our prediction that the entire evidential system is available for dream narratives. Another discovery that emerges during the course of the investigation is that the evidential being used depends on the type of dream being presented. This generalization was also attested with our Cree data, broadening its scope to include any language that uses evidentials. The next steps outlined are avenues for future research possibilities to further the knowledge of evidential systems and how they relate to dream narratives.

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Appendix

I. Tagalog Dream Data (elicited face-to-face, tape-recorder was used)

List of abbreviations used

Abbreviation	Meaning
APPAR	Apparently
AV	Active voice
CAUS	Causative
COMP	Complementizer
DEM	Demonstrative
DAT	Dative case
DP	Discourse particle
EXIS	Existential
FUT	Future aspect
GEN	Genitive case
IMPF	Imperfect aspect
IV	Instrumental voice
INCL	Inclusive
LNK	Linker
NOM	Nominative case
NONEXIS	Non-existential
NONVOL	Non-volitive mood
OV	Objective case
PERF	Perfective aspect
Pl	Plural
Pp	Past participle
PRESPART	Present participle
Q	Question particle
Sg	Singular
1	1st person
2	2nd person
3	3rd person
-	Morpheme boundary
=	Clitic boundary
.	Word boundary

Subject	Age	Gender	Years living Canada	First language
K	22	F	5	Tagalog/Hokkien
C	22	F	7	Tagalog
AC	49	F	5	Hokkien
L	32	F	7	Tagalog
UA	47	M	0	Tagalog
N	16	F	0	Tagalog

K's Dream (1) [1]

Yung dream ko ano… yung si Nats daw yung auntie ko raw
demon dream 1.GEN what… DEM NOM=Nats so.they.say DEM aunt 1.GEN so.they.say
My dream was…Nats was…My aunt

gumawa siya ng=isang parang certificate i-bi-bigay niya kay=Nats
PERF-make 3.NOM GEN=one=LNK like certificate bv-FUT-give 3.GEN DAT=Nats
made something like a certificate, which she will give to Nats

Para i-pasign raw. Tapos, sabi ko "Ano sasign mo Nats?
in.order.to CAUS-sign so.they.say then PERF-say 1sg.GEN what FUT-sign 2.GEN Nats
in order for him to sign. Then, I said, "What are you going to sign Nats?

Tingnan mo muna bago mo i-sign." Tapos, sabi ni Nats, "I don't know," sabi niya.
look-dv 2.GEN first before 2.GEN AV-sign then PERF-say GEN=Nats PERF-say 3.GEN
Look at it first before you sign." Then, Nats said, " I don't know,"

Tapos sabi ko, "let me see, let me see." Tapos, nakita ko… tapos pagkita ko yung
Then PERF-say 1.GEN then PERF-see 1.GEN then gerund-see 1.GEN DEM
Then, I said, "Let me see, let me see." Then, I saw…then seeing it, I saw that it was

account siya, parang yung nag-aapply ka ng account sa bank. Tapos, pagkatapos
account 3.NOM like demon AV-IMPF-apply 2.NOM GEN=account DAT=bank then PP-end
an account, like when you are applying at the bank. Then, after

niya, sabi ko, "Ano? Bakit mo gagamitin pangalan ng kapitid ko? Ganyan ganyan…
3GEN PERF-say 1.GEN what why 2.GEN FUT-use-OV name GEN=sibling 2.GEN like.that like.that
that, I said, "What? Why are you using my brother's name? Blah..blah…

[1] When the narrator is addressing the experimenter directly, the utterance is put in parentheses. Phrases enclosed in parentheses iwht asterisk are experimenter's comment.

Gusto mo gamitin credit niya noh? Ganyan ganyan… Ang kapal talaga!" Inaway-away
want 2.GEN use-OV credit 3.GEN right like.that like.that so thick really IMPF-fight
You want to use his name, huh? How presumptuous of you!" I fought with her,

ko raw auntie ko. Inaway-away ko raw, sabi ko, "Bakit
1.GEN so.they.say aunt 1.GEN IMPF-fight 1.GEN so.they.say PERF-say 1.GEN why
my aunt. I fought with her, then I said, "Why

mo ginagamit yung ano niya. Paano kung next time pág tumanda na siya,
2.GEN IMPF-use-OV demon what 3.GEN how if next time when PF-grow.up already 3.NOM
are you using his (name)? What if next time, when he has grown up

magagalit siya kasi hindi na siya makakabili ng sarili niyang bahay
fv.IMPF-angry 3.NOM because not already 3.NOM non.vol.FUT-buy GEN=self 3GEN=LNK house
he will be angry because he won't be able to buy his own house

kung sira na yung credit report niya. Ganyan ganyan…" Inaway-away ko
If destroyed already demon credit report 3GEN like.that like.that IMPF-fight 1.GEN
If his credit report is destroyed. Blah…blah…" So I fought with her

raw. Tapos pagtingin ko raw dun sa side ng room, yung auntie ko
so.they.say then gerund-see 1.GEN so.they.say there DAT=side GEN=room DEM aunt 1.GEN
Then looking at that side of the room, my aunt

raw, yung darating dito yung mataba, ate ng.. ate ni papa, siya naman
so.they.say DEM AV.FUT-arrive here DEM fat sister GEN..sister GEN=dad 3.NOM in.turn
my fat aunt who's coming here, my dad's sister, she is now the one who

raw yung nagpaano ng mata. Nakadapa rin daw siyang
so.they.say DEM AV.pf-what GEN=eye non.vol.pf-lie down also so.they.say 3.NOM=LNK
had her eye done. She was lying flat on her chest

ganoon. Tumitingin sa akin, sabi niya, "K. *a gwa tjo hj̃ũ̃ sjak*,"
like.that AV.IMPF-look DAT=me pf-say 3GEN 1nom have.to rest
like that.. She looked at me, and she said, "K, I have to rest."

sabi niya, "kasi *gwa e* mata raw. Ganyan ganyan ganyan." Tapos tawa.
PERF-say 2.GEN because 1nom GEN=eye so.they.say like.that like.that like.that then laugh
she said, "because of my eye." Then I laughed

ako ng tawa Bakit si papa rin meron tsaka siya. Tapos parang nasa isang villa
1nom GEN=laugh why NOM=dad also have and 3.NOM then like DAT=one=LNK=villa
and laughed. Why does my dad have that, and she as well? Then, it seems like we were all in this villa

lang kami, vacation raw buong angkan nandoon. Yun lang.
only 1pl.NOM vacation so.they.say whole=LNK family there DEM only
on vacation. The whole family was there. That's all.

K's Dream (2)

Nung isang gabi na-dream ko galing ako
DEM one=LNK night non.vol.pf-dream-dv 1.GEN (*COMP) pf-come.from 1nom
The other night, I dreamt that I came from

sa isang concert. Tapos pumunta kami sa isang parang classroom. Tapos nandoon

DAT=one=LNK=concert then AV.pf-go 3pl.NOM DAT=one=LNK=like=classroom then over.there
this one concert. Then, we went to this one classroom. Then there

si Mick Jagger. Oh my gosh. Tapos sabi niya sa akin, "You look like Bill Gates."
NOM=Mick Jagger then AV.pf-say 3GEN DAT=me
was Mick Jagger. Oh my gosh. Then he said to me, "You look like Bill Gates."

Sabi ko, "What?" Tapos sabi niya sa akin parang kasi determined
AV.pf-say 1.GEN what then AV.pf-say 3GEN DAT=me (*COMP) like because determined
I said, "What?" Then he said to me that it's because I have a determined look in

daw ako tumingin. Sabi niya baka yayaman rin
so.they.say 1nom AV.pf-look AV.pf-say 3GEN (*COMP) maybe AV.FUT-become rich also
me. He said that maybe I will become rich too

raw ako Sabi niya gusto ko ba raw ng autograph niya. Tapos
so.they say 1nom AV.pf-say 3GEN want 1.GEN Q so.they.say GEN=autograph 3GEN then
He said (asked) if I want his autograph. Then

sabi ko, "Okay." Di ko naman hinihingi diba pero binigay niya. Tapos
AV.pf-say 1.GEN not 1.GEN anyway IMPF-ask.for-OV DP but pf-give-OV 3GEN then
I said, "Okay," I was not asking him for his autograph, right? But he still gave it to me. Then

sabi ko, "Ay, pwede mo sulatin pangalan ni Patrick na lang? Para
AV.pf-say 1.GEN oh can 2.GEN write-OV name GEN=Patrick LNK just in.order.to
I said, "Oh, can you just write Patrick's name instead? So that

ibibigay ko. Tapos sabi niya,"You write it yourself."Ang gago. Tapos sabi ko,
FUT-give-OV 1.GEN then AV.pf-say 3GEN NOM foolish then AV.pf-say 1.GEN
I will give (it to him). Then he said, "You write it yourself." How crazy. Then I said,

"Fine" Tapos nag-walk out na ko. Yun na, yun dream ko.
Then AV.pf-walk out already 1.GEN DEM already DEM dream 1.GEN
"Fine," Then I walked out. That's it. That's my dream.

C's dream (1)

Nung isang gabi nanaginip ako diba (nakuwento ko na
DEM one=LNK night AV.pf-dream 1nom DP AV.NONVOL.pf-tell a story 1.GEN already
The other night, I dreamt, right, (I already told this to you guys)

sa inyo ito e. Alam mo yung bahay namin dati sa Philippines kasi
DAT=you(pl) this AV.know 2.GEN DEM house 1pl.GEN previously DAT=Philippines because
You know that house of ours back in the Philippines,

mayroon siyang window diba. Tapos doon siya sa loob ng kwarto ng nanay ko.
EXIS 3.NOM-LNK window DP then there 3.NOM DAT=inside GEN=room GEN=mom 1.GEN
it has a window, right. Then there, it's there inside my mom's bedroom.

Tapos mga 2 o'clock ng AM, parang dumungaw ako sa labas.
Then NOM(pl)=2 o'clock GEN=AM like AV.pf-look.out.the window 1nom DAT=outside
Then around 2 o'clock am, I kind of look out the window

Tapos madilim na. Tapos tatlo na lang kaming natitira
Then dark already then three already only 1pl.NOM=LNK AV.NONVOL.IMPF-left
It was dark already. There were three of us left

sa buong neighborhood. Tapos dumungaw ako sa labas. Tapos
DAT=whole=LNK neighborhood then AV.pf-look.out.the.window 1nom DAT=outside then
in the whole neighborhood. Then, I look out the window.

nakita ko yung kapitbahay namin, yung kapatid niyang bunso. Sabi
AV.NONVOL.pf-see 1.GEN DEM neighbor 1pl.GEN DEM sibling 3GEN=LNK youngest AV.pf-say
I saw our neighbor, the youngest. (I) said

sa kanya, "Ano ginagawa mo. Di ba dapat natutulog ka na
DAT=his/her what IMPF-make-OV 2.GEN hindi Q ought.to IMPF.NONVOL-sleep-OV 2.GEN already
to her, "What are you doing? Shouldn't you be sleeping already

since 2 o'clock na?" Tapos tumingin lang siya sa akin. Tapos umuwi siya
since 2 o'clock already then AV.pf-see already 3sg DAT=me then AV.pf-go home 3sg
since it's 2 o'clock?" Then she only looked at me. Then, she suddenly went home

bigla ng bahay niya. Tapos mamaya-maya, nung umuwi siya sa bahay niya
suddenly GEN=house 3GEN then in a short while when AV.pf-go.home 3.NOM DAT=house 3GEN
Then, later, when she has gone home, she

kinuha niya yung ate niya. Tapos sabi ko doon, tatlo kami diba. Ay, hindi
pf.get.OV 3GEN DEM sister 3GEN then AV.pf-say 1.GEN DEM, three 1pl.NOM DP oh not
she got her sister. Then I said, we were three right? Oh, no.

Si Gretchen pala yung isa. Tapos yung isa si Ia Mae. So, sabi ko
NOM=Gretchen APPAR DEM one then DEM one NOM=Ia Mae so, AV.pf-say 1.GEN
Gretchen was one then the other was Ia Mae. So, I said to Gretchen

kay Gretchen "Gretch, i-harangan mo yung pinto kasi parating na sila." Tapos
DAT=Gretchen Gretch, block-IV 2.GEN DEM door because CAUS-arrive already 3.NOMpl then
"Gretchen, block the door because they are coming." Then

nung hinarangan niya yung pinto, biglang ano.. nabuksan pa rin. Tapos may
when pf-block-dv 3GEN DEM door, suddenly what… NONVOL.pf-open-dv still also then exist
when she has blocked the door, suddenly well…it was still opened. Then there

mga spiders tsaka may mga flies na.. tsaka bees na nag-..yung parang
NOM.pl=spiders and exist NOM.pl=flies COMP.. and bees COMP DEM like
were spiders, flies and bees, which are, like, forcing their way in.

nagfo-force in silang pumasok. Tapos nung nakita ko yung ate diba.
AV.IMPF-force in 3pl.NOM=LNK enter.inf then when AV.NONVOL.pf-see-OV 1.GEN DEM sister DP
Then, when I saw the sister, right, the

yung ate tsaka yung kapatid. Tapos sabi ko dun sa kay Gretchen, " Gretchen, patayin
DEM sister and DEM sibling then AV.pf-say 1.GEN there DAT DAT=Gretchen imp-kill-OV
sister and her sibling (the youngest), I said to Gretchen, "Gretchen, kill

mo yung ate nila. Gretchen, Ia Mae pagtulungan nyo yung ate nila." Tapos,
2.GEN DEM sister 3pl.GEN attack-dv 2pl.GEN DEM sister 3pl.GEN then
the sister. Gretchen, Ia Mae, attack the sister." Then

ako dapat papatay nung bata. Kaya lang yung bata parang… meron siyang…
1nom ought.to AV.FUT-kill GEN=child but only DEM child like exist 3GEN=LNK
I was the one who was supposed to kill the child. But, the child like, she has…

umiiyak siya, kasi bata..er…parang sabi niya, "Huwag mo ko patayin.
AV.IMPF-cry 3.NOM because child like AV.pf-say 3GEN don't 2.GEN 1nom kill-OV
she was crying, because she's a child…like, she said, "Don't kill me.

Bata lang ako." Tapos meron siyang parang medallion (yuck, loser). May medallion
child only 1nom then exist 3.NOM=LNK like medallion exist medallion
I am only a child." Then, she has something like a medallion (yuck, loser). She has a medallion.

siya. Tapos kinuha ko diba. Tapos tinapon ko. Tapos sabi niya, "No,
3.NOM then pf-get-OV 1.GEN DP then pf-throw out-OV 1.GEN then AV.pf-say 3GEN
Then, I took it, right. Then, I threw it away. Then, she said, "No,

no." Pero sinaksak ko pa rin siya. Tapos, akala namin patay na silang
but pf-stab-OV 1.GEN still still 3.NOM then thought 1pl.GEN dead already 3pl.NOM=LNK
no, " But, I still stabbed her. Then, we thought they are both dead, right.

dalawa diba.Tapos, for some reason, nakuha niya yung medallion. Tapos
two DP then NONVOL.pf-get-OV 3GEN DEM medallion then
Then, for some reason, she (youngest) was able to get the medallion. Then

namuo nanaman siya. Tapos nakatayo kami sa harapan nung pinto
NONVOL.pf-form-OV again 3.NOM then AV.NONVOL.pf-stand 1pl.NOM DAT=in front GEN=door
she took form again. Then, we were standing in front of the door

kasi akala namin may parating pa. Tapos mamaya may nag-suck ng head namin
because thought 1pl.GEN exist gerund still then later exist AV.pf-suck GEN=head 1pl.GEN
because we thought there were others coming. Then, later, something sucked our heads…

..like…something sucked our heads off. Tapos natanggal. Tapos nahulog lang
then NONVOL.pf-remove-OV then NONVOL.pf-fall-OV only
…like…something sucked our heads off. Then they were removed. Our bodies fell off.

yung katawan namin. Tapos yung ulo namin na-detached. Tapos nagising
DEM body 1pl.GEN then DEM head 1pl.GEN NONVOL.pf-detach-OV then NONVOL.pf-wake up
Then our heads were detached. Then I woke up.

ako. Tapos pagbalik ko sa panaginip ko, nasa beach ako nararamdaman ko yung
1nom then gerund-return 1.GEN DAT=dream 1.GEN DAT=beach 1nom IMPF-feel-dv 1.GEN DEM
Then when I returned to my dream, I was at a beach. I could feel that

ulo ko naka-sewn on sa body ko. Tapos nagrerelax ako sa beach kasama
head 1.GEN pres.part-sewn on DAT=body 1.GEN then AV.IMPF-relax 1nom DAT=beach along.with
my head was sewn-on to my body. Then, I was relaxing at the beach

ko yung batang vampire.
1.GEN DEM child=LNK vampire
together with the child vampire.

C's Dream (2)

Okay, yung isa kong dream, nakapako raw ako naka-crucify
Okay DEM=LNK one 1.GEN=LNK dream AV.NONVOL.pf-nail so.they.say 1nom AV.NONVOL.pf-crucify
Okay, one of my dream, I was crucified (so they say). I was crucified

ako kasama ng dalawang tao. Tapos di ba parang naka-bilog sila,
1nom together GEN=two=LNK=person then not Q like AV.NONVOL.pf-circle 3pl.NOM
together with 2 other people. Then, so it seems they were in a circle

naka-crucify kami sa wall. Tapos may tao sa gitna, tapos may
AV.NONVOL.pf-crucify 1pl.NOM DAT=wall then exist person DAT=middle then exist
we were crucified on the wall. Then there were people in the middle, then there were (people)

nakabilog yung mga…I don't know…members siguro ng kulto or something.
AV.NONVOL.pf-circle DEM NOM.pl perhaps GEN=cult
in a circle, the …I don't know…probably members of the cult or something

Tapos nakagasoline na yung buong wall. Nakagasoline na
Then AV.NONVOL.pf-gasoline already DEM=LNK whole=LNK wall AV.NONVOL.pf-gasoline already
Then the entire wall was soaked with gasoline. We were all soaked with gasoline, as well.

rin kaming lahat. Tapos yung bola ginawa niya (alam mo yung canon
also 1pl.NOM=LNK all then DEM=LNK ball pf-make-OV 3GEN know 2.GEN DEM=LNK
Then the ball, what he did (you know that canon

ball or something. Alam mo yung bilog tapos gaganun siya <acting out>)
know 2.GEN DEM=LNK circle then AV.FUT-like.that 3.NOM
ball or something. You know that round thing then it'll do this <acting out>)

Tapos parang may mga torture siyang nilalagay doon. Tapos dahan-dahan niyang
Then like exist pl torture 3.NOM=LNK FUT-put-OV there then slowly 3GEN=LNK
Then it appears that there were torture (stuff) that he was putting there. Then he slowly

shinu-shoot. Bahala kung saan mag-land. Tapos yung isang time, yung isa
IMPF-shoot-OV however if where AV-land then DEM=LNK one=LNK time DEM=LNK one
shooting it. It doesn't matter where it land. Then one time, one

kong kasamahan, yeah..yung isang naka-paku doon, na-burn
1.GEN=LNK companion DEM=LNK one=LNK AV.NONVOL.pf-nail there AV.NONVOL.pf-burn
of my companion, yeah, that one who was crucified there, was already burnt

na siya kasi tumama sa kanya yung torch. Tapos yung isa
already 3.NOM because AV.pf-hit DAT=him/her DEM=LNK torch then DEM=LNK one
because the torch hit her. Then the other one,

naman yung paligiran niya nasusunog na pero hindi pa
on.the.other.hand DEM=LNK surrounding 3GEN AV.NONVOL.IMPF-burn already but not yet
her surrounding was on fire already but she has not

siya nasusunog. Tapos ako, tumama yung torch, pero hindi natamaan yung
3.NOM AV.IMPF-burn then 1nom AV.pf-hit DEM=LNK torch but not pf-hit-dv DEM=LNK
burnt yet. Then the torch hit me, but it didn't hit

wall so hindi pa ako nasusunog. Tapos, for some reason, biglang
not still 1nom AV.NONVOL.IMPF-burn then suddenly=LNK
the wall so I was not yet burning. Then, for some reason, my other two companions

naka-escape itong dalawa kong kasama. Tapos ako naka-pako
AV.NONVOL.pf-escape DEM=LNK two 1.GEN=LNK companion then 1nom AV.NONVOL.pf-nail
was able to escape. Then me, I was still crucified

pa rin ako. Tapos tumakbo sila sa .. diba nag-escape sila diba. Tapos hinabol
still also 1nom then AV.pf-run 3.NOM DAT DP AV.pf-escape 3.NOM DP then pf-chase-OV
Then they ran..right they escaped right. Then they were chased

sila nung mga tao. Tapos, e, since mag-isa pa rin.. wala ng tao dun
3pl.NOM GEN=LNK NOM.pl person then since alone still also non.EXIS GEN=person there
by the people. Then, since I was by myself still. There were no one there

sa ano.. sa sacrificing place. Tapos naka-ganun ako diba <acting out>. Tapos
DAT=what DAT=sacrificing place then AV.pf-like.that 1nom DP then
at the..at the sacrificing place. Then, I was like this (acting out). Then

bumalik yung isang.. may bumalik na isang nakawala. Tapos pinakawalan
AV.pf-return DEM=LNK one=LNK EXIS AV.pf-return GEN=one=LNK got.free then pf-set.free-OV
one came back. One who escaped returned. Then she in turn set me free

naman niya ako. Tapos ginawa namin sinuot namin yung garment nila,
in.turn 3GEN 1nom then pf-make-OV 1pl.GEN pf-wear-OV 1pl.GEN DEM=LNK garment 3pl.GEN
Then what we did was wear their garment,

yung garment nung kulto na iyon. Tapos nag-pretend kami na part
DEM=LNK garment GEN=LNK=cult LNK DEM then AV.pf-pretend 1pl.NOM COMP part
the garment of the cult. Then we pretended to be a part

kami ng kulto na iyon. Tapos, merong mga stairs, para siyang Rose Garden
1pl.NOM GEN=cult LNK DEM then EXIS=LNK NOM.pl=stairs like 3.NOM=LNK
of that cult. Then, there were stairs, kind of like Rose Garden

(ang ganda, noh?) Tapos kaya lang may priest sa harapan namin. Tapos parang
NOM pretty no then but only EXIS priest DAT=in.front 1pl.GEN then like
(so pretty no?) However, there was a priest in front of us. Then it seems like

na-sense ata niya na hindi kami tunay na members. So, inalert
pf.NONVOL-sense-OV perhaps 3GEN COMP not 1pl.NOM real LNK members so pf-alert-OV
he perhaps sensed that we were not real members. So, he alerted

niya yung guard na nag-iintay doon sa may gate. Tapos, ginawa namin,
3GEN DEM guard LNK IMPF.AV-wait there DAT=around gate then pf-do-OV 1pl.GEN
the guard who was waiting there by the gate. Then, what we did was

tumakbo ulit kami pero this time, napadpad naman kami
pf.AV-run again 1pl.NOM but pf.NONVOL-carry.off-OV on.the.other.hand 1pl.GEN
run again but this time, we came to

sa parang staircase na mahaba. Tapos naka-lock yung tuktok naka-lock DAT=like=staircase
LNK long then pf.NONVOL.AV-lock DEM peak pf.NONVOL.AV-lock
a kind of a long staircase. Then, the top (of the staircase) was locked

din yung ilalim. Tapos naka-lock yung ilalim, may kumakatok. Tapos yun
too DEM bottom then NONVOL.pf.AV-lock DEM bottom EXIS IMPF.AV-knock then DEM
the bottom too. Then, the bottom was locked, someone was knocking. Then, it turns out,

pala, nanay ko. Tapos, e syempre ayaw namin pag binuksan kasi baka
APPAR mom 1.GEN then of.course not.want 1pl.GEN when pf-open-dv since maybe
it was my mom. Then, of course, we didn't want to open it in case

mamaya member din siya nung kulto diba. (siya pa ata yung leader noon, joke
later member too 3.NOM GEN=cult DP 3GEN yet perhaps DEM leader of.that joke

she turned out to be a member of the cult, right. (she's probably the leader there, joke only)

lang) Tapos, di sabi niya sa akin, "Pumasok kayo dun sa isang crack
only then so pf.AV-say 3GEN DAT=me AV-enter 2pl.NOM there DAT=one=LNK=crack
Then, so she said to me, "You guys, go in that crack there

sa wall. Merong daan dun." Sabi niya sa amin…Tapos may tumawag sa kanya
DAT=wall EXIS=LNK way there pf.AV-say 3GEN DAT=us then EXIS pf.AV-call DAT=her
on the wall. There, there is a way." She said to us. Then one of the member called her.

na isang member. Sabi sa kanya, "Nakita mo na ba sila?" Sabi
LNK one=LNK=member pf.AV-say DAT=her pf.NONVOL-see-OV 2.GEN already Q 3pl.NOM say
That person said to her, " Did you see them?"

ng nanay ko, "Hindi, wala, wala akong naririnig. Wala pa." Tapos, so, doon
GEN=mom 1.GEN not, none none 1nom=LNK IMPF.NONVOL-hear-OV none yet then so there
My mom said, "No, none, I didn't hear anything. None yet." Then, so, that's when

namin nalaman na hindi pala against sa amin yung nanay ko. Tapos
1pl.GEN pf.NONVOL-learn-dv COMP not APPAR against DAT=us DEM mom 1.GEN then
we found out that she wasn't against us. Then

pagpasok namin doon sa crack, bumalik kami kung saan kami pinako.
gerund-enter 1pl.GEN there DAT=crack pf.AV-return 1pl.NOM if where 1pl.NOM pf-nail-OV
After going into that crack, we returned to that place where we were crucified.

Tapos yun, nagising ako.
Then DEM pf.NONVOL.AV-wake.up 1nom
Then there, I woke up.

C's Dream (3)

One time nanaginip ako kasama raw ko yung mga=kaibigan ko.
pf.NONVOL-dream-OV 1nom together so.they.say 1.GEN DEM=LNK pl=friend 1.GEN
One time, I dreamt that I was with my friends.

Tapos nasa van kami. Tapos yung isa namin kasamahan sabi niya, "O sige punta
Then at van 1pl.NOM then DEM=LNK 1pl.GEN companion say 3GEN okay go.imp.
Then, we were in this van. Then, one of our companions said, "Okay, go

ka muna sa place namin." So nagpunta kami sa place niya. Tapos parang yung
2nom first DAT=place 1pl.GEN pf.AV-go 1pl.NOM DAT=place 3GEN then like DEM=LNK
to my place first." So, we went to her place. Then her place seemed

place niya parang malaking haunted house. Tapos sabi ko, "O pwede ba akong
place 3GEN like large=LNK then say 1.GEN can Q 1nom=LNK
to be like a huge haunted house. Then I said, " Can I

umihi." Tapos nung umihi ako sabi niya, "O sige pumunta ka sa baba."
AV.pee then when=LNK pf.AV-pee 1nom say 3GEN okay pf.AV-go 2nom DAT=below
use the washroom?" Then, when I finished… she said, " Okay, go downstairs."

Parang sa basement siya. Tapos parang maraming nakakalat na mga gamit-gamit.
Like DAT=basement 3.NOM then like many=LNK pf.AV-litter LNK NOM.pl=thing(redup)
It appeared to be at the basement. Then, there seemed to be a lot of things scattered around.

Tapos may malaking space doon. Tapos mamaya may lumabas na babaeng may
Then EXIS large=LNK space there then later EXIS pf.AV-go.out LNK woman=LNK EXIS
Then, there was a big space there. Then later, a woman came out

dala-dalang statue, nagmomold siya ng statue. Tapos sabi nung babae
pres.part-bring=LNK statue IMPF.AV-mold 3.NOM GEN=statue then say of.that=LNK=woman
carrying a statue. She was molding a statue. Then the woman said

"O sige hintayin mo lang yung turn mo." Tapos nung behind nung isang screen,
okay wait-dv 2.GEN only DEM=LNK turn 2.GEN then GEN=behind GEN=one=LNK=screen
"Okay, wait for your turn." Then behind this one screen,

may demonyong nagsasalita, sabi niyang ganun. Tapos pinapatay niya yung
EXIS monster=LNK IMPF.AV-talk say 3GEN=LNK like.that then pf.cause-kill-OV 3GEN DEM=LNK
a monster was talking. Then it was killing

umiihi. Tapos nung nalaman kong ako na yung susunod,
IMPF.AV-pee then when=LNK pf.NONVOL-know-OV 1.GEN=LNK 1nom aready DEM=LNK FUT.AV-follow
those who were using the washroom. Then I found out that it was my turn.

umakyat na lang ako. Sabi ko "Shit, hindi ako makakaihi." Sabi ko,
pf.AV-climb already only 1nom say 1.GEN not 1nom FUT.NONVOL.AV-pee say 1.GEN
I just went back upstairs. I said, "Shit, I won't be able to use the washroom." I said,

"Hindi ako makakaihi kasi may demonyo doon sa bathroom." Tapos yung
Not 1nom FUT.NONVOL.AV-pee because EXIS monster there DAT=bathroom then DEM=LNK
"I won't be able to use the washroom because there's a monster in there." Then

nanay ko umihi rin siya pero siya naman nakalabas siya. Pumunta siya
mom 1.GEN pf.AV-pee too 3.NOM but 3.NOM also pf.NONVOL.AV-go.out 3.NOM pf.AV-go 3.NOM
my mom also used the washroom but she was able to come out. She went to that

doon sa same screen kasama yung demonyo pero nakalabas siya kasi
there DAT=same=screen together DEM=LNK monster but pf.NONVOL.AV-go.out 3.NOM because
same screen together with the monster but was she was able to come out (alive) because

sabi niya nilagay raw niya yung rosary doon sa ulo nung demonyo. So
say 3GEN pf.AV-place so.they.say 3GEN DEM=LNK rosary there DAT=head GEN=monster
according to her, she placed a rosary on the head of the monster. So

pinabayaan siya. Tapos sabi namin, "O sige ano lahat tayo sabay-sabay
pf-not.care-dv 3.NOM then say 1pl.GEN okay what all we(INCL) at.the.same.time
she was released. Then we said, "Okay, all of us,

tayong pumunta doon sa basement patayin natin yung demonyo." Ako may
we(INCL) pf.AV-go there DAT=basement kill-dv 1pl.NOM DEM=LNK monster 1nom EXIS
let us all go to the basement together. Let us all kill the monster." I was

dala-dala akong rosary at saka paminta (as if naman may mangyayari). Tapos
AV.bring 1nom=LNK rosary and also pepper also EXIS IMPF.AV-happen then
carrying rosary and pepper (as if something will happen when I used the pepper). Then

yung nanay ko may dala-dala siyang rosary. Tapos di nakapila
DEM=LNK mom 1.GEN EXIS AV.bring 3.NOM=LNK rosary then so pf.NONVOL.AV-line.up
my mom brought a rosary. Then, so, we were in line

nga kami diba kasi parang staircase siya tapos nakapila kami.
certainly 1pl.NOM DP because like staircase 3.NOM then pf.NONVOL.AV-line.up 1pl.NOM
right, because there was this staircase. Then, we were in line.

Tapos sabi, "if you try to go back, mageexplode ka." Like mageexplode ka into bits
then say FUT.AV-explode 2nom FUT.AV-explode 2nom
Then it was said, "If you try to go back, you'll explode." Like, you'll explode into bits.

diba. Tapos sabi ko, " Shit hindi ko yatang kaya gawin ito." Kasi pagkita
DP then say 1.GEN not 1.GEN maybe=LNK able do-OV this because gerund-see
Then I said, "Shit, I don't think I can do this." Since seeing

ko, meron silang parang dalawang cremator I don't know pang-cremate na machine.
1.GEN exist 3.NOM=LNK like two=LNK AV.cause-cremate LNK
that there appeared to be 2 cremators—I don't know a machine for cremating.

Tapos nilalabas nila tapos makikita mo may apoy-apoy pa. Diba
Then IMPF-take.out-OV 3pl.GEN then FUT.NONVOL-see-OV 2.GEN EXIS fire(redup) still DP
Then, they were pulling it out then you'll see fire. So,

paglabas nila may abo sa labas. Tapos papalamigin nila iyon. Tapos
gerund-go.out 3pl.GEN EXIS ash DAT=outside then FUT-cool.down-dv 3pl.GEN DEM then
after those people get out of there, there were ashes outside. Then they will let those cool down.

ipapasok ka nila doon sa cremator para maano mo yung
FUT.CAUS-put.in-OV 2nom 3pl.GEN there DAT=cremator in.order.to NONVOL-what-OV 2.GEN DEM=LNK
Then they will put you in that creamtor in oder to face the monster.

demonyo. Pag hindi mo kaya siyang patayin, ibabalik ka nila doon
monster when not 2.GEN able 3.NOM=LNK kill-OV FUT-return-OV 2nom 3pl.GEN there
If you can't kill it, they will put you back into

sa cremator. Tapos paglabas mo, at saka ka masusunog. Tapos ikaw
DAT=cremator then gerund=go.out 2.GEN and then 2nom FUT.NONVOL-burn-OV then 2nom
that cremator. Then, when you got out, then you'll burn. Then you'll become

yung magiging abo. Tapos yung next person siya naman
DEM=LNK FUT.AV-become ash then DEM=LNK 3.NOM in.turn
ashes. Then the next person

yung sasakay. Tapos ako parang, "O shit hindi ko yata kaya ito." So
DEM=LNK FUT.AV-board then 1nom like not 1.GEN perhaps able this
will be place on that cremator. Then I was like, "O shit, I don't think I can do this." So

sinubukan kong umakyat. Tapos sabi ko "Baka naman magexplode
pf-try-dv 1.GEN=LNK pf.AV-climb then say 1.GEN maybe in.turn AV-explode
I tried to climb upstairs. Then I said, "Maybe I'll explode.

ko. Ano like hell or mageexplode ako diba." Tapos ang ginawa ko nagpray
1.GEN what FUT.AV-explode 1nom DP then NOM pf-do-OV 1.GEN pf.AV-pray
It was like hell or I'll explode right." Then what I did was I just prayed.

na lang ako, pagpasok ko dun hindi ako , for some reason, hindi ko na
already only 1nom gerund-enter 1.GEN there not 1nom not 1.GEN already
When I got into that cremator, for some reason, I didn't

kailangan magcoach, magpractice ng cremation or whatever. Or hindi na kailangan
Need AV-coach AV-practice GEN=cremation not already need
Need to be coached on what to do, nor practice the cremation rule or whatever. Or

sumakay dun sa parang whatever. Tapos yung parang may dala-dala akong
AV-board there DAT=like=whatever then DEM=LNK like EXIS AV.bring 1nom=LNK
I board there on what appeared to be…whatever. Then I seemed to be

rosary ginaganun-ganun ko yung demonyo. I mean,like hinahampas-hampas ko
rosary IMPF-like.that-OV 1.GEN DEM=LNK monster IMPF-slam-OV 1.GEN
carrying a rosary I was doing this to the monster [acting out]. I mean like, I was slapping it with

siya. Parang winiwhip ko siya para lumayo siya sa akin. Kaya lang lahat
3.NOM like IMPF-whip-OV 1.GEN 3.NOM in.order.to AV.go.far 3.NOM DAT=me but only all
that. I appeared to be whipping it like that so it'll stay away from me. However, all

ng kapatid ko parang nanigas na sila. Tapos yun, sabi niya,
GEN=sibling 1.GEN like pf.NONVOL-solidify-OV already 3pl.NOM then DEM say 3GEN
my sibling seemed to be frozen solid. Then there, it said,

"No use na fighting me." So naggive-up na lang ako. Tapos parang sabi niya,
already pf.AV-give-up already only 1nom then like say 3GEN
"There's no use fighting me." So I just gave up. Then it seemed to say,

"O sige dito ka na lang forever na kasama ko." Tapos biglang paggising
Okay here 2nom already only LNK together 1.GEN then suddenly=LNK gerund-wake.up
"Okay stay here forever with me." Then uddenly I woke up

ko naihi na ako.
1.GEN pf.NONVOL-pee-OV already 1nom
and went to the washroom.

AC's Dream (1)
Di ko masyado matandaan pero parang naalala ko mga siguro
not 1.GEN much remember-OV but like pf.NONVOL-remember-OV 1.GEN pl maybe
I can't really remember much but it seems I remembered, this is about maybe

10 years ago na ito. O kasi yung dream na-dream ko kasi yung una
10 years ago LNK DEM DP DEM dream pf.NONVOL-dream-OV 1.GEN DP DEM one
10 years ago. I remembered that I dreamt, the first one I dreamt that

yung bahay namin sa labas ang daming parang swallow na ibon.Tapos lumingon
DEM house 1pl.GEN DAT=outsidenom many=LNK like swallow LNK bird then pf.AV-look.back
there were a lot of kind of like swallows outside our house. Then when I turned around.

ako yung swallow na ibon lumipad silang lahat, umalis. Tapos nung umalis
1nom DEM swallow LNK bird pf.AV-fly 3pl.GEN=LNK all pf.AV-leave then when pf.AV-leave
all the swallows flew away. They left. Then when they had already left,

na, may mga mas malalaking ibon na dumating. Dun din sa bahay
already EXIS NOM.pl more big(redup)=LNK bird LNK pf.AV-arrive there too DAT=house
even bigger swallows arrive. There at the house too.

punung-puno sila. Tapos nung natanong ko, "Bakit umalis yung swallow?"
full(redup) 3pl.NOM then when pf.NONVOL-ask-OV 1.GEN why pf.AV-leave DEM swallow

There were a lot. Then when I asked, "Why did the swallow leave? "

May nagsabi sa akin, "Kasi mas maganda ito dahil mas malaking fortune
EXIS pf.AV-say DAT=me since more beautiful DEM because more big=LNK fortune
Someone told me, "This is better (bigger swallows) because an even bigger fortune

darating sayo." Sabi sa akin. O di sige okay. Di nung nagising ako
FUT.AV-arrive DAT=you say DAT=me so sure okay so when pf.NONVOL-wake.up-OV 1nom
will come to you." I was told. So okay. Then when I woke up

kinuwento ko sa asawa ko. Sabi niya wala yun e di wala, wala na. Tapos
pf-tell.a.story-OV 1.GEN DAT=spose 1.GEN say 3GEN none DEM so none none already AV.finish
I told my husband. He said, it was nothing. So nothing, it was nothing. It was finished

na. Isa iyon.
already one DEM
That was one.

AC's Dream (2)

Tapos siguro mga ilang araw after, napanaginipan ko naman yung house ko
Then maybe pl several=LNK day after pf.NONVOL-dream-OV 1.GEN in.turn DEM house 1.GEN
Then maybe a few days after, I dreamt now that my house

punung-puno ng isda. Puro isda, ang daming isda. Tapos sabi ko bakit
full(redup) GEN=fish all.covered.with fish NOM many=LNK fish then say 1.GEN why
was filled with fishes. Full of fishes, so many fishes. Then I said, "Why

maraming isda naman ngayon e ibon dati ngayon isda nanaman. Tapos sabi,"Kasi ang
many=LNK fish in.turn now bird before now fish in.turn then say because NOM
is it that there are lots of fishes now. Before, there were birds now fishes. Then someone said,

ibig sabihin noon, ano daw, magiging, parang *te te ya tsue mingkia*
want say-dv of.that what so.they.say IMPF.AV-become like get very many things
"it's because it means, so they say, that you'll never go hungry,

thang tsia ko. Ganun ibig sabihin. Iyon, iyon ang dalawang dream
to eat DP like.that want say-dv DEM DEM NOM=two=LNK=dream
It means, something like that." There, those were my two dreams.

naalala ko talagang matagal na yun pero parating nasa utak ko
pf.NONVOL-remember-OV 1.GEN really=LNK long LNK DEM but always=LNK DAT=brain 1.GEN
that I dreamt. They were really so long ago but they were always in my mind.

yun.
DEM

AC's Dream (3)

Hindi, na-dream ko nasa isang bahay ako. Pero nasa taas ako. Tapos
Not pf.NONVOL-dream-OV 1.GEN DAT=one=LNK=house 1nom but DAT=above 1nom then
No, I dreamt that I was at a house. But I was upstairs. Then downstairs

yung baba niyan may mga window, may mga bintana na may makikita
DEM bottom 3GEN EXIS NOM.pl=window EXIS NOM.pl=window LNK EXIS FUT.NONVOL-see-OV
there were windows, windows where you can see

kang tao. Pero yung araw na iyon parang may party pero nasa taas lang

2nom=LNK person but DEM day LNK DEM like EXIS party but DAT=above only
people. But that day it appears there was a party but we were upstairs only.

kami. Kaya lang, yung natapos na yung party tahimik na sa baba
1pl.NOM but only DEM pf.NONVOL-finish-OV LNK DEM party quiet LNK DAT=below
But only, when the party was finished, it was quiet downstairs.

Tapos narinig ko parang may tao sa baba. Kaya bumaba
then pf.NONVOL-hear-OV 1.GEN like EXIS person DAT=below therefore pf.AV-go.down
Then I heard that there seems to be people downstairs. So I went down

naman ako ng hagdan. Nung bumaba ako nakita ko siya
in.turn 1nom GEN=stair when pf.AV-go.down 1nom pf.NONVOL-see-OV 1.GEN 3.NOM
the stairs. When I got down, I saw someone.

ang bilis niya dumaan dun sa may bintana. Sinigawan ko,
NOM fast 3GEN pf.AV-pass.by there DAT=around=window pf-shout.at-dv 1.GEN
She went by me so fast there by the window. I shouted at her.

nawala siya. Tapos mamaya nakita ko parang mukha niya
pf.NONVOL-disappear-OV 3.NOM then later pf.NONVOL-see-OV 1.GEN like face 3GEN
She disappeared. Then later, I saw that she appeared to be a ghost.

aswang. Ang ginawa ko ni-rebuke ko siya, sabi ko, "In the name of Jesus Christ I
ghost NOM pf-do-OV 1.GEN pf-rebuke-OV 1.GEN 3.NOM say 1.GEN
So what I did was, I rebuked her. I said, "In the name of Jesus Christ, I

rebuke you!" Tapos nawala siya. Tapos natakot ako. Pero
Then pf.NONVOL-disappear-OV 3.NOM then pf.NONVOL-scare-OV 1nom but
rebuke you!" Then she disappeared. Then I got scared. But

nagising ako dahil ginising niya ako. Kasi nagsasalita
pf.NONVOL-wake.up-OV 1nom because pf.AV-wake.up 3.NOM 1nom because IMPF.AV-talk
I woke up because my husband was waking me up. According to him, I was talking

raw ako na hindi ko mailabas yung boses. Parang gusto ko
so.they.say 1nom COMP not 1.GEN NONVOL.CAUS-go.out-OV DEM voice like want 1.GEN
talking, but can't really voice out the words. It seems like I wanted

magsalita pero hindi lumalabas yung boses ko. Kasi yun yun, ni-rebuke
AV.talk but not IMPF.AV-go.out DEM voice 1.GEN because DEM DEM pf.AV-rebuke
to talk but the words can't come. It was because that was when I was rebuking

ko siya nun, pero hindi mailabas kasi nasa dream nga.
1.GEN 3.NOM at.that.time but not NONVOL.cause-go.out-OV because DAT=dream certainly
her (the ghost), but I can't force out the words because they were in my dream.

L's Dream (1)

A yung panaginip ko yung na parang naglalaro kami and then parang
DEM dream 1.GEN DEM LNK like IMPF.AV-play 1pl.NOM like
O my dream, it was kind of like we were playing and then it seems

naaksidente ako pero hindi ko nakita na naaksidente ako.

pf.NONVOL-accident-OV 1nom but not 1.GEN pf.NONVOL-see-OV COMP pf.NONVOL-accident-OV 1nom
I was in an accident but I didn't see myself had the accident.

Tapos biglang nung pagising ko parang ibang lugar na para bang
Then suddenly=LNK when gerund-wake.up 1.GEN like other=LNK place COMP like Q=LNK
Then suddenly when I woke up it appears I was at this place that seems like

siyang bundok na yung parang ang haba ng bundok yung talagang
3.NOM=LNK mountain COMP DEM=LNK like NOM long LNK mountain DEM really=LNK
it was a mountain, a mountain that seems so long (high), really very long (high)

ang hirap akyatin. Ganyan tapos nahirapan akong umakyat ganyan,
NOM hard climb-OV like.that then pf.NONVOL-hard.time-dv 1nom=LNK pf.AV-climb like.that
it was so hard to climb. There, then I had a hard time climbing,

tapos hanggang sa nasalubong ko yung bata sabi niya.. umiyak siya, umiyak.
then until=LNK pf.NONVOL-meet 1.GEN DEM=LNK child say 3GEN pf.AV-cry 3.NOM pf.AV-cry
then until I met a kid. He said…he was crying.

Tapos sabi ko, " Ba't ka umiiyak?" Sabi niya, "E kasi, sabi ni Jesus
Then say 1.GEN why 2nom IMPF.AV-cry say 2.GEN because say GEN=Jesus
Then I said, "Why are you crying?" He said, "It's because Jesus said that

salbahe raw ako. sabi niyang ganun, hindi raw ako makarating
bad so.they.say 1nom say 3GEN=LNK like.that not so.they.say 1nom NONVOL.AV-arrive
I was a bad kid, he said something like that. That I won't get to

ng heaven sabi niyang ganun." E di nag-wonder ako, sabi ko "bakit may Jesus ba?"
GEN=heaven say 3GEN=LNK like.that so pf.AV-wonder 1nom say 1.GEN why EXIS Jesus Q
heaven Jesus said." So I wondered, I said, "Why does Jesus exist?"

sabi kong ganun. Parang anu, excited ako na parang interesado akong
say 1.GEN=LNK like.that like what 1nom COMP like interested 1nom=LNK
I said. It was like, I was excited like I was interested

makita siya. Tapos naglakad ako, naglakad ako hanggang nakarating ako
NONVOL-see-OV 3.NOM then pf.AV-walk 1nom pf.AV-walk 1nom until=LNK pf.AV-arrive 1nom
to see him. Then, I walked, I walked until I arrived

sa anu yung lugar na akala mo heaven na. Pero ang sa isip ko parang
DAT=what DEM place COMP think 2.GEN heaven already but NOM DAT=mind 1.GEN like
at a place which you'd think was heaven already. But in my mind, it doesn't appear

hindi talaga totally heaven pa talaga. Ganun. Tapos inisip ko, ano kaya ito
not really totally heaven yet really like.that then pf-think-OV 1.GEN what perchance this
to be totally heaven just yet. There. Then I thought, what is this?

ang daming mga clouds, mga ganun, tapos parang yung sa baba clouds na
NOM many=LNK NOM.pl=clouds NOM.pl=like.that then like DEM DAT=below clouds COMP
So many clouds. Then it appears below there were clouds too

clouds na ang ganda talagang tingnan talaga. Tapos hanggang naglakad pa rin,
clouds COMP NOM pretty really=LNK look=OV really then until=LNK pf.AV-walk still too
clouds that were really so beautiful to look at. Then I still walked

pero hinahanap ko pa rin yung sinasabi nung bata na Jesus

But IMPF-look.for-OV 1.GEN still too DEM IMPF-say-OV DEM=GEN=child COMP Jesus
I was still looking for whom that kid was talking about was Jesus.

raw. Kasi parang innocente ako na hindi ko ma…talaga kung talagang
so.they.say because like innocent 1nom COMP not 1.GEN really if really=LNK
Because I appeared to be innocent that I couldn't….(know) whether there

meron bang Jesus ba na sinasabi niya. Tapos ngayon di, lakad pa rin ako
EXIS Q=LNK Jesus Q COMP IMPF-say-OV 3GEN then now so AV.walk still too 1nom
really was a Jesus whom that kid was talking of. Then,so now, I still kept on walking

ng naglakad hanggang sa nakarating ako sa isang lugar na dalawang daan.
LNK pf.AV-walk until=LNK DAT pf.NONVOL.AV-arrive 1nom DAT=one=LNK=place LNK two=LNK way
and walking until I arrived at a place with two roads.

Hindi ko alam kung saan ako pupunta, pero ano nawala na yung
Not 1.GEN know if where 1nom FUT.AV-go but what pf.NONVOL-disappear-OV LNK DEM=LNK
I didn't know where I was supposed to go but the clouds,

clouds na magandang lugar. Para ba siyang may isang part lang talaga na ang
clouds LNK pretty=LNK place like Q 3.NOM=LNK EXIS one=LNK part only really LNK NOM
the beautiful place with the clouds were gone. It appears that there was only one part really

ganda ng lugar. Tapos in the end, parang meron siyang nahati. Tapos sabi
pretty GEN=place then like EXIS 3.NOM=LNK pf.NONVOL-divide-OV then say
where the place was beautiful. Then in the end, it was splitted into two. Then I said,

ko "Saan kaya ako pupunta? Dito kaya ako sa ano, yung magandang daan,
1.GEN where should 1nom FUT.AV-go here should 1nom DAT=what DEM=LNK pretty=LNK way
"Where should I go? Maybe here, where the way is beautiful (*clear, paved)

o dito sa ano..?" Pero natandaan ko yung kwento ng ninuno na
or here DAT=what but pf.NONVOL-remember-OV 1.GEN DEM=LNK story GEN=ancestor COMP
or here (the road was unpaved)?" But I remembered the stories of my ancestors that

yung maganda daw na daan papunta daw dun sa heaven (hell),
DEM=LNK pretty so.they.say LNK way gerund.go so.they.say there DAT=heaven
the beautiful one, sao they say, was going straight to heaven (*supposed to be hell)

yung pangit daw na daan papunta daw dun sa heaven. E di
DEM=LNK ugly so.they.say LNK way gerund.go so.they.say there DAT=heaven so
and the ugly one goes to heaven. So

pinili ko yung pangit na daan na talagang ang pangit lang talaga
pf-choose-OV 1.GEN DEM=LNK ugly LNK way LNK really=LNK NOM ugly only really
I chose the ugly way, which was really very ugly

maraming bato-bato ganyan. Tapos hanggang sa nakarating ako sa yung
many=LNK stone(pl) like.that then until=LNK DAT pf.NONVOL.AV-arrive 1nom DAT=DEM=LNK
with so many rocks. Then when I reached that place

parang, (alam mo ba yung mga puno na sa ano may gilid-gilid na
like know 2.GEN Q DEM=LNK pl tree LNK DAT=what around edge (pl) LNK
a place like (you know where there were trees on the side

napakalaking puno na naghihilera na yung alam mo ba yung puno

very.big=LNK tree LNK IMPF.AV-file LNK DEM=LNK know 2.GEN Q DEM=LNK tree
very large trees that line up the road where their

na naggaganun ang mga branch niya ganyan tapos ang daming mga dahon
LNK IMPF.AV-like.that NOM.pl=branch 3GEN like.that then NOM many=LNK pl leaf
branches were like that and there were lots of leaves

sa baba ganyan) Di habang naglalakad ako, ang ganda ng lugar talaga puro
DAT=bottom like.that so while=LNK IMPF.AV-walk 1nom NOM pretty GEN=place really filled.with
below the trees) So while I was walking, the surrounding was so pretty, filled

puno. Tapos may nakita akong nangangabayo dalawa papunta
tree then EXIS pf.NONVOL-see-OV 1nom=LNK pres.part-ride.a.horse two FUT.AV-come
with trees. Then I saw someone riding a horse, two, coming

sa akin. Sabi ko.. Tapos nung medyo malapit na siya parang namukhaan
DAT=me say 1.GEN then when somewhat near LNK 3.NOM like pf.NONVOL-recognize-OV
towards me. I said…Then when they were near, it seems I seemed

ko si Jesus, sabi ko, "Hala, ito yung ano, ito yung nakita ko
1.GEN NOM=Jesus say 1.GEN oh no, this DEM=LNK what this DEM=LNK pf.NONVOL-see-OV 1.GEN
to recognize Jesus. I said, "Oh no, this person is the one I saw

sa picture sa bahay namin," sabi kong ganun. Tapos ngayon di, nung nasa
DAT=picture DAT=house 1pl.GEN say 1.GEN=LNK like.that then now so, when=LNK at
in a picture at our house." I said. Then now, so, when they were

harap ko na talaga siya, nung pababa na siya sa kabayo
In.front 1.GEN LNK really 3.NOM when=LNK IMPF.cause.AV-go.down already 3.NOM DAT=horse
right in front of me, when they were getting off their horses

niya, umiyak ako. Napaluhod ako. Napaluhod ako, tapos
3GEN pf.AV-cry 1nom pf.NONVOL.cause-kneel-OV 1nom pf.NONVOL.cause-kneel-OV 1nom then
I cried. I kneeled. I kneeled. Then

sabi ko… di humawak ako sa damit niya (diba yung damit niya is yung
say 1.GEN so pf.AV-hold 1nom DAT=dress 3GEN DP DEM=LNK dress 3GEN DEM=LNK
I said…so I grabbed his dress (his dress was

mahaba) Tapos di, hinawakan ko siya. Tapos umiyak ako ng umiyak. Tapos sabi niya
long then so pf-hold-dv 1.GEN 3.NOM then pf.AV-cry 1nom LNK pf.AV-cry then say 3GEN
was long right) Then, so, I held him. Then I cried and I cried. Then he said

na… sabi ko, para bang humingi ako ng tawad. Di ko nga
COMP say 1.GEN like Q=LNK pf.AV-ask.for 1nom GEN=forgiveness not 1.GEN certainly
that…I said, I appeared to be begging for forgiveness. I certainly

naintindihan kung bakit ako humingi ng tawad parang ganun.
pf.NONVOL-remember-dv if why 1nom pf.AV-ask.for GEN=forgiveness like like.that
didn't understand why I was begging for forgiveness like that.

Tapos di, ano pinapatayo niya ako. Tapos sabi niya, O sige, punta na lang
then so what IMPF.cause-stand.up-OV 3GEN 1nom then say 3GEN sure AV-go already only
Then, so, he was asking me to stand. Then he said (that) okay, just go

raw ako dun sa ano.. may malaking gate, na talagang wala kang

so.they.say 1nom there DAT=what EXIS=around=big=LNK=gate LNK really=LNK none 2nom=LNK
there at the….where there was a large gate, where you couldn't really

makita kung ano yung nandoon kasi malaking gate e. Tapos kasi sabi
NONVOL-see-OV if what DEM=LNK over.there because big=LNK gate then because say
see what is (beyond) there kasi the gate was so large. Then, he said

niya, "Kasi may pupuntahan pa ako, marami pa akong misyon," sabi niyang
3GEN because EXIS FUT-go-dv still 1nom many still 1nom=LNK mission say 3GEN=LNK
"IT's because I still have someplace lese to go, I still have a lot of missions," he said

ganun sa akin. Di umalis na yung dalawa si Jesus at saka
like.that DAT=me so pf,AV-leave already DEM=LNK two NOM=Jesus and also
to me. So, I left and the two, Jesus and

yung kasama niya. Tapos nangangabayo. Nilingon ko pa siya.
DEM=LNK companion 3GEN then pres.part-ride.a.horse pf.AV-look.back 1.GEN still 3.NOM
his companion. Then, they left on their horses. I looked back at them.

Napakalayo na niya, hindi ko na halos matanaw. Tapos nung
very.far already 3GEN not 1.GEN already almost NONVOL-look-OV then when
He (jesus) was so far away, I almost couldn't see them. Then when

lumingon ako sa isang ano, may gate nga na malaki. Tapos ngayon di
pf.AV-look.back 1nom DAT=one=LNK=what EXIS gate certainly LNK large then now so
when I looked towards me, there certainly was a large gate. Then now, so

pumunta na ako doon. Di ko alam kung saan ako kakatok or ano kasi
pf.AV-go already 2nom there not 1.GEN know if where 1nom FUT.AV-knock what because
I went there. So, I didn't know where to knock or what because

walang tao e. Ganun. Walang tao. Tapos ngayon di parang siguro
non.EXIS=LNK person like.that non.EXIS=LNK person then now so like maybe
there was no one there. There. There was no one there. Then now so it appears

naramdaman nung may nagbabantay na parang may tao. Di lumabas siya
pf.NONVOL-feel-OV when EXIS pf.AV-guard LNK like EXIS person so pf.AV-go.out 3.NOM
the guard probably felt that someone's at the gate. So he went out.

(alam mo ba yung si Moses, na talagang mahaba ang ano). Tapos sabi ko,
know 2.GEN Q DEM=LNK NOM=Moses LNK really=LNK long NOM=what then say 1.GEN
(You know Moses, whose beard was so so long? The guard looked like him) Then I said,

"A, sabi nung mama dito daw ako pupunta. Dito daw ang daanan"
say of.that=LNK=mister here so.they.say 1nom FUT.AV-go here so.they.say NOM=way
"Oh, the man said to go here. The way is here."

Tapos sabi niya, "Ay, hindi ka dito dadaan, dito ka sa maliit (alam mo ba
then say 3GEN oh not 2nom here FUT.AV-pass.by here 2nom DAT=small know 2.GEN Q
Then he said, "O, no you are not coming in here, come in here from the small gate (you know

yung gate na ang laking gate tapos may maliit pa na ano). Doon banda ako
DEM=LNK gate LNK NOM large=LNK gate then EXIS small still LNK what there about 1nom
the gate which is a big one with a small one). There, somewhere there

pumunta. Tapos may tinawag siyang dalawang babae, pero… nakaputi pero parang

pf.AV-go then EXIS pf-call-OV 3.NOM=LNK two=LNK woman but in.white but like
I went there. Then, he called two women, but…they were in white but they didn't appear

hindi naman angel, parang ganun. Tapos ngayon, ginamot ako, sabi niya,
not in.turn angel like like.that then now pf-heal-OV 1nom say 3GEN
to be angels. Then now, they healed me, she said,

"Bakit, na-ano yung paa mo?" " Kasi natisod ako," sabi
why pf.NONVOL-what-OV DEM=LNK foot 2.GEN because pf.NONVOL-trip-OV 1nom say
"Why, what happened to your feet?" "I tripped," I said

kong ganun "sa kakalakad." Tapos sabi niya, "O sige, kasi mahina
1.GEN=LNK like.that because pres.part-walk then say 3GEN okay because weak
"from walking," Then she said, "Okay, it's because you're weak.

ka kasi. Marupok yung ano mo, mga paa mo. Mahina ka." Tapos sabi
2nom because delicate DEM=LNK what 2.GEN pl foot 2.GEN weak 2nom then say
Your feet are delicate. You are weak." Then she said

niya...e di nung gumaling ako, sabi niya, "O sige na umuwi ka na,
3GEN so when cause-well 1nom say 3GEN okay already pf.AV-go.home 2nom already
…so when I was healed, she said, "Okay, go on home."

"Ay di pala ako papasok dito." "Hindi umuwi ka muna." Tapos nung
Oh not APPAR 1nom FUT.AV-enter here not pf.AV-go.home 2nom first then when
"Oh, so I wasn't supposed to go here." "No, go home first." Then when

umuwi ako, yung bahay namin, ang dami daw tao. Tapos dun
pf.AV-go.home 1nom DEM=LNK house 1pl.GEN NOM many so.they.say person then there
I got home, our house, there were lots of people. Then there

sa may kalsada (kasi yung bahay namin malapit lang sa kalsada) nakita
DAT=around=street because DEM=LNK house 1pl.GEN near only DAT=street pf.NONVOL-see-OV
on the street (because our house was near the street), I saw

ko yung mga tao, para bang may tinitingnan sa kalsada. Na parang
1.GEN DEM=LNK NOM.pl=person like Q=LNK EXIS IMPF-look-dv DAT=street COMP like
the people, they seemed to be watching something on the street. The people seemed to be

umiikot ang tao (alam mo ba yung nagtsitsismis lang, 'ano
IMPF.AV-encircle NOM=person know 2.GEN Q DEM=LNK IMPF.AV-gossip only what
in a circle (you know when people are gossiping, saying "what happened". Kind of like that)

nangyari, parang ganun). Tapos nung malayo pa lang ako, "ano sino kaya
happened like like.that then when far already only 1nom what who should
Then when I'm still far off, (I heard them saying) "Who's that?"

yun?" Tapos kinakabahan ako. "Namatay na ba ako?" sabi
DEM then IMPF.CAUS-nervous-dv 1nom pf.NONVOL-die-OV already Q 1nom say
Then I was getting nervous. "Have I died? " I said

kong ganun. Kasi yung time na yun alam ko na nadisgrasya
1.GEN=LNK like.that because DEM=LNK time LNK DEM know 1.GEN COMP pf.NONVOL-accident-OV
Because at that time, I knew I was involved in an accident

ako pero hindi ko alam kung ano na ang nangyari. Tapos nung doon

1nom but not 1.GEN know if what already NOM pf.happen then when there
but I didn't know the circumstances. Then inside the house itself

sa bahay mismo sa loob, nakita ko yung pamilya ko, yung nanay
DAT=house itself DAT=inside pf.NONVOL-see-OV 1.GEN DEM=LNK family 1.GEN DEM=LNK mom
I saw my family, my mom

ko kapatid ko, nagiiyakan. Kasi ewan ko kung hindi lang ako ang
1.GEN sibling 1.GEN pres.part-cry because don't.know 1.GEN if not only 1nom NOM
my sibling, they were crying. I don't know if I was the only one

nadisgrasya. Marami kami. Siguro ang katawan ko nandun sa loob na.
pf.NONVOL-accident-OV many 1pl.NOM perhaps NOM=body 1.GEN over.there DAT=inside already
who was in the accident. There were many of us. Perhaps my body was already inside.

Tapos nung nasilip ko may ano, may kabaong. Sabi ko, "Siguro
then when pf.NONVOL-peep-OV 1.GEN EXIS what EXIS coffin say 1.GEN perhaps
Then when I peeked inside, there was a coffin. I said, "Maybe

namatay na ako. Oh no, hindi pwedeng mamatay ako," Gaganun
pf.NONVOL-die-OV already 1nom not can=LNK NONVOL-die-OV 1nom FUT.AV-like.that
I died. Oh no, I can't die." I was doing that.

daw ako, "Hindi pwedeng mamatay ako." Nagaano ba.. nagiiyak na
so.they.say 1nom not can=LNK NONVOL-die-OV 1nom IMPF.AV-what Q IMPF.AV-cry COMP
"I can't die." I was crying like that

hindi pwedeng mamatay akong ganyan. Tapos nagising ako.
not can=LNK NONVOL-die-OV 1nom=LNK like.that then pf.NONVOL-wake.up-OV 1nom
that I can't die. Then I woke up.

UA's Dream (1)

Nanaginip ako kanina na nagpunta ako sa isang mall. Namili
pf.NONVOL-dream-OV 1nom earlier COMP pf.AV-go 1nom DAT=one=LNK=mall pf.NONVOL-buy-OV
Earlier I dreamt that I went to this one mall. I bought

ako nung mga gamit para dito sa biyahe namin sa Canada. Umabot yung
1nom GEN=pl=thing for here DAT=trip 1pl.GEN DAT=Canada pf.AV-reach DEM=LNK
some things for our trip here to Canada. The cost

binayaran ko ng mga mahigit 40 dollars. Tapos akala ko nakamura na
pf-pay-dv 1.GEN GEN=pl=more=40 dollars then thought 1.GEN pf.NONVOL.AV-cheap already
reached to over 40 dollars. Then, I thought that was a good deal.

ako. And then, pumunta ako sa isang mall ulit. Nakita ko yung
1nom pf.AV-go 1nom DAT=one=LNK=mall again pf.NONVOL-see=OV 1.GEN DEM=LNK
Then, I went to another mall again. I saw

mga presyo ng pinamili ko, nakita ko na mas mababa pa pala
pl price GEN=cause-buy-OV 1.GEN pf.NONVOL-see-OV 1.GEN COMP more low still APPAR
the prices of what I had bought, I saw that the price was cheaper

yung presyo dun sa pangalawang mall. Umabot lang yung halaga
DEM=LNK price there DAT=second=LNK=mall pf.AV-reach only DEM=LNK price

there at the second mall. The cost only reached

ng mga bilihin ko siguro mahigit 30 dollars. So medyo nainis ako
GEN=pl=buy-OV 1.GEN perhaps over 30 dollars somewhat pf.NONVOL-annoy-OV 1nom
to over 30 dollars. So, I was a bit annoyed

dahil akala ko nakamura na ako sa una yun pala mas mura
because thought 1.GEN pf.NONVOL.AV-cheap already 1nom DAT=one DEM APPAR more cheap
because I thought I had a good deal at that first mall. But, in turns out

pa yung pangalawa. Tapos paglabas ko dun sa panagalawang mall pumasok
still DEM=LNK second then gerund-go.out 1.GEN there DAT=second=LNK=mall pf.AV-go.in
the price was cheaper at the second mall. Then, after leaving the second mall, I went

ako sa isang pangatlong mall. Nakita ko yung mga pinamili ko,
1nom DAT=one=LNK=third=mall pf.NONVOL-see-OV 1.GEN DEM=LNK pl cause.buy-OV 1.GEN
to a third mall. I saw that the things I bought (at the first mall)

nung pinagsama-sama ko yung presyo yung halaga ng pinamili
when cause-gather.together (redup)-OV 1.GEN DEM=LNK price DEM=LNK price GEN=cause-buy-OV
when I add all their prices together,

ko, mas mura pa rin doon sa pangalawang mall, hindi pa siya umabot
1.GEN more cheap still too there DAT=second=LNK=mall not still 3.NOM pf.AV-reach
the prices were even cheaper than the at the second mall. They didn't reached

ng 30 dollars. So, lalo akong nainis. Akala ko nakamura
GEN=30 dollars more 1nom=LNK pf.NONVOL-annoy-OV thought 1.GEN pf.NONVOL.AV-cheap
to 30 dollars. So, I was even more annoyed. I thought I had a pretty good deal

na ako doon sa una, napamahal pala ako. Doon sa pangalawa
already 1nom there DAT=one pf.NONVOL.AV.cause-expensive APPAR 1nom there DAT=second
there at the first mall. But it turns out, I had not. There at the second mall

akala ko mas mura, yun pala meron pang mas mura doon. Yun, yun
thought 1.GEN more cheap DEM APPAR EXIS still=LNK more cheap there DEM DEM
where I thought the things were cheaper, it turns there was an even cheaper place. There, that

yung panaginip ko.
DEM=LNK dream 1.GEN
was my dream.

N's Dream (1)

Kasi napaniginipan ko yung friend ko (*na) naging close siya sa crush
Because pf.NONVOL-dream-OV 1.GEN DEM=LNK friend 1.GEN COMP became close 3.NOM DAT=crush
So I dreamt that my friend became close to her crush

niya as in parang palagi silang lumalabas sa mall and stuff. Pero yung
3GEN like often 3pl.NOM=LNK IMPF.AV-go.out DAT=mall but DEM=LNK
as in, they appeared to be going out often, going to mall and stuff. But, their

parents hindi alam na palagi silang nagmamall. Alam nung parent nung friend
Parents not know COMP often 3pl.NOM IMPF.AV-mall know of.that=LNK parent of.that=LNK friend
parents didn't know that they were often going to the mall. My firend's parents knew that

ko na everytime lumalabas yung friend ko pumupunta siya sa house
1.GEN COMP IMPF.AV-go.out DEM=LNK friend 1.GEN IMPF.AV-go 3.NOM DAT=house
everytime she was going out, she was going to the house

ng classmate para gumawa ng project. Tapos nung isang time,
GEN=classmate in.order.to pf.AV-make GEN=project then DEM one=LNK time
of a classmate in order to do their project. Then, one time,

nahuli siya kasi ano.. yung friend ko meron siyang directory
pf.NONVOL-catch-OV 3.NOM because what DEM=LNK friend 1.GEN EXIS 3.NOM=LNK directory
she got caught. My friend had this directory

sa room niya ng mga number ng people. Tapos tumawag yung dad ko doon
DAT=room 3GEN GEN=pl=number GEN=people then pf.AV-call DEM=LNK dad 1.GEN there
in her room filled with phone numbers of people. Then, my dad called there

sa house na sinabi niya na pupuntahan niya. Tapos so nahuli siya.
DAT=house LNK say-OV 3GEN COMP FUT-go-dv 3GEN then pf.NONVOL-catch-OV 3.NOM
At the house where my friend was supposedly had been. Then, so she got caught.

Tinawagan. Tapos nalaman na wala siya dun. Nahuli rin
pf-call-dv then pf.NONVOL-learn-OV COMP non.EXIS 3.NOM there pf.NONVOL-catch-OV too
Her parents called that house. Then they found out that she wasn't there. They (her friend and

na pumunta sila sa mall. E parang yung parents nila
COMP pf.AV-go 3pl.NOM DAT=mall like=LNK DEM=LNK parents 3pl.GEN
her crush) got caught that they were at the mall. Their parents appeared

nagka(*roon) (*ng) misunderstanding. So dahil sa business yata.
pf.AV.cause.(have) (GEN)=misunderstand because DAT=business maybe
to have a misunderstanding—because of business, I guess.

So bawal. So parang pinabreak-up sila. Yun lang.
forbidden like pf.cause-break-up-OV 3pl.NOM DEM only
So, it was forbidden. It seemed they were forced to break-up. That's all.

Evidentials and Parasitic Irony: Activating the Illocution-Proposition Distinction*

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1. Introduction

Evidential meanings are cross-linguistically expressed in a variety of ways. They overlap with epistemic modals. They are often fused with tense (Aikhenvald 2004: 68). They may be conflated with elements that encode information-structure such as focus markers (Faller 2002: 13). In fact, even within a language, evidential meaning can be scattered across several different categories (Aikhenvald 2004: 80). In short, evidentials do not appear to form a unified syntactic category – they are parasitic on other functional categories. In this paper, we look at the flipside of the coin: we focus on how irony in English is parasitic on evidential constructions. In particular, we show that certain ironic utterances in English rely on evidential constructions, as without these evidentials the utterance is infelicitous.

This paper is organized as follows: In section 2, we outline the relevant phenomena. In section 3 we present our hypothesis, and as an outline of our theoretical framework. Section 4 deals with predictions made by the hypothesis, and section 5 investigates possible directions for further research.

We adopt a broad definition of 'evidential' as "encoding one's grounds for making a speech act" in the spirit of Faller (2002). We use irony as per the narrow definition put forth by Kotthoff (1998). Irony under this reading is a manner of communicating such that the *dictum* (what is said) is contrasted with the *implicatum* (what is meant) in such a manner that the contrasting nature of the evaluations are emphasized.

2. Observations on English Evidentials and Irony

Although English is not generally considered as having grammaticized evidentials, several researchers have analyzed certain constructions in English as having evidential meaning. For example, Norrick (1995) analyzes *hunh*-tags as evidentials which signal the difference

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between the speaker's and hearer's degree of evidential certainty. These evidential tags, according to Norrick, do not specify a particular source of information on the part of the speaker, but instead encode that the speaker believes that the hearer has a stronger source of information. (Norrick 1995: 2) Thus in the following data, Vera's use of "hunh" signifies to Shelly that she believes that Shelly has a stronger source of information about Paul than she does:

(1) Shelley: "So Paul can get it over with." (example (7) in Norrick 1995)
Vera: "Then he – then he's got to go look for a job, **hunh**?"
Shelley: "Yeah. And he..."

Simons (2006) analyzes semantically parenthetic matrix clause verbs such as *see*, *think*, *hear*, *believe* etc. as having evidential uses. By semantically parenthetic she means that the matrix-clause verbs do not contribute to the 'main point' of the utterance, where 'main point' is defined as the part of the utterance that "constitutes the proffered answer to a question" (Simons 2006: 2). Thus in the following data, it is always the embedded clause, not the matrix clause, which constitutes the 'main point' of the utterance:

(2) A. Why isn't Louise coming to our meetings these days?
B. She's left town.
(i.) Henry **thinks/**I **think** that *she's left town*.
(ii.) Henry **believes/**I **believe** that *she's left town*.
(iii.) Henry **said** that *she's left town*.
(iv.) Henry **suggested** that *she's left town*.
(v.) Henry **hinted** that *she's left town*.
(vi.) Henry **imagines/**I **imagine** that *she's left town*.
(vii.) Henry **supposes/**I **suppose** that *she's left town*.
(viii.) Henry **heard/**I **heard** that *she's left town*.
(ix.) Henry is **convinced/**I'm **convinced** that *she's left town*.

(from example (3) in Simons 2006)

The matrix clause, in contrast, expresses a source of information, and/or encodes how reliable the embedded claim is (Simons 2006:10). Thus B's response in (i) can be paraphrased, according to Simons, as follows: "the answer to your question might be that Louise has left town. The source of the claim that Louise has left town is Henry; [sic] but Henry is not fully committed to its truth." (Simons 2006:10)

Gisborne (1998) identifies a class of English verbs describing modes of sensory input as SOUND-class verbs. These verbs, such as *sound*, *look*, *feel* and *smell*, have uses which express evidentiality in the form of describing the particular type of sensory input from which information is known. The following data show SOUND-class verbs acting in an evidential manner:

(3) (i.) He sounds foreign. (Gisborne 1998:1)

(ii.) He looks ill.

(iii.) The fabric looks old.

(iv.) The wine smells delicious.

Gisborne motivates the separation of the evidential use of English SOUND-class verbs from their non-evidential counterparts through the relationship of their use to the speaker's ability to make a judgment, and through the factivity/nonfactivity of the resulting statement (Gisborne 1998: 3-8). As a result of this analysis, it is possible to differentiate situations in which SOUND-class verbs are behaving evidentially from those in which they are behaving in an "attributary" manner. The examples in (3) are put under the test of cancelability wherein we assume that the implied assertions are non-factive under evidential contexts. Therefore, under the contexts provided in (4), the cancelability tests show that SOUND-class verbs are non-presuppositional.

(4) (i.) He sounds foreign. {to me}

(i.') He sounds foreign, but not because he's from another country, but because his parents are.

(ii.) He looks ill. {today}

(ii.') He looks ill, but he is not.

(iii.) The fabric looks old. {in age}

(iii.') The fabric looks old, but is not because it was made many years ago, but because of the pattern.

(iv.) The wine smells delicious. {which means it probably tastes good}

(iv.') The wine smells delicious, but it doesn't taste very nice.

The main observation of this paper is that ironic readings often arise with the aforementioned evidential constructions; and in fact that the ironic readings are dependent on the evidential constructions. Consider the following contexts:

> Context: Meagan's brother has a restriction on his computer usage – he is only allowed to use the computer on weekends. One day, however, he claims that he is doing a group project with friends, and that they need the computer to do their homework. Permission to use the computer on a school day is grudgingly granted, but when Meagan comes home, she sees her brother and his friends are playing games on the computer.

(5) What is meant: You're not doing your homework.

(i.) I *see* you're doing your homework.

(i.') So, you're doing your homework, *eh*?

(ii.) I *suppose* you're doing your homework.

(ii.') (Gee,) I *hope* you're doing your homework.

(iii.) (Sure) *looks* like you're doing your homework.

(iii.') (Sure) *sounds* like you're doing your homework.

(iii.") You (sure) *look* like you're doing your homework.

(iii."') You (sure) *sound* like you're doing your homework.

(iv.) **#You're doing your homework.**

(iv.') *Yeah*, you're doing your homework. (requires intonation)

Context: Meagan's brother says he needs the computer to do his homework. She doesn't believe him. He swears he won't play a videogame, Counterstrike (CS), at all that night – he really needs the computer for his homework. Meagan comes back later and he is play playing CS.

(6) What is meant: You're playing CS

(i.) So, you're not playing CS, *eh*?

(i.') I *see* you're not playing CS.

(ii.) I *suppose* you're not playing CS.

(ii.') I *suppose* this isn't CS you're playing.

(ii.") (Gee) I *hope* you're not playing CS.

(iii.) ??*Sounds* like you're not playing CS.
(Sure *sounds* like you're not playing CS)

(iii.') ??*Looks* like you're not playing CS.
(Sure *looks* like you're not playing CS)

(iv.) **#You're not playing CS**.

(iv.') *Yeah*, you're not playing CS.

According to our judgments, (5) (i.)–(iii.) spoken with no special intonation are all felicitous ironic statements. These utterances are all accompanied by evidential constructions. (5) (iv.), in contrast, lacks an evidential construction and is infelicitous in the given context, unless given a special intonation. The same is true for the data in (6).

The question that arises is this: What is the connection between evidentials and irony? Why are ironic utterances with evidentials felicitous, while their minimal pairs without evidentials are infelicitous?

3. Hypothesis and Theoretical Framework

We work with the following assumptions:

(i.) We assume that a speech act consists of two levels: an illocutionary level F, and a propositional level p, where p is defined in terms of truth-conditions and the principle of compositionality. For ease of discussion, from we refer to illocutionary-level meaning as *F-level*, or pragmatic, and proposition-level meaning as *p-level*, or semantic.

(ii.) We assume that irony, being related to sincerity conditions, draws from *F-level* pragmatic meaning. It is assumed that irony is the result of sincerity conditions being absent from the speech act performance, whether purposely or innocently.

(iii.) We assume that irony is a flouting of Grice's Maxim of Quality, though not necessarily deliberate in terms of the speaker. An ironic reading can still surface if understood by the hearer, or by the speaker *ex post facto*.

(iv.) We assume that evidential constructions in English likewise contribute to *F-level* pragmatic meaning.

This last assumption is motivated by the fact that they cannot be embedded under propositional operators while at the same time maintaining their parenthetical evidential meaning. This can be seen by the following data – Simons' semantically parenthetic evidentials cannot be embedded under negation without losing their parenthetic, and thus, evidential meaning.

(7) A. Why isn't Louise coming to our meetings these days?

B. She's not in town

(i.) #Henry doesn't believe/I don't believe she's in town.

(i.') Henry believes/I believe she's not in town.

(ii.) #Henry didn't say that she's in town.

(ii.') Henry said that she's not in town.

(iii.) #Henry didn't suggest that she's in town.

(iii.') Henry suggested that she's not in town.

(iv.) Henry didn't hear that she's left town.

(iv.') Henry heard that she's not in town.

What were semantically parenthetic verbs become main verbs in the examples (i.)-(iii.). The main point of the sentences are the seeing and hearing (or lack thereof) of the embedded clause, as opposed the main point being the embedded clause itself. They thus semantically contrast with examples (i.')-(iii.'), whereas they wouldn't if the English evidential constructions could escape the scope of negation. Note that this follows from De Haan's (1999) assertion that evidentials cannot scope below negation.

With these assumptions, we offer the following hypothesis: because evidentials contribute to *F-level* meaning, they serve to mentally activate (create a self-awareness) the Speaker/Hearer's distinction between the F and p. Irony, which must arise outside of the propositional content, p, can be accessed more easily if this distinction is activated.

We frame our analysis following Faller (2002, 2006a and 2006b). Faller, in the tradition of speech-act theory (cf. Searle 1969), assumes that a speech act consists of two levels: an illocutionary force F, and the propositional content p. F is defined in terms of several components: illocutionary point, mode of achievement, propositional content, preparatory and sincerity conditions and a degree of strength (Faller 2006a: 5). Thus F

takes p as its argument, $F(p)$, where the propositional content p is generally defined in terms of truth-conditions – i.e. if an element affects the truth-conditions of the proposition, then it contributes to p. (Faller 2006a: 5). More explicitly, we define the propositional level p in terms of compositionality: that the meaning of p is determined by the meaning of its components, and the way in which they are syntactically combined. As an illustration, consider the following utterances:

(8) *Assertive propositions with truth-values*

(a.) "You closed the window."

(b.) "Quietly, you closed the window."

(c.) "You didn't close the window."

Non-assertive propositions

(d.) "Close the window!"

(e.) "Did you close the window?"

(f.) "Frankly, you closed the window."

The main components of p are 'you', 'close' and 'the window'. Our basic p can be represented by the predicate structure $CLOSE(you, window)$. Now, if you actually closed the window with a bang, then p, as expressed in (a.) is true. The addition of 'quietly' in (b.), however, changes the truthconditions of the proposition - (b.), although it expresses quite nearly the same thing as (a.), is not true. The same is true with the addition of negation in (c.), the imperative construction in (d.) and the Y/N construction in (e.). These all affect the truth-conditions of the basic proposition $CLOSE(you, window)$. Negation makes the expression in (c.) false, and the imperative and Y/N constructions strip the expressions of their truth-values.[1] All of these constructions, because they modify the truth-conditions of the proposition, contribute to p. Contrast this with the addition of 'frankly' in (f.). In this case, no matter how deceptively you closed the window, the proposition expressed by (f.) is still true. Thus, as 'frankly' and the does not appear to affect or modify the truth-conditions of the proposition, it instead modifies the illocutionary level. For our purposes, we consider p to be equivalent to Simons' notion of "main point."

4. Predictions

4.1 *F-level* Evidentials forced to modify p will lose ironic readings

Several of the English evidentials mentioned previously are not dedicated evidential/epistemic morphemes/lexical items. As seen above, they also have interpretations where they become part of the main point – that is, they contribute the proposition-level semantics instead, in which case they also lose their evidential readings.

[1] We assume that questions and imperatives are not subject to truth-conditions, along the lines of Giannakidou (1998), questions and imperatives instead being defined in terms of answerhood and fulfillment conditions respectively.

Thus, if they can be forced under the scope of propositional operators (like negation, conditional antecedents, questions, etc.) such that they are forced into modifying the propositional content, they will lose their evidential force. If our hypothesis is on the right track, we would expect that ironic readings would also be stripped away with the evidential pragmatics. This is borne out by the data – when the evidential constructions are forced under the scope of negation, both the evidentiality and irony are lost. Examples (9) and (10) illustrate this phenomenon where the F-level evidentials are forced under negation. (The # indicates that the utterance is infelicitous with an ironic reading.)

Context: Meagan's lying brother is playing CS when he said he wouldn't.

(9) What is meant: You're playing CS.

(i.) #I don't see you're playing CS. (#I don't see you playing CS)

(i.') I see you're not playing CS.

(ii.) I don't suppose you're playing CS. (unless with specific intonation)

(ii.') I suppose you're not playing CS.

(iii.) #Gee, I don't hope you're playing CS.

(iii.') Gee, I hope you're not playing CS.

(iv.) ?Doesn't look like you're playing CS. (unless with specific intonation)

(iv.') ?Doesn't sound like you're playing CS.

(v.) ?You sure don't look like you're playing CS.

(v.') ?You sure don't sound like you're playing CS.

Context: Meagan's brother is not doing his homework even though he said he would.

(10) What is meant: You're not doing your homework.

(i.) #I don't see you're not doing your homework.

(ii.) #I don't hear you're not doing your homework.

(iii.) #I don't suppose you're not doing your homework.

(iv.) #Doesn't look like you're not doing your homework. (unless, again, intonation?)

(v.) #Doesn't sound like you're not doing your homework.

4.2 *p-level* Evidentials in Japanese will not act as irony triggers

So far we have assumed that the meaning encoded by English evidentials is above the level of propositional meaning. However, several researchers including Faller have noted that evidentials cross-linguistically need not be above *p-level* semantics. Matthewson et. al (2007) and McCready & Ogata (2007), for example, argue that evidentials in St'át'imcets

and Japanese respectively, are modal operators that can be embedded under propositional operators. If this is the case, then it would predict that irony could *not* arise from evidentials in either St'át'imcets or Japanese. While we haven't the relevant data for St'át'imcets, this prediction proves true in Japanese. The following responses in (11) are all felicitous in non-ironic contexts; however, their usage in an ironic one renders some infelicitous. Specifically, irony does not arise with the addition of evidential morphemes *mitai*, *rashi*, or *soo*.

Context: Meagan's brother is not doing his homework when he said he would.

(11) Japanese Evidentials and Irony (or lack thereof) (Amie Yang, pc)

a. *shukudai-wo shite iru* ***mitai*** *da ne.*
homework-ACC. you be-cont. EV-inferential copula PTC
"It seems like you're doing your homework."

b. *#shukudai-wo shite iru* ***rashi*** *ne.*
homework-ACC you be-cont. EV-circumstantial PTC
"It appears that you're doing your homework."

c. *#shukudai-wo shite iru* ***soo*** *da ne.*
homework-ACC you be-cont. EV-hearsay copula PTC
"It sounds like you're doing your homework."

d. *#shukudai-wo shite iru* ***mitai*** *da (yo) ne.*
homework-ACC you be-cont. EV-infer copula assertion tag
"It sure seems like you're doing your homework."

e. *shukudai-wo shite iru n da (yo) ne.*
homework-ACC you be-cont. copula copula assertion tag
"You're sure doing your homework."

The data above shows that in most cases, evidentials do not trigger irony. (See examples (11)(b) to (d).) However, the prediction that irony cannot arise from evidentials is compromised in example (a) where it is possible to have an ironic interpretation. (Example (e) has the possibility of an ironic reading, most likely in part to the inclusion of the assertive *yo*.) Note, however, that the usage of sentence final particle *ne* operates two-fold dependent on the intonation pattern. It has the possible effect of changing the literal meaning of a phrase such that the speaker wants to confirm his assumption as the information is not shared between participants or the speaker is commenting on the information that is shared with the listener. This in itself could trigger irony.

An interesting phenomenon to note is that unlike Japanese evidentials, Japanese honorifics cannot be embedded under the semantic scope of propositional operators (Potts & Kawahara 2004: 5). From this it would follow that while Japanese evidentials cannot trigger the *F/p* distinction, Japanese honorifics could, such that irony might arise. This

does seem to be the case – marked honorifics are associated with sarcastic irony, as noted by Okamoto (2002).[2] There are at least three levels of politeness in Japanese: informal, polite, and formal. The informal style would be the unmarked version – this is what is used among friends or similar-aged or younger relatives. Polite is used by inferiors when addressing strangers, acquaintances, and superiors. Formal language has a different structure and vocabulary than informal language. As such, polite and formal can be successively combined to create an overpolite honorific, as follows in example (12):

Context: Same context as before: Meagan's no-good brother is not doing his homework.

(12) Overpolite honorifics and irony in Japanese (Amie Yang, pc)
Translation: "You're doing your homework (I see)."

a. Informal

shukudai-wo	*shite*	*iru*	*mitai*	***da-ne***.	
Homework-ACC	you	be-cont.	EV-infer	copula.informal	PTC

b. Polite

shukudai-wo	*shite*	*iru*	*mitai*	***desu-ne***.
Homework-ACC	you	be-cont.	EV-infer	copula.polite-PTC

c. Overpolite (Formal and polite combined)

shukudai-wo	*shite*	*iru*	***irasshaimasu***	*mitai*	***desu-ne***
Homework-ACC	you	be-cont	be-formal	EV-infer	copula.polite-PTC

The default form given the above context is informal. Our consultant noted that b. and c., which are increasingly formal given the context, can be used with an ironic or sarcastic meaning.[3] Therefore if the context were to change (for example, speaking to a superior), it can be assumed that different honorifics would be given a similar reading.

5. Further Consequences: Evidentials as Speech Act/Illocutionary Force Modifiers

If *F-level* evidentials serve to activate the F/p distinction, as we proposed, then we would predict that other functions depending on this distinction could also be parasitic on *F-level* evidentials. For example, we might expect that evidentials could be used as an indication of disparity between the illocutionary (F) and propositional (p) levels of an utterance.

The disparity between F and p, to which we refer, focuses on the observation made by Austin (1962) that the illocutionary force of an utterance need not necessarily correspond to its syntactic form or propositional meaning. For example, in the data below, the

[2]Where 'marked' refers to non-default usage.

[3]Note, however, that example b. has an elongated *desu* – so the irony may also arise due to prosodic considerations.

utterance "Can you pass me the salt?" is ostensibly a yes/no question with respect to its syntactic form and propositional content. However, it is clearly used with an imperative, not interrogative, illocutionary force to mean "pass me the salt."

(13) "Can you pass me the salt?"

(i.) *Propositional meaning:* Interrogative Y/N Question

(ii.) *Illocutionary meaning:* Imperative "Pass me the salt"

Our analysis predicts that such form-meaning mismatches could be signaled by *F-level* evidentials, just as form-meaning mismatches with respect to irony could be signaled by *F-level* evidentials. This prediction is borne out by data from Wanka Quechua. While standard syntactically formed imperatives are incompatible with evidentials in Wanka Quechua, the addition of a direct evidential to a declarative has the effect of producing an imperative illocutionary force:

(14) Wanka Quechua (Aikhenvald 2004: 252-253)

a. *shramu-y*
come-IMPV
"Come!"

b. *sharmu-nki-m*
Come-2p-DIR.EV
"You will come."
(Directive: strong suggestion)
Propositional meaning: declarative
Illocutionary meaning: imperative

Aikhenvald analyzes this imperative illocutionary force as falling out from the epistemic connotations of certainty associated with the direct evidential (Aikhenvald 2004: 252). While this is certainly intuitive, it is less intuitive how to extend this type of analysis to the case of interrogatives in Quechua. Quechua questions, when they take an inferred evidential, according to Aikhenvald, lose their interrogative illocutionary force, and are seen as rhetorical questions.

(15) a. Father speaking:

may-chruu-chra	*gasta-y-pa*	*paawa-alu-n?*
where-LOC-INFR	spend-NOMN-GEN	finish-ASP-3p

"I wonder where he spent it all?"
(Lit. Where did he spend it – INFERRED)

b. Mother speaking:

kanan *ima-nuy-chra* *ka-shrun*
today what-sim-infr be-1.to.2.fut
"Now what will we do?"
(Lit. Today how will we be – INFERRED) (Aikhenvald 2004: 247)

While the change in illocutionary force could be attributed to the "lack of commitment" that Floyd (1999) notes as associated with the WQ inferred evidential, the connection is rather tenuous. While we do not deny that the connotative and denotative semantics of evidentials may affect how the mismatch between the illocutionary force and morphosyntactic form is interpreted, we propose that it is actually the use of the (*F-level*) evidentials that signal the mismatch. As a note of interest, Faller (2006a) also notes that the WQ reportative enclitic can be used to convey irony, though no example is provided (Faller 2006a: 3).

Note that this analysis assumes that the Wanka Quechua evidentials are *F-level* evidentials that modify the illocutionary level. There is (admittedly preliminary) evidence for this. The direct evidential, when used with questions, can be anchored to the hearer – it "implies that the addressee has 'directly acquired' information about the event" (Aikhenvald 2004:245). Faller 2006a uses this same property to argue that the Cusco Quechua reportative evidential is an illocutionary modifier – she argues that this is a property also shared of the English illocutionary adverbs *honestly* and *frankly* (Faller 2006a:8).

(16) "Honestly, who did Pilar visit?" (Faller 2003:22)

In the above example, the illocutionary adverb honestly is used to elicit an honest answer from the addressee, not to convey the fact that the question is asked by the speaker honestly.

To properly test whether or not the Wanka Quechua evidentials contribute to the *F-level*, however, we would need to see if the Wanka Quechua evidentials could be embedded under propositional operators like negation or the conditional – if they are cannot be interpreted within the scope of these operators, they likely contribute to the illocutionary level, as assumed. We do not have the relevant data at this time.

6. Conclusions and Further Research

The ideas presented in this paper are still very much preliminary, and there are several deeper questions that arise from our hypothesis. As of yet, we have not looked closely at the formal aspects of Speech Act Theory and Illocutionary Logic (cf. Searle & Vanderveken 1985). For instance, the basic concept of illocutionary logic is that it consists of the three following parts, where the illocutionary context consists of five elements: Speaker, Hearer, Time, Location, and Circumstances (world knowledge).

(i.) The illocutionary context

(ii.) The illocutionary force

(iii.) The propositional content

We have only looked at distinctions between (ii.) and (iii.), the distinction between the illocutionary force and propositional content. Thus if our hypothesis is on the right track, we would also expect the existence of elements that take advantage of the distinction between (i.) and (iii.). While our research in this area is still in its infancy, we suggest that mirativity may be an example of such a phenomenon.

Mirativity is the category of linguistic traits which introduces unexpected or previously unknown information (Delancey 2001: 1; see Peterson, this volume) It is often the case that mirativity, if grammaticized, is co-encoded with evidentiality. This is the case in the languages of Albanian, Western Armenian, Bulgarian, Georgian, Macedonian, Persian, Tadzhik, Turkish, and Nepali (Delancey 2001: 10). It may also arise through the relationship between evidentiality and Speaker – several evidentials gain a mirative meaning, but only when used with first-person (Aikhenvald 2004:192). While mirativity is often co-encoded with evidentiality, Delancey shows in his analysis of *lõ* in Hare that it is a separate effect - Hare grammatically encodes mirativity, but not evidentiality:

(17) Hare (Delancey 2001:375)

a. *júhye* *sa* *k'ínayeda*
hereabout bear sg.go.around.3sg.subj.PERF
"There was a bear walking around here." (DeLancey 2001: 375-376)

b. *júhye* *sa* *k'ínayeda* ***lõ***
hereabout bear sg.go.around.3sg.subj.PERF
"I see there was a bear walking around here."

Context: Speaker comes out of the house in the morning and discovers bear tracks

(18) *heee,* *gúhde* *daweda!* *ch'ifi* *dachída* ***lõ***
hey, up.there SG.sit.3sg.IMPERF. guy sitting
"Hey, he's sitting up there! The guy is sitting up there!"

Context: [T]he hero, Egadekini, has been sitting up in a tree throwing branches down on an ogre who has been hunting for him. The ogre finally looks up and sees him and says:

Example (17) exhibits the standard pattern for evidentials in inferential context; however, example (18) the usage of *lõ* is utilised by the speaker to report "direct perception" (*ibid*). Thus mirativity, like irony, appears to be parasitic on evidentials and the *F/p* distinction – specifically activating awareness of the illocutionary context's Speaker element.

This raises the question of whether languages take advantage of the *F/p* distinction with respect to other elements of the illocutionary context. We suggest that they do. As noted before, evidentials are often fused with tense, or collapsed with epistemic modals. Both of these elements can be seen as corresponding to the elements of Time and Circumstances within the illocutionary context. What remains to be seen is whether Hearer and

Location also provide a locus for parasitic evidentiality (or *vice versa*), and whether our hypothesis can be further refined in terms of formal Speech Act Theory and Illocutionary Logic.

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On the Semantics of Conjectural Questions*

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1. Introduction

In many languages with evidentials, the insertion of a conjectural/inferential evidential into a question creates a non-interrogative utterance, roughly translatable using 'I wonder.' The goal of this paper is to provide an analysis of this phenomenon in three Amerindian languages: St'át'imcets (Lillooet Salish), Nɬeʔkepmxcín (Thompson Salish), and Gitksan (Tsimshianic).

Examples of the effect of a conjectural evidential on questions in these languages are given below: example (1)a. is an evidential assertion, (1)b. is an ordinary yes-no question, and (1)c. contains both the evidential and the yes-no question marker and is translated as a statement of uncertainty.

(1) St'át'imcets (Matthewson et al 2007)

a. *lán=**k'a*** *kwán-ens-as*
already=**INFER** take-DIR-3.ERG
ni=n-s-mets-cál=a
DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'She must have already got my letter.'

b. *lán=**ha*** *kwán-ens-as* *ni=n-s-mets-cál=a*
already=**YNQ** take-DIR-3.ERG DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'Has she already got my letter?'

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c. *lan**=as=há=k'a*** *kwán-ens-as*
already=**3.SBJN=YNQ=INFER** take-DIR-3.ERG
ni=n-s-mets-cál=a
DET.ABS=1sg.POSS-NOM=write-ACT=EXIS
'I wonder if she's already got my letter.'
'I don't know if she got my letter or not.'

The same effect is shown in (2)a. and b. for a *wh*-question:

(2) St'át'imcets

a. ***swat*** *ku=lhwál-ci-ts-as* *ti=ts'úqwaz'=a*
who DET=leave-APPL-1sg.OBJ-3ERG DET=fish=EXIS
'Who left me this fish?'

b. ***swát**=as=**k'a*** *ku=lhwál-ci-ts-as* *ti=ts'úqwaz'=a*
who=SBJN=**INFER** DET=leave-APPL-1sg.OBJ-3ERG DET=fish=EXIS
'I wonder who left me this fish.'

Similar paradigms are given for Nɬeʔkepmxcínin (3) and (5):

(3) Nɬeʔkepmxcín

a. *y'e-mín-s**=nke*** *e=Meagan* *e=ti*
good-REL-3.sub=**INFER** DET=Meagan DET=tea
'Meagan must like the tea. / Apparently, Meagan likes tea.'

b. ***kéʔ*** *k=s-y'e-mín=s* *e=Meagan* *e=ti*
whether IRL=NOM-good-REL=3.poss DET=Meagan DET=tea
'Does Meagan like the tea?'

c. ***kéʔ**=ws=**nke*** *k=s-y'e-mín=s* *e=Meagan*
whether=SBJN=INFER IRL=NOM-good-REL=3.poss DET=Meagan
e=ti
DET=tea
'I wonder whether Meagan likes the tea.'

(4) a. *s-xén'x**=nke*** *xeʔ*
NOM-rock=**INFER** DEM
'That must be a rock.'

b. ***kéʔ*** *xeʔ* *k=s-xén'x=s*
whether DEM IRL=NOM-rock=3.poss
'Is that a rock?'

c. ***ké?=****ws*=***nke*** *xe?* *k=s-xenx-s*
whether=SBJN=**INFER** DEM IRL=NOM-rock-3.poss
'Maybe it's a rock.'

(5) a. ***sté?*** *xe?*
what DEM
'What is that?'

b. ***sté?=****ws*=***nke*** *xe?*
what=SBJN=**INFER** DEM
'I don't know what that is.'

Exactly the same effect on both yes-no and wh-questions is illustrated for Gitksan in (6) and (7):

(6) Gitksan

a. *sdin*=***ima***=*hl* *xbiist*
be.heavy=**INFER**=CND box
'The box might be heavy.'

b. ***nee***=*hl* *sdin=hl* *xbiist=a*
YNQ=CND be.heavy=CND box=INTERROG
'Is the box heavy?'

c. ***nee=ima***=*hl* *sdin=hl* *xbiist=a*
YNQ=INFER=CND be.heavy=CND box=INTERROG
'I wonder if the box is heavy.'

(7) a. ***naa*** *'an-t* *gi'nam-(t)=hl* *xhlaẃsxw* *'as* *John*
who S.REL-3 give-3=CND shirt PREP John
'Who gave this shirt to John?'

b. ***naa=ima*** *'an-t* *gi'nam-(t)=hl* *xhlaẃsxw* *'as* *John*
who=INFER S.REL-3 give-3=CND shirt PREP John
'I wonder who gave this shirt to John.'

Finally, although we do not analyze Cuzco Quechua in the current paper, the same phenomenon also exists there, at least for wh-questions, as shown in (8).

(8) Cuzco Quechua (Faller 2003: 26):

*may-pi-****chá*** *kunan* *ka-sha-n-ku*
where-LOC-**CONJ** now be-PROG-3-PL
'Where are they now?'
Evidential contribution: Speaker does not expect the hearer to know the answer;
'Who knows...'

1.1 The Proposals

The first issue concerns the illocutionary force of questions that contain an evidential: are these utterances questions or assertions? In approaching this, it is necessary to start with the basics and review the three different but interrelated notions of *question* (Higginbotham 1996):

(9) *Syntactic:* An instance of a certain sort of linguistic structure.
Semantic: An utterance with a certain type of denotation.
Pragmatic: A particular sort of speech act.

We argue that what we call *Conjectural Questions* (CQs) are syntactically and semantically questions, but pragmatically they have the force of assertions.[1]

The apparent reduced interrogative force of the CQs might suggest that they are some kind of rhetorical question. However, we argue that CQs are distinct from rhetorical questions, and form part of a three-way typology of Ordinary Questions, Rhetorical Questions, and Conjectural Questions. This gives us a three-way typology of question-types based on expectations of Speaker / Addressee knowledge of the answer:

	Speaker	**Addressee**
Ordinary Questions	No	Yes
Conjectural Questions	No	No
Rhetorical Questions	Yes	Yes

Table 0.1: Speaker and Addressee Knowledge Across Sentence Types

The final question is how we can derive the right semantics and pragmatics for Conjectural Questions. Ideally, we want to derive the meaning compositionally, using only the independently-needed semantics for the elements contained within CQs. We claim that this is attainable, given an independently motivated modal analysis of evidentials (Matthewson et al. 2007, Rullmann et al. 2008, Peterson 2009, 2010) The evidentials in St'át'imcets and Gitksan are epistemic modals: they have a modal semantics but carry a presupposition that there is evidence of a certain type for the proposition they embed.[2] The evidential is applied to a question, which denotes the set of propositions which are its potential answers. The presuppositions carried by each proposition in the question denotation conjoin, so that the CQ as a whole presupposes everything presupposed by each of its members. The resulting conjoined presupposition entails that there is mixed evidence about the potential answers to the question, and therefore that the speaker does not expect the hearer to be able

[1] Recent work in Inquisitive Semantics suggests a fourth property: whether or not an utterance is *inquisitive*, a property shared by questions and some kinds of assertions, such as disjunctions (Groenendijk 2009). CQs do appear to be inquisitive, in that they raise the issue of which of a set of alternatives holds.

[2] Analysis of the Nɬeʔkepmxcín evidential *=nke* is at a preliminary stage; see Mackie (2009) for some discussion. So far the Nɬeʔkepmxcín evidential seems to pattern like a modal on the relevant tests.

to provide an answer. The outcome is a reduced interrogative force for CQs: the speaker is encoding that the hearer is probably not able to answer, and therefore the hearer is not required to answer.

2. CQs are syntactically questions

In this section we show that CQs have the structure associated (in the languages in question) with questions. The first piece of evidence for this claim is that in each of the three languages, CQs take the characteristic syntactic form of questions, with either a wh-element taking a particular sort of complement, or the usual yes-no question particle.[3] Furthermore, results show that CQs syntactically embed in the same manner as ordinary questions:

(10) St'át'imcets

aoz *kw=s=zwát-en-as* *k=Lisa* *lh=wa7=as=**há=ká***
NEG DET=NOM=know-DIR-3.ERG DET=Lisa HYP=IMPF=**YNQ=INFER**
áma-s-as *k=Rose* *ku=tíh*
good-CAUS-3.erg DET=Rose DET=tea
'Lisa doesn't know whether Rose likes tea.'

(11) Nɬeʔkepmxcín

teté? *k=s-xek-s-t-és* ***ké?=ws=nke***
NEG IRL=NOM-know-CAUS-TR-3.sub **whether**=SBJN=**INFER**
k=s-y'e-mín-s *e* *tí*
IRL=NOM-good-REL-3.poss DET tea
'He doesn't know whether she (could) like tea.'

(12) *nee-tii=hl* *wilaax-(t)=s* *Henry* *ji* *ixsta-t-in-(t)=ima=s*
NEG-CONTR=CND know-3=PND Henry IRR taste-T-CAUS-3sg=MODAL=PND
Lisa=hl *x-dii*
Lisa=PND consume-tea
'Henry doesn't know if Lisa might like tea drinking.'

3. CQs are semantically questions

Not only are CQs syntactically questions, we claim that they denote the same sorts of things that questions denote. That CQs embed under predicates like KNOW, ASK, etc. in an identical manner to ordinary questions is *prima facie* evidence that they are of the same type. We adopt a fairly standard approach (Hamblin 1973; see Groenendijk and Stokhof

[3] In St'át'imcets, CQs strongly prefer the addition of subjunctive morphology. See Matthewson (2009) for discussion; Matthewson argues that it is the evidential, not the subjunctive, which achieves the reduced interrogative force.

1982, 1984 for an alternative view) to the semantics of questions: a question denotes a set of propositions, each of which is a (partial) answer to the question. The question set contains both true and false answers (as in Hamblin 1973, but unlike in Karttunen 1977):

(13) $[\![\text{does Hotze smoke}]\!]^w = \{\text{that Hotze smokes, that Hotze does not smoke}\}$

(14) $[\![\text{who left me the fish}]\!]^w = \{\text{that Ryan left me this fish, that Meagan left me this fish, that Ileana left me this fish,...}\} = \{p : \exists x[p = \text{that } x \text{ left me this fish}]\}$

Assuming a modal analysis of the conjectural evidential (Matthewson et al. 2007), the semantics of CQs are fairly straightforwardly handled by a Hamblin-set analysis:

(15) $[\![\text{who } \Diamond \text{ left me the fish}]\!]^w = \{\text{that Ryan } \Diamond \text{ left me this fish, that Meagan } \Diamond \text{ left me this fish, that Ileana } \Diamond \text{ left me this fish,...}\} = \{p : \exists x[p = \text{that } x \text{ left } \Diamond \text{ me this fish}]\}$

The presence of the modal already goes some way towards an intuitive 'weakening' of the interrogative force of the question. The speaker is asking only who could have *possibly* left me the fish, rather than who *did* leave me the fish. We will see below that the evidence presuppositions of the epistemic modals are responsible for a further weakening of interrogative force.

4. CQs are not pragmatically questions

An Ordinary Question has three features: first, an OQ is a request by the speaker for information from the addressee. Secondly, its answer is not known to the Speaker, but the Speaker thinks the Addressee may know it. Thirdly, an OQ requires an answer in order for the dialogue to be felicitous (Caponigro and Sprouse 2007). More technically, when an interrogative clause f is uttered in a world w, the utterer thereby requests to be told which of the propositions in $[\![\text{f}]\!]^w$ are true in w (von Fintel and Heim 2007). However, not everything that is a syntactic or semantic question is, by this definition, a pragmatic question. Consider an Ordinary Question vs. a Rhetorical Question (RQ) (cf. Caponigro and Sprouse 2007):

(16) a. 'John looks like an interesting syntactician.'
OQ: 'What does he know about semantics?'
[Possible answers: He knows a lot about semantics; He doesn't know a lot about semantics; etc.]

b. 'I don't think we should have John on our short list.'
RQ: '(After all,) what does he know about semantics?'
[Implicates he knows nothing about semantics.]

RQs and OQs are syntactically and semantically the same, but pragmatically different (Sadock 1971; Han 2002; Sprouse 2007, Caponigro and Sprouse 2007): an RQ differs from an OQ in that the answer is known to the Speaker and the Addressee, and they both

also know that the other knows the answer as well. In terms of the requirement for an answer, RQs also differ from OQs in that they can have, but do not require an answer. CQs are similar to RQs in these respects. They have same syntactic form and alternative semantics as OQs, but the sentential force of a declarative. CQs can have, but do not require an answer. For the CQ in (17)a., either the Speaker or the Addressee can respond with (17)b.:

(17) Gitksan

a. *na=**ima*** *'an-t* *stil-(t)=s* *John=a*
who=**INFER** S.REL-3 accompany-3=PND John=INTERROG
'I wonder who went with John.'

b. *Bill=**ima*** *('an-t* *stil-(t)=s* *John=a)*
Bill=**INFER** S.REL-3 accompany-3=PND John=INTERROG
'Maybe it was Bill (who went with John.).'

However, CQs are not acceptable in RQ situations, as shown in (18) for St'át'imcets.

(18) St'át'imcets

Context: Your daughter is struggling with learning how to hang ts'wan (wind-dried salmon). She starts to get frustrated and you say:

tsun-tsin=lhkán=ha *kw=s=cuz'* *lil'q*
say(DIR)=1.sg.SUBJ=YNQ DET=NOM=going.to easy
'Did I tell you it would be easy?'

Moreover, CQs differ from RQs in terms of Addressee knowledge. In an RQ, typically both the Speaker and Addressee know the answer. CQs, in contrast, are typically bad in situations in which the Addressee can be assumed to know the answer (cf. also Rocci 2007:147). This is shown not only in (18), but in other cases of Addressee knowledge such as (19) – (21).

(19) St'át'imcets

?? *lan=acw=**há=k'a*** *q'a7*
already=2sg.SBJN=**YNQ=INFER** eat
'I wonder if you've already eaten.'

(20) Nłeʔkepmxcín

?? ***kéʔ**=ws=nke* *k=s-y'e-min-x^{w}* *e=tí*
whether=conj=**INFER** IRL=NOM-good-REL-2.sub DET=tea
'I wonder whether you like the tea.'

(21) Gitksan

***nee=ima**=hl* *xwdax-n=a*
YNQ=INFER=CND hungry-2sg=INTERROG
'I wonder if you're hungry.'

In Nɬeʔkepmxcín, 2nd person *plural* CQs are fine – most likely since each Addressee can't be presumed to know the internal states of the other Addressees.

(22) Nɬeʔkepmxcín

kéʔ**=ws=**nke *k=s-téyt=wp*
whether=SBJN**=INFER** IRL=NOM-hungry=2.pl.conj
'I wonder whether you (pl.) are hungry.'

OQs, RQs, and CQs all have an interrogative syntax and semantics. Then what distinguishes them? We claim that the difference is rooted in the nature of Speaker and Addressee knowledge.

In sum, a CQ differs from an OQ and RQ in that it is a statement expressing uncertainty or wondering. An CQ is unlike both an OQ and an RQ in that its answer is not known to the Speaker or the Addressee, and they both also think that the other does not know the answer. A CQ invites, but does not require, an answer from the Addressee, and may be answered by either the Speaker or the Addressee, similar to an RQ. These claims are summarized in Table 0.2:

	Speaker knows answer	**Addressee knows answer**	**Answer required**
Ordinary Questions	No	Yes	Yes
Conjectural Questions	No	No	No
Rhetorical Questions	Yes	Yes	No

Table 0.2: Speaker and Addressee Knowledge Across Sentence Types with Answer Requirement

5. Analysis

We have two main goals: the first is to derive the reduced interrogative force of CQs from the semantics of CQs, rather than by positing the presence or absence of an invisible speech-act-operator for which we don't have syntactic or semantic evidence. Secondly, we want to use only independently-needed aspects of the meanings of evidentials (Section 5.1) and questions (Section 5.2) to derive the right semantics and pragmatics for CQs. Our central claim is that CQs have the semantics of ordinary questions, but exhibit a reduced interrogative force in the pragmatics due to their evidential presuppositions.

5.1 Analysis of evidentials

The evidentials which create CQs in St'át'imcets, Nłeʔkepmxcín and Gitksan are indirect evidentials. They require some sort of inferential evidence for the proposition, which may be based on observable results, and/or on mental reasoning.

(23) St'át'imcets

Context: You look in the fridge for cake and discover there is none left.

*ts'aqw-an'-ás=**k'a**=tu7 k=Lenny ti=kíks-a*
eat-DIR-3.erg=**INFER**=then DET=Lenny DET=cake-EXIS
'Lenny must have eaten the cake.' (Matthewson et al. 2007)

(24) Gitksan

Context: You look in the fridge for some hoxs (fish) to make soup, and it's gone.

*gub-i-(t)=**ima**=s Sheila=hl hoxs*
eat-TR-3=INFER=PND Sheila=CND hoxs
'Sheila might've eaten the hoxs.'

(25) Nłeʔkepmxcín

Context: The speaker's mother is missing.

*x^wəs-x^wəsít=**nke** ƛ'uʔ e=n-s-kixəze*
RED-walk=**INFER** just DET=1.poss-NOM-mother
'Maybe my mother went for a walk.'

The evidentials have the semantics of epistemic modals, with an added presupposition about evidence type (Matthewson et al. 2007). The denotation we assume for St'át'imcets *k'a* is given in (26), and for Gitksan *=ima* in (24). As noted above, we assume for current purposes that Nłeʔkepmxcín *nke* is similar in the relevant respects.

(26) Semantics of St'át'imcets *k'a* and Gitksan *=ima*

$[\![k'a\ /\ =ima]\!]^{c,w}$ is only defined if c provides a modal base B such that for all worlds $w' \in B(w)$, if the **inferential** evidence in w holds in w', and f is a choice function such that $f(B(w)) \subseteq B(w)$.

If defined, $[\![k'a\ /\ =ima]\!]^{c,w} = \lambda f_{\langle st,st\rangle}.\lambda p_{\langle s,t\rangle}.\forall w'[w' \in f(B(w)) \rightarrow p(w') = 1]$.

According to the denotation in (26), evidentials in St'át'imcets and Gitksan introduce a presupposition that there is inferential evidence for the embedded proposition. In (26), for example, the presupposition is that the speaker has inferential evidence that Sheila ate the *ts'al*. When the evidential is defined, it introduces universal quantification over a subset of the worlds in the epistemic modal base. The subset of modal base worlds (picked out by the choice function f) are asserted to all be worlds in which the embedded proposition is true. Depending on how big a subset of modal base worlds is quantified over, the modal claim has varying strengths – anything ranging from a weak 'might' to a strong 'must'. In (26), for example, the assertion is that Sheila might have or must have eaten the ts'al. See Matthewson et al. (2007), Rullmann et al. (2008), Peterson (2009, 2010) for details and discussion.[4]

5.2 Analysis of questions

As above, we assume the commonly-used Hamblin (1973) semantics for questions. This will underlie our claim that the presupposition introduced by a question is the conjunction of the presuppositions introduced by the statements in its Hamblin set. (For a similar idea, namely that a question presupposes all the presuppositions of its sub-constituents, see Guerzoni 2003.) Usually, one cannot detect this conjunction of presuppositions, as each proposition in the question set introduces exactly the same presupposition. This is illustrated in (27) and (28):

(27) Does Henry smoke too?
{that Henry smokes too, that Henry doesn't smoke too}
(all propositions in the question set presuppose that some salient x other than Henry smokes)

(28) Has Patrick stopped embezzling funds?
{that Patrick has stopped embezzling funds, that Patrick has not stopped embezzling funds}
(all propositions in the question set presuppose that Patrick has been embezzling funds)

However, the interesting cases are where each member of the Hamblin set introduces a *different* presupposition.

(29) Who here doesn't drink anymore?
{that Tyler doesn't drink any more, that Lisa doesn't drink any more, ...}

[4] Peterson (2010) actually gives a slightly different denotation for =*ima*, which utilizes an ordering source rather than a choice function over the modal base as a means of achieving variable quantificational force, and which captures the variable quantificational force using an existential rather than a universal quantifier. These details do not affect the main point here.

(presupposes of each x in the contextually salient group that x used to drink[5])

(30) Who went to Paris again?
{that Scott went to Paris again, that Edna went to Paris again, ...}
(presupposes of each x in the contextually salient group that x has been to Paris)

Evidence that the combined presupposition exists is found in the interpretations in (31)a,b. The exclusive particle only presupposes that its embedded proposition is true (get reference about only). The conjoined presupposition of (31)a. is therefore that each country has two cities. While this is not true for strictly every country in the world (cf. Vatican City or Tuvalu), the assumption is nevertheless fairly commonly held, and therefore the question is felicitous. (31)b., however, is odd: although some countries do have two capital cities (e.g., Bolivia, Swaziland) it is definitely infelicitous to presuppose this of each country.

(31) a. Which countries have only two cities?
{that Canada has only two cities, that Iceland has only two cities, ...}
(presupposes of each country x that x has two cities.)

b. #Which countries have only two capitals?
{that Canada has only two capital cities, that Iceland has only two capital cities, ...}
(presupposes of each country x that x has two capitals.)

5.3 Putting it together: Conjectural Questions

Assuming that questions presuppose the conjunction of the presuppositions of their partial answers and evidentials introduce presuppositions of evidence, we predict the reduction of interrogative force. The denotations and presuppositions of a yes-no question and a wh-question are illustrated in (32) and (33) respectively:

(32) St'át'imcets

*man'c-em=**h'a=k'a*** *k=Hotze*
smoke-MID=**YNQ=INFER** DET=Hotze
'I wonder if Hotze smokes.'

= {that Hotze might smoke [presupposing there is inferential evidence that Hotze smokes], that Hotze might not smoke [presupposing there is inferential evidence that Hotze doesn't smoke]}

[5]Judgments about (29) and (31) have pr oven slightly variable, with a small subset of people allowing these questions in situations in which not *every* person in the group used to drink, or had visited Paris in the past. We think this is due to people limiting the set of entities asked-of to only include those for whom the presupposition obtains. This is analogous to quantifier domain restriction with nominals ('Every man loves his wife').

(33) ***swát=as=k'a*** *ku=lhwál-ci-ts-as* *ti=ts'úqwaz'=a*
who=SBJN=**INFER** DET=leave-APPL-1sg.obj-3.erg DET=fish=EXIS
'I wonder who left me this fish.'

= {that Ryan might have left me this fish [presupposing there is inferential evidence that Ryan left me this fish], that Meagan might have left me this fish [presupposing there is inferential evidence that Meagan left me this fish], that Ileana might have left me this fish [presupposing there is inferential evidence that Ileana left me this fish], ...}

= $\{p : \exists x[p =$ that x might have left me this fish [presupposing there is inferential evidence that x left me this fish]]$\}$

The conjoined presupposition of (33) is that there is inferential evidence that Ryan left me this fish, and there is inferential evidence that Meagan left me this fish, and there is inferential evidence that Ileana left me this fish, and so on. We suggest that a speaker who utters a question but at the same time makes explicit that she believes the evidence is utterly mixed (even contradictory), is indicating her belief that the hearer is not in a position to answer the question.

We need to make more precise exactly how this effect is achieved in conversation, specifically how a CQ indicates that the speaker believes the hearer is not in a position to answer a CQ question. We claim that there is a Gricean effect that arises in questions such as (33): consider a slightly different context where the speaker *requires* an answer. In this case, it would be simpler and more succinct for the speaker to simply utter a regular OQ, which requires an answer from the addressee in order for the discourse to be felicitous. CQs are more complex constructions than OQs, and by using an evidential in a question, a speaker is implicating that the speaker was not in a position to utter an OQ, and thus that the hearer is assumed to lack an answer to the question.

6. Summary and Further Issues

CQs have the syntax and semantics of ordinary questions; they denote sets of propositions. The presuppositions introduced by the evidential are carried by each proposition in the question denotation, and conjoin with each other. The CQ as a whole presupposes everything presupposed by each of its members. The resulting conjoined presupposition entails that there is mixed evidence about the question at hand. Our claim is that the presupposition of mixed evidence functions to indicate reduced confidence on the speaker's part that the hearer is in a position to know the true answer. Consider, for example, that even if you think you know who left me the fish in (33) , the existence of conflicting evidence indicating that perhaps someone else left me the fish will decrease your confidence in your belief. Thus, while the conjoined presupposition of a CQ does not strictly rule out hearer knowledge of the true answer, pragmatically it functions to encode lack of confidence that the true answer is known – since, if the speaker simply trusts the hearer to know the true answer and is asking to be told it, s/he could use the simpler Ordinary Question for this purpose.

One issue to be further considered is the exact status of the evidence restriction introduced by evidentials. It seems clear that the evidence restriction is not-at-issue content (see, e.g., Potts 2005), but is it really a presupposition, as we have claimed? Murray (2009a,b) argues that the evidence restriction of an evidential is asserted, not presupposed.

It is true that the evidence restriction of an evidential is not a typical common-ground presupposition in the sense of Stalnaker (1974). Thus, if a speaker utters a sentence containing an inferential evidential, s/he does not have to assume that the proposition that the speaker has inferential evidence for the embedded proposition is *already* in the common ground. For St'át'imcets, it is no surprise that the evidence restriction we model as a presupposition does not require addressee knowledge prior to the utterance: Matthewson (2008) argues that the language as a whole lacks any Stalnakerian presuppositions which place constraints on the common ground. Gitksan, however, does appear to have Stalnakerian presuppositions elsewhere in the grammar, so the question of the status of evidential restrictions is an important one here.

One obvious solution is to assume that evidential presuppositions will, by necessity, need to be accommodated. Note that evidential presuppositions are in this respect on a par with other aspects of meaning which are often analyzed as presuppositions, for example the features on tenses and pronouns (Heim get date, Kratzer 1998, Heim and Kratzer 1998). It may be that temporal, pronominal and evidential features are not truly presuppositional, but are some other type of not-at-issue content. For example, perhaps the evidential claim is part of not-at-issue *expressive meaning* (Potts 2005, Kratzer 1999), similar to the speaker commitments which arise with discourse particles (Kratzer and Matthewson 2009).

We leave this issue for future research, but note that our core idea may still carry over to a revised analysis of evidential presuppositions: whether or not they are "presuppositions" in the classical sense of this term, it may still be the case that these evidential restrictions distribute to each proposition in the question set and result in an inference of 'mixed evidence', deriving the reduced interrogative force along the lines suggested above.[6]

Further work also needs to be done to expand this account to include other types of evidentials. The conjectural/inferential evidential is not the only evidential to appear in questions, but it the only one to have this 'I wonder' effect.[7] 'Reportative Questions', for example, are straightforward questions meaning something like 'Have you heard ...?'. Examples of this are found in Nłeʔkepmxcínin (35) and Gitksan in (36)

[6]Hotze Rullmann (p.c.) points out that the expressive meaning of epithets (cf. Potts 2005) does not seem to project in the way we would want in questions. For example, the speaker of (i) is not committed to the claim that each of the addressees is a bastard:

(34) Which bastard among you guys left the door open?

Further research is clearly required.

[7]Compare, however, Cheyenne (Murray 2009b), in which it appears to be the reportative, rather than the conjectural, that has this effect. Why this same effect would be caused by different evidentials in different languages is another pressing issue for future research.

(35) Nɬeʔkepmxcín

Context: There is a new professor in the department, and the students are curious about her personality.

a. ***kéʔ*** *xeʔ* *k=s-y'é-s*
whether DEM IRL=NOM-good-3.poss
'Is she nice?'

b. ***kéʔ=ekʷu*** *xeʔ* *k=s-y'é-s*
whether=REPORT DEM IRL=NOM-good-3.poss
'Are they saying she's nice?'

(36) Gitksan

Context: You and a friend are taking the overnight bus to Prince George. You can't remember what time you arrive, but your friend booked the tickets and she might know.

a. ***taxgwi*** *tim* *bakw-m̓*
when FUT arrive.pl-1pl
'When is it we'll get there?'

b. ***taxgwi=kat*** *tim* *bakw-m̓*
when=REPORT FUT arrive.pl-1pl
'When is it (did they say/did you hear) we'll get there?'

c. *silkwsax* *t'aahlakw****=kat***
noon tomorrow=**REPORT**
'(I heard/They said) at noon tomorrow.'

Our account as sketched above predicts that these questions would introduce conjoined presuppositions, too, to the effect that there is mixed or contradictory *reportative* evidence, in the same way that conjectural questions introduce a conjoined presupposition that there is mixed or contradictory conjectural evidence. However, in none of these reportative questions does there appear to be any not-at-issue meaning akin to 'reports are mixed', nor does there appear to be any resulting signal that the speaker does not expect the addressee to be able to answer.

The account above will thus need to be refined and expanded to properly account for evidentials other than the conjectural evidential, with the eventual goal of accounting for Conjectural Questions as a unified phenomenon. One possible direction to pursue is refocussing on the meanings of individual evidentials and taking in to account their paradigmatic relation to one another in terms of specific kinds of inferential evidence they encode. For example, in Gitksan both the modal *=ima* and reportative *=kat* are inferential evidentials, but *=kat* encodes a more specific kind of inferential evidentiality, specifically that the inferential evidence must be a report. Gitksan also has a sensory evidential, *n̓akw*, which

is also a more specific type of inferential evidential. Neither *n̓akw* nor =*k̲at* can convey a 'wonder' interpretation when put into a question. This could be because the kinds of evidential information encoded by *n̓akw* nor =*k̲at* are too specific to allow for any kind of controversy. In other words, only the 'weakest' evidential can be used in a CQ.

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Evidential Universals*

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Abstract

This paper addresses the question of whether or not there are evidential universals. It is argued that no universals can be found in the areas of scopal behavior or 'level of meaning' at which the evidential operates. However, two potential universals can be found when the nature of the required evidence itself is considered: its perspective dependence and the status of that evidence as knowledge.

1. Introduction

The question addressed in this paper is the following one: what can be said about cross-linguistic commonalities in the semantics of evidentials? Typological research (as reported in e.g. Aikhenvald 2004) has shown a number of apparent commonalities at the level of morphology and syntax; in many evidential systems the use of evidentials is obligatory, for example, though even this point is contested (de Haan 1999). The semantic side of the picture has received a good deal of attention in typology, of course, and as a result a great deal is known about the array of evidence types grammaticalized in language and required for the use of evidentials. Here, though, it is plain that we find no truly universal phenomena; languages vary quite broadly in the range of evidence types they use. To find true semantic universals in evidentials, one must look elsewhere.

The semanticist trained in formal techniques is naturally inclined to examine areas like scopal phenomena and interaction with other semantic objects for universals. Do evidentials always take wide scope? Do they interact with negation or modality? The typological literature is often silent on these questions, and even when it is not what it has to say can be somewhat ambiguous. However, after some years of research in formal semantics on evidentiality we can say that no universals are to be found here—though there are clear patterns. As I will discuss further in section 2, the facts are quite various across

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languages, and indeed I will even be somewhat negative on the possibility of deriving all the cross-linguistic facts within a single formal system.

Still, this negative result does not mean that we have to give up on finding evidential universals completely. I will suggest that there is an area in which such universals might still be found, and, although the discussion will of necessity remain suggestive rather than conclusive, I believe the facts to be discussed are potentially important. The area to be examined is the notion of evidence itself. As is obvious, evidentials require evidence; this is their main function. But the notion of evidence is mostly taken for granted in the study of evidentials. Here is one example from the early literature, the analysis Izvorski (1997) gives for the Bulgarian indirect evidential perfect in her seminal paper.

(1) The interpretation of EV(p): (Izvorski 1997)

a. Assertion $\Box p$ in view of the speaker's knowledge state

b. Presupposition: Speaker has **indirect evidence** for p

Here the notion of indirect evidence is left as a primitive. This situation is rather unsatisfying from a semantic perspective, for at least two reasons. First, it leaves it unclear what the evidential actually means. If we defined the meaning of *might p* as *it is possible that p*, we would not feel that we had given a semantic analysis. But this is precisely what we find here.[1] It is unfortunate also in the following sense: by not addressing the concept of evidence directly we miss an opportunity for deeper understanding of these constructions.

I would like to argue that considering more carefully the necessary concepts of evidence for the study of evidentials yields some insight into what evidentials have in common. In particular, we can identify two immediate questions relating to 'evidence for evidentials,' evidence that licenses the use of evidentials: what it is, and whose it is. What notion of evidence is relevant for the use of evidentials? And whose evidence must it be? I will try to show below that a careful consideration of these questions yields two potential evidential universals.

The paper is structured as follows. In section 2 I show (tentatively) that evidential systems are non-unitary, by examining evidentials in two languages, Quechua and Japanese, which have very different semantic behavior. By considering the formalisms that have been proposed to analyze these languages, I will show that there is no (obvious) way to unify the two semantically, at least not in a non-stipulative way. The conclusion of this section is negative: evidential systems are cross-linguistically nonuniform at a deep level. No universals here.

Section 3 turns to a consideration of evidence itself. I address both of the questions above: what, and whose? I will take a Bayesian approach to evidence, concluding that evidence (from a linguistic standpoint) corresponds to learned information that induces changes in subjective probability. The subjective nature of this probability allows us to ask the question of whose probability function is at issue. Here, an examination of the behavior of evidentials in a number of typologically unrelated languages leads to a proposal: that

[1] I do not mean to pick on Izvorski in particular or on her analysis, in particular. Much current work also uses evidence as a primitive notion.

the evidence holder can be identified with the *judge* of a context. This proposal is motivated and discussed in section 4. Section 5 turns back to evidence itself, again from the perspective of subjective probability. It is argued here that, based on the results of a test based on skeptical arguments, that only (what the speaker takes to be) knowledge can serve as evidence. This is proposed as a second universal. Section 6 sums up, concludes, and indicates some implications of the study and directions for future research.

2. Evidential Systems as Non-Unitary

In this section I will consider two evidential systems that have received thorough treatments in the formal literature. The first is Quechua, as discussed and analyzed by Martina Faller (2002, and other work). The second is Japanese, as analyzed by McCready and Ogata (2007). There are several reasons for picking these two systems in particular. First and foremost, they are well understood from the perspective of a formal semanticist. We know a good deal about the scope properties of the evidentials and about their semantics. Second, the evidentials in these two languages seem representative of very different types of evidentiality, as will be discussed below. This makes them good candidates to place head-to-head in trying to determine whether evidentials behave alike (or similarly) across languages. I will, however, make occasional comments related to other systems, though they will mostly be speculative and based on discussion in the informal literature, which requires semantically oriented fieldwork for confirmation.

We begin with Quechua. Quechua is a language widely spoken across the Andean highlands, in e.g. Peru and Bolivia. Faller's work concentrates on one particular dialect of this language, Cuzco Quechua. This language has several enclitic suffixes that mark evidentiality. Use of these suffixes is not completely obligatory, but is close. Quechua thus falls directly into the characterization of evidentials made by Aikhenvald (2004), who takes 'true' evidentials to be obligatory; though, as mentioned above, de Haan (1999) notes that this characterization is too strong. Quechua also appears to allow sentences without evidentials. When no suffix is present, speakers interpret the sentence with a direct evidential default.

Faller analyzes three evidential suffixes in detail.[2] The first, *-mi* indicates that the speaker has direct evidence for the claim made in the sentence in which it appears. This evidence is usually perceptual, but not always, e.g. in cases where we make claims about someone's motivations, so that direct perception is impossible.[3] The second, *-si*, indicates that the speaker heard the information expressed in the claim from someone else; that is, it is a hearsay evidential. The last suffix, *-chá*, indicates that the speaker's background knowledge, plus inferencing, leads him to believe the information in the claim true. Its meaning is thus simultaneously evidential and modal.

The following example is representative of the behavior of the three suffixes.

[2] In later work, she considers another suffix, *-sqa* (Faller 2004), but I leave it aside as it lies outside the core evidential system.

[3] We begin by considering only the assertive case.

(2) a. Para-sha-n-mi
rain-PROG-3-MI

'It is raining. + speaker sees that it is raining'

b. para-sha-n-si
rain-PROG-3-SI

'It is raining. + speaker was told that it is raining'

c. para-sha-n-chá
rain-PROG-3-CHÁ

'It may/must be raining. + speaker conjectures that it is raining based on some sort of inferential evidence'

Note that the content of the evidentials seems not to be part of the propositional content of the utterance. This is crucial, both for Faller's analysis and for the comparison with the Japanese case.

Due in part to the fact that the evidentials do not form part of propositional content, Faller uses speech act theory for her analysis, in particular the version of Vanderveken 1990. As is well known, speech acts have preconditions for successful performance. One type of precondition is the sincerity condition (SINC). These are necessary conditions for successful performance of the speech act that are associated with the mental (intentional) state of the speaker. For assertions, one such condition is that $Bel(s,p)$ holds—that the speaker believes the content of the assertion. In large part, the focus of Faller's analysis of the Quechua evidentials is on the sincerity conditions for the assertion.

Let us look at the evidentials in turn. The direct evidential *-mi* adds an additional sincerity condition: that $Bpg(s,p)$. The formula $Bpg(s,p)$ means that the speaker has the best possible grounds for asserting p. What the best possible grounds are depends on the content of p; if p describes something external (e.g. that it is raining, that Juan played soccer last night, that the fish is ready) the best possible grounds for assertion will involve direct perception ('as I saw/smelled'). If p describes something not amenable to direct perception, such as someone's motivations for doing something, inferential or other evidence may be the best possible grounds available, as mentioned above. Faller appears dubious that a principled account of what the best possible grounds are for assertion is available that generalizes to all possible contents, and does not further specify the content of the formula.

The indirect evidential *-chá* is analyzed as being simultaneously modal and evidential. The proposition it applies to, p, is mapped to $\Diamond p$, as is the corresponding belief object $Bel(s,p)$ in SINC, so what is asserted is that p is possible, and what must be believed by the speaker for sincere assertion is that p is possible. Further, the condition $Reasoning(s, Bel(s, \Diamond p))$ is also added to SINC. This means that the speaker's belief that p is possible was derived by reasoning from some other premises, i.e., via inference.

The hearsay evidential *-si* also receives a complex analysis, mostly because the propositional content p is not asserted when this hearsay evidential is used. Faller posits a special speech act PRESENT for this situation, on which the speaker simply presents a

proposition without making claims about its truth.[4] Because the speaker need not believe that p to present it, $Bel(s,p)$ is eliminated from SINC. Finally, the condition $\exists s_2[Assert(s_2,p) \wedge s_2 \notin \{h,s\}]$ is added to the set of sincerity conditions, indicating that someone other than speaker or hearer asserted p.[5]

One main reason for using a speech act-based analysis is that the Cuzco Quechua evidentials do not embed semantically. In the following example, the negation cannot scope over the evidential; only the opposite scoping is available.

(3) Ines-qa **mana-n/-chá/-s** qaynunchaw ñaña-n-ta-chu watuku-rqa-n
Ines-Top not-MI/CHÁ/SI yesterday sister-3-Acc-CHU visit-Pst1-3

'Ines didn't visit her sister yesterday.' (and speaker has evidence for this) NOT 'Ines visited her sister yesterday' (and speaker doesn't have evidence for this)

This fact is consistent with the evidentials being presuppositions as well, or merely having the property of always taking wide scope. However, they do not exhibit presupposition-like binding behavior, e.g. of nonprojection out of conditionals of the form $p \rightarrow q[p]$, $[p]$ the presupposed content. They also are not targeted by denial, so they are unlikely to be part of propositional content, which means that rather than having wide scope they are in fact 'scopeless.' Details of these facts can be found in Faller (2002).

Speech act theories of evidentiality like that of Faller don't allow for embedding of evidentials, which makes sense given that they is designed precisely to account for evidentials in languages which disallow such embeddings. But making this possibility available proves to be necessary for Japanese, as we will see shortly. So, although a speech act based analysis may be right for Quechua, it doesn't extend easily to the Japanese case. This is not, of course, a shortcoming of the analysis; but it does show that the two evidential systems are essentially different in semantic behavior.

Let us turn now to the Japanese case. Japanese has several evidentials: the inferentials *mitai, yoo, rashii,* and *(infinitive+)soo*, and the hearsay evidentials *(sentence+)soo.* The inferential *rashii* also has an evidential use (McCready & Ogata 2007). The Japanese system is different from that of Quechua in a number of respects. First, it lacks a direct evidential. This is not too surprising; many such systems can be found cross-linguistically. Second and more importantly, the evidentials are more or less optional. There is no *grammatical* requirement on their use.[6] It seems possible that the semantic differences between

[4]It is interesting to speculate on whether this happens elsewhere in the linguistic system. I cannot immediately think of any instances that do not involve modification of a proposition at the level of linguistic content.

[5]Presumably we also want an additional condition to the effect that the speaker heard or otherwise experienced this assertion as well.

[6]Aikhenvald (2004) even questions whether this is a true evidential system at all. The answer depends on how we define evidentials—but I do not see a clear way to distinguish the two. Aikhenvald takes 'true evidential' systems to be those that make use of the evidentials completely obligatory, which requires her to assume, not just a default, but a null evidential morpheme. This last strikes me as theoretically dubious in that it seems to be needed only to maintain the assumption of obligatoriness. Surely the notion of default does not require this strong move. In any case, as I have stressed above, there do not seem to be languages that unambiguously require evidentials on the surface. Quechua, at least, is not one. Another possibility—the

the Quechua evidentials and the Japanese ones shown below might correlate with this morphological distinction. In any case, it is the semantic differences that are crucial for the present discussion.

McCready and Ogata (2007) analyzed the inferential modals using an operator $\triangle_a^i$, where i indexes an evidence source and a is an agent. Informally the semantics of this operator is as follows.

(4) $\triangle_a^i\phi$ is true given a world w, time s, and probability function μ iff:

a. ϕ was less likely according to a at some time preceding s (before introduction of some piece of evidence i);

b. ϕ is still not completely certain for a at s (given i);

c. the probability of ϕ for a never decreased between the time a became aware of the evidence i and s as a result of the same piece of evidence i (i.e., the probability of ϕ given i is upward monotonic).

The hearsay evidential on the other hand was modelled with an operator H_a, a dynamic test, understood as follows.

(5) $\mathsf{H}_a\varphi$ indicates that a has experienced an event of acquiring hearsay knowledge $\mathsf{E}_a^h\varphi$, at some past time.

On this analysis, then, the Japanese evidentials simply introduce semantic operators, which can scope over and under other bits of content as usual, unlike what happens if they're tied to speech acts (or, for that matter, presuppositions).

One main reason for treating the Japanese evidentials as semantic operators is that they can quite easily take scope under other semantic operators, such as conditionals. This is so for both inferential and hearsay evidentials; here I just give one case with an inferential for reasons of space.[7]

(6) a. Taro-ga kuru yoo da-ttara osiete kudasai
Taro-Nom come YOO Cop.Pres-COND teach please
'If it looks like Taro will come, please tell me.'

b. $\triangle_h^i come(t) \Rightarrow Imp(tell(s))$

Here, plainly, the speaker is asking the hearer to tell him *if it appears as if Taro will come*, not just if Taro will. The evidential scopes in the conditional antecedent.

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one I favor—takes evidentials to be those expressions that make reference to a notion of evidence in their semantics. This seems the most obvious and intuitive definition. Expressions that leave what kind of evidence is at stake completely unspecified, such as the English epistemic *might*, would not be included. On this definition, Japanese clearly has evidentials. It also covers most of the expressions that have been taken to be evidential in the semantic literature, but not all of them.

[7] It does seem to be more difficult to embed hearsay evidentials, though, and some speakers find it quite bad.

Evidentials can also embed under modals and negation, as in the following case. Suppose that Mika is in love with Taro and always waits for him if she thinks he's going to show up. We were supposed to meet Mika somewhere but she never appeared. Here it would be fine to say the following, indicating that we think Mika might be waiting for Taro somewhere else.

(7) a. mosikasitara Taro-ga kuru yoo datta kamosirenai
perhaps Taro-Nom come YOO cop.Pst maybe
'Maybe it looked like Taro would come.'

b. $Might(\triangle^{i}_{m} come(t))$

Further, one major reason for treating the Japanese inferential evidentials as modals is that they enable modal subordination. Modal subordination is a well-studied phenomenon in which a modal 'accesses' content in the scope of another modal. Ordinarily this is tested via anaphora. Modals, like negation and other operators, normally block anaphora, assuming the first sentence is read *de dicto*.

(8) A wolf might come in. # It is very big.

If the second sentence also contains a modal, however, anaphora is fine.[8]

(9) A wolf might come in. It would/might eat you first.

Here the idea is that the second modal is able to 'pick up' the content of the first. Intuitively, if a world makes the first sentence true, it will contain an object in the extension of *wolf* at that world. This object can then serve as antecedent to *it* in the second sentence. This is the basic intuition, which has been spelled out in varying ways by many people (Roberts 1989, Frank 1997, van Rooij 2005, Asher and McCready 2007). We need not concern ourselves here with which of these is the correct way of thinking about the facts.

Modal subordination with evidentials is enabled both with modals in subordinate position, and with other evidentials, as shown by the following two examples respectively. Examples like this fail with hearsay evidentials, for the simple reason that (on the McCready-Ogata analysis) no modality is involved.

(10) a. ookami-ga kuru mitai da
wolf-Nom come MITAI Cop.Pres
'A wolf will come in, it seems.'

b. anta-o taberu kamoshirenai
you-Acc eat might
'It might eat you.'

[8]There are complex restrictions on what combinations of modals license modal subordination. The issue appears to involve the kind of accessibility relation at work. See e.g. Frank (1997) for discussion.

(11) a. ookami-ga kita mitai/yoo da
wolf-Nom came MITAI/YOO Cop.Pres
'A wolf/Some wolves has/have come, it seems.'

b. yatsu(ra)-wa totemo onaka-o sukaseteiru mitai/yoo da
it(they)-Top very stomach-Acc emptied MITAI/YOO Cop.Pres
'It/they seems/seem to be very hungry.'

Let us pause briefly to sum up the facts. Quechua evidentials always take widest scope over semantic operators (excluding questions, which can be analyzed as speech acts—we will return to this point shortly). Japanese evidentials can be embedded in conditionals and under modals and negation, and also must be analyzed as modal in that they license modal subordination.[9] Thus the two systems exhibit extremely different semantic behavior, which explains why the systems used to analyze them, speech acts and (dynamic) modality, are so different. The natural question now is whether they *must* be so different. Can one of the two analyses can be naturally extended to the system it was not designed to cover? The answer to this question leads to the conclusion that the two systems are different at a fundamental level.

Let us consider the speech act-based account first.[10] This account obviously can account for languages in which evidential content doesn't scope under semantic operators, as it was designed to do so. It can also account for cases in which evidential content modifies other evidential content (see McCready 2008 for some discussion of this latter case). However, it is unable to account for languages in which evidentials can scope under semantic operators, or for languages in which multiple evidentials can appear without interacting (again, see McCready 2008). The reason is that the evidential content is scopeless with respect to such operators, due to the use of speech acts. It might be possible to claim that modals and conditionals are also speech act operators—indeed, some kinds of modality certainly seem to be (Papafragou 2004). But this account seems a bit odd when extended to negation. In any case, moving to consider semantic operators at a speech act level means that we lose the explanation of the Quechua facts, which crucially depended on operators acting at the level of propositional content. This route therefore does not seem the right way to go..

The modal account, conversely, does well with cases where evidentials can embed under semantic operators and cases in which they modify each other. By itself, however, it cannot force evidentials to scope out or handle cases in which multiple evidentials don't modify each other. We therefore need to augment it in some way, preferably one that is not completely stipulative. The question to ask is therefore whether we find analogous phenomena elsewhere: are there other things that are scopeless, non-presuppositional, and not part of 'ordinary' semantic content? The obvious answer is conventional implicature (cf. Potts 2005).

[9]The same may be true of Quechua *-chá*. More research is needed to determine the facts here.

[10]As far as I can see, the account of Davis et al. (2007), which makes reference to Gricean conditions on the use of sentences, makes the same predictions as the speech act account—i.e. does not allow embedding. The conclusion I draw in this paragraph therefore should apply to it as well.

Conventional implicatures are pragmatic meanings associated with particular constructions or lexical items. They have two properties of interest here: they are scopeless and do not interact with other content. We could think of Quecha-style evidentials in this way too. Perhaps there is simply a parametric difference between evidentials. In some languages evidential content is modal in the sense of the McCready-Ogata theory, where the modals apply to ordinary semantic content, and in others their meaning is also conventionally implicated. It might be that such a difference could also be correlated with the morphological differences discussed by Aikhenvald and others.

I explore this idea thoroughly in McCready (2008), ultimately rejecting it. Here let me briefly summarize the idea and conclusions. Quechua evidentials can, in principle, be analyzed as Pottsian conventional implicatures. The idea would be that they are given modal-like definitions, but that their content is conventionally implicated, and so is scopeless and free from denial. The hearsay evidential *-si*, for example, would translate as

$$\lambda p.[\mathsf{H}(p)] : \langle t^a, t^c \rangle,$$

where a-types are at-issue and c-types are CI content. This approach gives widest scope, as desired, and at first blush looks potentially reasonable.

This story will not work for multiple reasons. First, the Potts logic for conventional implicature implies that in the evidential case, we will get the propositional content back after the evidential operator applies.[11] But assertions of *S-chá* or *S-si* do not entail that the content of *S* is true, as Faller shows; rather, the former entails *Might*($[\![S]\!]$) and the latter entails only that *Hearsay*($[\![S]\!]$) (as discussed above). If the Potts logic is assumed, there seems no way around this prediction. We also get problems with questions, which have multiple possible scopes in Quechua: the evidential can scope over the questioned sentence, or the evidential sentence itself can be questioned. The CI logic can only get a third (non)scoping (angled brackets indicating the two dimensions of content in this theory): $\langle$Q(S), Evid(S)$\rangle$. This indicates that the speaker has evidence for *S* and is also asking whether *S*. But this interpretation is simply not available. This implementation of CIs, then, is not the right one for evidentials.

The lessons of all this seem to be the following. Evidentials do not share the properties of conventional implicatures like appositives: in particular they do not simply 'pass up' their content in the way that the Potts $\mathscr{L}_{CI}$ logic predicts them to do. More broadly, the two evidential systems examined seem to operate on completely different levels of meaning, and behave in completely different ways. Trying to devise a kind of denotation that applies directly to both does not seem the most useful possible project. This does not of course mean that it cannot be done, but simply that I do not see how to do it in a natural and nonstipulative way.

I suggest therefore that rather than working to find a single compositional system for the analysis of such heterogeneous phenomena, we should look elsewhere for generalities. The obvious place to turn is to what all evidentials plainly do have in common: their reference to evidence itself. In the next section I begin with a consideration of what evidence is.

[11] The reason is that the logic is not resource-sensitive in the sense of e.g. linear logic (Girard 1987). Details are in McCready (2008).

3. Evidence and Probability

There are many ways to look at the nature of evidence: philosophical, scientific, juridical. But our focus should not be on any of these, but rather on the nature of what the evidence is that is needed for the use of evidentials. There is no obvious conceptual reason why evidence as a linguistic concept should be identical to evidence as a philosophical or legal one. I thus narrow the problem to one to which linguistic evidence (and therefore intuition) can be directly applied. In terms of a search for universals, the big question then is this: does what counts as evidence vary from language to language?

I suggested above that there are two areas that warrant immediate investigation. The questions are whose evidence must be considered, and what that evidence consists of. Who determines what counts as evidence, and whose evidence is taken into consideration? Is evidence a fully subjective concept, in terms of language use ('evidence for evidentials')? A related question: what has to hold 'outside the head' for something to count as evidence? I will not be able to give definitive cross-linguistic answers to these questions. I will instead work with data from Japanese (and a few other languages) to approach an answer which can serve as hypothesis.

To begin to answer these questions, we have to say something about what it is for a proposition to be evidence in the first place. I assume all evidence is propositional, following Williamson (2000) and others. Plainly a bloody knife hidden in his cupboard can be evidence that Robert did the murder; but it is not the knife itself, but the fact that the knife is there, that serves as the evidence that is used in inferential reasoning. The knife itself is just a knife.

The assumption that all evidence is propositional opens up the Bayesian path to defining evidence. I will here make use of the definition in McCready and Ogata (2007). We assumed that observation sentences in Quine's sense introduce evidential indices i via an operator E. This operator, like $\triangle$, serves a complex function. Informally, it works as follows:

(12) $\mathsf{E}^i_a\varphi \ldots$

a. changes the probabilities assigned to every proposition ψ (excluding φ itself) in the current information state σ by replacing them with the conditional probability of ψ given φ, if defined

b. replaces the modal accessibility relation with one restricted to worlds in which φ holds.

Here conditional probability is defined in the standard way: the probability of the conjunction of the new information with the old divided by the probability of the old (where the probability of φ is understood just as the proportion of the domain of worlds W in which φ holds; see below).

$$(\varphi|\psi) = \frac{\varphi \cap \psi}{\varphi}$$

In essence, if the conditional probability of ψ given that φ is true exceeds the conditional probability of ψ given the falsity of φ, then φ is evidence for ψ. This is a very standard picture of evidence (see discussion in e.g. Halpern 2003).

Notice that the definition of evidence here is liberal in the sense that it allows in principle for something to be evidence that no one realizes to be evidence. In an absolute sense this is reasonable if we consider e.g. philosophy of science: certainly something could be evidence for a hypothesis, but recognizing this could require inferential steps which have not yet been made. But for the analysis of evidentials—or the role of evidence in human reasoning—this is undesirable. We may therefore assume (with various authors) that we are dealing with *subjective probability*.

Roughly, the difference between subjective and objective probability is this. The objective probability of φ is just the raw chance that φ is true. This is also known as classical probability. It can be roughly defined as the fraction of total possible outcomes in which φ is true.

$$OP(\varphi) = \frac{|\{w : \varphi(w)\}|}{|W|}$$

The subjective probability of φ, conversely, is simply the degree of belief in φ of some agent a.

$$SP_a(\varphi) = \frac{|\{w : w \in Dox_a \wedge \varphi(w)\}|}{|Dox_a|}$$

It seems to be this latter notion that is relevant for natural language evidentials.[12]

It turns out that the conclusion made here allows us to approach the question of whose evidence is involved in the use of evidentials. The reason is that we must make use of the probability valuations of some individual to define subjective probabilities. Who is this individual? This question is the topic of the next section.

4. Evidence Holder as Judge

In sentences with evidentials, whose subjective probability are we talking about? In simple declarative sentences it is, plainly, the speaker's subjective probabilities. We know this because in such cases the evidential expresses the kind of evidence the speaker has for her assertion.

(13) ame-ga furu mitai
rain-Nom fall EVID(INF)

'It looks to me like it's going to rain.' (based on some evidence the speaker has) (Japanese)

(14) Ines-qa **mana-n/-chá/-s** qaynunchaw ñaña-n-ta-chu watuku-rqa-n
Ines-Top not-MI/CHÁ/SI yesterday sister-3-Acc-CHU visit-Pst1-3

'Ines didn't visit her sister yesterday.' (and speaker has evidence for this) (Quechua)

[12] Davis et al. (2007) reach the same conclusion based on other considerations.

In other sentence types the situation is different. First let us consider the case of embedded sentences. I start with Japanese examples.

(15) Taro-wa ame-ga furu mitai da to itta
Taro-Top rain-Nom fall EVID(INF) Cop C said

'Taro said that it is probably going to rain [and he has some evidence for this claim]'

(16) Jiro-wa pasokon-ga kowareteiru rashii to itta
Jiro-Top computer-Nom broken EVID C said

'Jiro said the computer appears to be broken.' (and he has some evidence for this claim)

Generalizing, in Japanese, the evidence holder is the same as the matrix subject when the evidential appears in an embedded clause.

The same kind of facts can be found in Tibetan (Garrett 2001). Tibetan has an *ego evidential* realized as *yin* in copular sentences. In simple sentences, this evidential only is felicitous when used with the speaker as subject. We can conceptualize this as a constraint on the ego evidential: the evidence source must be the speaker, i.e. it is the speaker's evidence that is at issue, just as in the Japanese case.

(17) nga/#khyed.rang/#kho dge.rgan yin
I/you/he teacher ego.cop

'I'm a teacher.'

In embedded sentences, however, the ego evidential refers to the matrix subject. Just as in Japanese, the evidence holder shifts in embedded clauses.

(18) bkhra.shis kho dge.rgan yin lab-gi-'dug
Tashi he teacher ego.cop say-Dir.Imp

'Tashi$_i$ says he$_{i/\#j}$ is a teacher.'

When considering simple sentences in other moods, we see a different kind of shift. The evidence holder also changes in questions in Japanese. The examples make use of inferential evidentials, but hearsay evidentials behave similarly.

(19) ame furi-soo (na no)?
rain fall-EVID (Cop Q)

'Does it look like it's going to rain (according to your evidence)?'

(20) pasokon-ga kowareteru mitai (na no)?
computer-Nom broken EVID (Cop Q)

'Does the computer look broken (based on your evidence)?'

In Japanese, then, the evidence holder is the interlocutor when the evidential appears in questions. Again, Tibetan looks the same (Garrett 2001).

(21) khyed.rang/*nga/*kho lha.sa-la phyin-pa-yin-pas
you/I/he Lhasa-loc go-ego.pst-Q

'Did you go to Lhasa?'

It is worth noting that in Japanese it is fine to ask about the speaker's evidence when the hearer can be taken to have more reliable information than the speaker about the relevant information, e.g. in a situation where the speaker cannot access his own sensory data or memories. For instance, suppose that I am amnesiac and asking about what the situation was last week with respect to the evidence that I had for my getting a visitor today, or that I have some kind of brain damage that prevents me from accessing some aspect of my knowledge or inferential capacities and want to know whether what I am seeing counts as substantial evidence for its going to rain. (Such scenarios are possible, if not plausible.) We therefore see that the question shift is a default rather than a grammatical necessity. I do not know whether Tibetan is similar in this point or in allowing speaker-oriented readings at all. More research is needed to determine the full range of cross-linguistic facts.

The facts here bear a close relationship to other 'changes in perspective' found elsewhere. First, consider epistemic modals. As the glosses indicate, the 'judgement of possibility' is made by a different individual in the context of simple declarative sentences, embedded clauses, and questions. In the first case, the speaker's sense of what is epistemically possible is at issue, in the second, the matrix subject's (cf. Stephenson 2007), in the third, the hearer's.[13]

(22) a. John might come. (according to me)

b. Bill thought John might come. (according to Bill)

c. Is it the case that John might come? (according to you)

We also find such shifts with predicates of personal taste (e.g. Lasersohn 2005). These are lexical items, generally adjectives, that can be considered to indicate subjective judgements: what is *fun*, what is *tasty*, what is *boring*. Such predicates exhibit the same sort of shifts as evidentials and epistemic modals.

(23) a. Oysters are delicious. (my tastes)

b. Bill said oysters are delicious. (Bill's tastes)

c. Are oysters delicious? (your tastes)

[13] I am simplifying the issue a bit in the case of simple declaratives at least. It is not completely certain that it is only the speaker's judgement that is at issue here. It may be that we must take into consideration the range of possibilities admitted by all participants in the conversation, or a subset of them, or a relevant community of speakers. See e.g. DeRose (1991) or Egan (2006), as well as Stephenson (2007), for relevant discussion.

A final case: so-called *experiencer predicates* in Japanese. These predicates are termed 'experiencer' because they indicate directly experienced emotions or sensations of some individual. (Note the similarity to the Tibetan ego evidential.) These predicates are infelicitous/ungrammatical when used in simple sentences with other than first-person subjects (Kuno 1973).[14]

(24) watasi/*anata/*kare-wa samui desu
I/you/he-TOP cold COP

'I'm/You're/He's cold.'

However, predicates like these are fine with second person subjects when they appear in questions.

(25) ?watasi/anata/*kare-wa samui desu ka?
I/you/he-TOP cold COP Q

'I'm/You're/He's cold.'

Again, we find related facts in Tibetan with respect to questions—I have no data about embedded cases. Tibetan has a direct evidential that can appear only with first person subjects when the sentence predicate is 'endopathic' (unobservable, cf. *hungry*). In questions, these are possible with second person subjects.

We find also shifts in the sensation holder of experiencer predicates in embedded cases.

(26) Taro-wa samui to itta/omotta
Taro-Top cold C said/thought

'Taro said/thought he was cold.'

This again looks very much like the evidential case.

The restrictions on the experiencer predicates seems to involve whose sensation is being reported. McCready (2007) analyzes experiencer predicates as placing presuppositional requirements on the context of utterance, in particular that the *judge* of the context must be the same as the subject. The notion of a judge was introduced by Lasersohn (2005), to pick out the individual who decides on matters of subjective 'fact,' such as what counts as exciting and what does not. The same tool has been used by Stephenson (2005, 2007)to analyze who determines what counts as a possibility in epistemic modality. Stephenson's idea is that in embedded clauses, the judge shifts to be identical with the subject via a 'monstrous' context shift in sense of Kaplan (1989) or Schlenker (2003). The same idea accounts directly for the case of experiencer predicates. Further, the shift found in questions in general can be analyzed via a shift in the judge parameter to the interlocutor, as proposed by McCready (2007).

[14]The literature splits on whether the perceived badness is simple infelicity or genuine ungrammaticality. I believe it to be infelicity in the sense of presupposition failure. See McCready 2007.

We are now in a position to make a generalization about evidentials: that, at least in some languages, they behave the same as predicates of personal taste, experiencer predicates, and modals with respect to whose judgement is at stake. More specifically, I believe that it is reasonable to conclude that whatever mechanism is at work in these other cases is also at work in evidentials. Assuming this is right, then if we follow the authors above in analyzing the alterations found in epistemic modals, experiencer predicates and so on as shifts in the judge parameter, we must conclude that evidential expressions are the same. The conclusion then is that evidentials also interact with the contextually determined judge parameter.

With all this in place, we may return to our original problem: who determines what counts as evidence? I propose based on the above considerations that we should identify the contextually supplied judge with the 'evidence holder.' The individual whose subjective probabilities are at stake in the determination of evidence is the judge. This seems intuitively correct given the very notion of a subjective probability, an individual determination of what the objective matters of fact are. In terms of concrete analysis, we can follow McCready (2007) and make use of monstrous shifting operators that shift judges in questions, and follow Stephenson (2005, 2007) in adding similar operators for attitude verbs. This will give us coverage of the data, as well as bringing out an interesting linguistic generalization about 'subjective facts.' Further, given that Stephenson is correct in analyzing epistemic modals as making use of the judge parameter, we also have good evidence for taking at least one class of evidentials to be a kind of modal operator.[15] Together with the facts about modal subordination summarized in section 2, this observation makes a strong case for treating at least some evidentials as modals.[16]

A deeper hypothesis is the following. This is the first potential evidential universal I will propose in this paper.

(U1) *All evidentials make use of the judge parameter; all evidentials are shiftable.*

If true, this hypothesis yields a fairly deep understanding of one aspect of evidential meanings, and an interesting evidential universal. However, it may be that the relevant shifts happen in different ways, or at different levels, in different languages—or even with different evidentials within a single language. Consider the case of Quechua, where the paradigm is more complex. What happens when we put evidentials in questions in Quechua?

(27) a. -Mi Qs: speaker-oriented or hearer-oriented

b. -Si Qs: speaker-oriented or hearer-oriented

c. -Chá Qs: always hearer-oriented

[15] Matthewson et al. (2006) provide some additional reasons, based on evidence from St'at'imcets.

[16] The discussion in this section should also alleviate some possible worries about basing much of our theory of evidentials on the Japanese case, which, as mentioned, is taken by some authors to be a marginal case of evidentiality. Since Tibetan behaves similarly to Japanese in terms of shifting behavior in evidentials and is a canonical system, we see that Japanese may not be so atypical after all, at least from a semantic perspective.

In Japanese, all the evidentials shift in the same way (according to informants), but in Quechua the situation differs depending on the evidential in use. Thus the exact nature of interaction between judges/logophors and evidentials appears to be somewhat language-dependent, and also dependent on the particular evidential in question. Further research is needed to fully clarify the picture. But the line of research suggested here strikes me as a suggestive and useful one.[17]

5. Evidence as Knowledge

We now have an answer to the first question I posed: evidence for who? Now I would like to proceed to the second question: what that evidence consists of. But we already have what looks like an answer to this question, in that we have identified evidence for p with propositions inducing changes in the subjective probability of p. An issue arises, however, with the observation that this does not appear to be enough. Subjective probabilities are merely concerned with degrees of belief, so in a (subjective) Bayesian framework, changes in belief are all that matters. We can therefore identify evidence for φ with anything that changes the subjective probability of φ.

The problem is that it is not clear that everything that changes subjective probabilities is necessarily evidence. Consider the following scenario, based on on in Williamson 2000. Suppose that I have $1, enough for a scratch-off lottery ticket but not for a hot dog. I have no reason to believe that the ticket I buy will win; but as I get hungrier I begin to convince myself that the chance of winning is a fairly good one—though I may know the odds. My belief that I will win goes up and up. But since we have identified subjective probability with degrees of belief, my hunger is somehow evidence for my winning the lottery. This is a strange, and obviously undesirable, outcome.

Wishful thinking is not evidence in the objective sense, any more than desire is. It may be, though, for the purposes of linguistic use: it might be enough to license evidentials. This kind of case seems at least conceptually possible. What then is the nature of the evidence needed for use of evidentials? Our current answer is that evidence for p is anything that raises the subjective probability that the judge assigns to p. But the wishful thinking scenario suggests that we need to consider additional issues. Here is the one I will concentrate on: is the evidence relevant for evidentials knowledge or belief? Note that both have the same effect on subjective probabilities, as the example above shows, and so

[17]Let me close this section with a final comment. I have not talked about this set of facts in this paper, but it seems that modal and evidential operators are also capable of shifting the judge parameter (this is briefly discussed in McCready 2007) at least in Japanese. I have not pursued this issue in the present paper for two reasons. First, the paradigm is complex. Modals and evidentials shift the judge parameter, but there is a split in behavior between experiencer predicates (and so on) and other modals/evidentials themselves. It is always possible (as far as I know) to use modals and evidentials to shift the judge parameters of other kinds of objects, but there are restrictions on sequences of evidentials that are not clear to me now. This suggests that there is either a difference in the kind of monstrous operator at work, or a constraint on sequences of perspective-taking operators. Another reason for leaving these cases out of the present paper is that there seem to be substantial speaker differences in what is allowed and what not, so the data is at present a bit muddy. Here, again, more research is needed.

both are compatible with a Bayesian picture—and, indeed, subjectively indistinguishable, as Williamson shows.

How to tell knowledge from belief? Here is a traditional answer from epistemology: knowledge is justified true belief. I can be said to know p if I believe p, p is true, and I have good reason to believe p This answer looks reasonable, and many people have espoused some version of it. But it is wrong, as the epistemologists well know. Gettier (1963) discovered examples in which all the conditions above are met, but still there is no knowledge. Here is a scenario in the Gettier style. Johnny is traveling in the country when he sees what looks to him like a horse on top of a hill and hear a horse neigh. However, what he sees is a horse-shaped rock, and the neigh is just the wind whistling through that pipe over there. But there is—coincidentally—a horse standing behind the rock. Now consider this sentence:

(28) Johnny knows there is a horse on top of the hill.

This statement seems false–though the conditions listed are satisfied: Johnny believes that there is a horse on top of the hill, there is in fact a horse there, and Johnny has good reason—in fact two good reasons—to believe there is one there, at least from his own perspective.

So knowledge is not justified true belief. What is it? This is a hard question, and no one has been able to give a definitive answer since Gettier showed the incorrectness of the traditional one. For our purposes—fortunately—we need not give a full analysis of knowledge. We need only something less ambitious, which this kind of scenario does suggest: a way to distinguish belief from knowledge. Gettier scenarios show one way to eliminate knowledge: by eliminating the foundations of knowledge, we can eliminate the knowledge itself. Now let us apply a version of this strategy to the evidential case.

The above considerations suggest a way to distinguish knowledge from belief: if one can destroy the justification for the putative piece of knowledge, yet there is no change in the (subjective) cognitive status of the object of the attitude, then it is belief. If the cognitive status of the putative knowledge changes—if it becomes uncertain or eliminated—then the putative knowledge is knowledge indeed.

The linguistically minded reader may now be wondering why we need to go to all this trouble. After all, isn't knowledge factive, and belief not? That means that the object of knowledge is presupposed, but not so in the case of belief. If this is so, then why must we worry about justification and the foundations of knowledge? There is some initial plausibility to this objection, but it rests on a confusion. The verbs *know* and *believe* are factive and not factive respectively, but here we are not interested in knowledge or belief as it is linguistically expressed. Rather, we are interested in evidence, as the object required for the felicitous use of evidentials. This content is not explicitly expressed in language. To find out its properties, we must take a more indirect route.

The strategy, then, is to call into question the justification for the evidence. We will use the most extreme form of this general strategy: the *skeptical argument*. Skeptical arguments call into question the foundations of all our knowledge (for some given area). They have the following general form: one introduces possibilities which falsify all—or

some relevant portion of—our putative knowledge and cannot be conclusively eliminated. Because we cannot eliminate them, possible flaws in the foundations of our knowledge enter our awareness. In view of these potential errors, we become uncertain about the solidity of our knowledge. As a result, our knowledge disappears. One can think of this effect in various ways, for instance as a change in the contextual standards for knowledge attribution (e.g. DeRose (1992), Lewis (1996)); DeRose and Warfield (1999) provides an overview of other possibilities; general background on epistemological stances can be found in Pollock and Cruz (1999). For our purposes we need not take a stand on which of these positions is correct.

Skeptical scenarios usually look implausible to the average non-philosopher. Some traditional examples include the possibility that you might be deceived by an evil demon into believing that you are receiving certain kinds of perceptual input, such as that you are drinking a cup of coffee; that you might be a brain in a vat, with your perceptual centers stimulated by electric impulses, or in a Matrix-like situation; that you might be dreaming everything you are perceiving, or be in a catatonic state. The common characteristic to these scenarios is that, in each, the sensory data you receive is not trustworthy as a guide to what actually is. Note the similarity to the Gettier scenarios. The difference between skeptical scenarios and Gettier cases is that, in the skeptical scenarios, there is no possibility for the individual in the scenario to learn that he is in fact in such a scenario, because all of his sensory input is open to question, and the same holds for everyone else in the scenario; but in the Gettier cases, a world-internal observer could make the Gettiered individual aware of his error.

We can also find scenarios that look more common-sensical, especially when we confine ourselves to scenarios that only cast doubt on certain types of knowledge or knowledge in certain domains. For instance, consider a scenario on which you fell down a moment ago and hit your head, and the resulting damage caused you to hallucinate your current state—you appear to be reading this paper, but in fact you are lying on the floor outside your office viewing an internal projection of what you had planned to do before your injury. This situation seems quite normal compared to those above, but only calls into question your knowledge of your present activities, rather than of your entire set of memories.

What all skeptical scenarios have in common is the property that—if taken seriously—they destroy knowledge. For any p that one putatively knows (or for any salient p, for limited skeptical scenarios like the above), one may retain the belief that p but this belief can no longer be conclusive. There is always a possibility of error. Such beliefs are thus no longer knowledge in the strict sense. As a result, skeptical arguments can be viewed as tests for knowledge, when used on susceptible speakers. By running a skeptical argument on someone who is willing to consider them seriously, one can test whether a particular bit of their cognitive state is knowledge or belief, in the following sense: if the skeptical argument has no effect on the cognitive status of the content of interest, that content is merely believed.

To believe something, one must assign it a degree of subjective probability higher than whatever the threshold for belief is taken to be. In general, this threshold is contextually determined in the usual way familiar from degree predicates (cf. Barker (2002),

Kennedy (2007) on degree predicates and Stanley (2005) on belief in particular); skeptical arguments are implausible enough that they will not (barring an extremely high contextual standard) rule out belief, for they lessen degrees of subjective probability in a very minor way. Thus beliefs can survive skeptical scenarios, but knowledge cannot. We thus have a way to distinguish knowledge from belief.[18] One application of this tool, the one I am concerned with in this paper, is in determining whether the evidence needed for evidentials consists of knowledge or whether mere belief is acceptable. I now turn to this application.

How can one use skeptical arguments in the desired way? The idea is straightforward. First, give a speaker a piece of evidence supporting some conclusion φ in the intuitive sense. I here sidestep issues concerning exactly what should count as evidence for some conclusion, as it would require complex detours into questions about induction and defeasible reasoning. After providing the evidence, ask whether $Evid(\varphi)$ is true (or assertable, depending on the language). This step ensures that the piece of evidence is the right kind to license the evidential in general.

Here is an example from Japanese. Under ordinary circumstances, the observation that the street is wet outside in the morning leads to a rise in the probability that it rained the night before. So, by the definitions above, it should count as evidence, and be sufficient to license the inferential evidential *mitai*.

(29) (In the morning)

michi-ga nureteiru. kinoo-no ban ame-ga futta mitai
street-Nom wet yesterday-Gen night rain-Nom fell INF-EVID

'The street is wet. It must$_{\text{inf}}$ have rained last night.'

This is correct. In this case, the evidential sentence is assertable. So the sequence $E;ES$, where E is the evidence and ES the sentence containing the evidential, is a felicitous one.

The test for knowledge comes when we introduce a skeptical scenario after the evidence. Here is an English version.

(30) The street is wet. But perhaps there is no street—perhaps you are just dreaming. (Anyway,) It rained last night–Evid$_{inf}$.

Now ask the speaker: Is the new sequence $E;S;ES$ acceptable, where S is the skeptical scenario? Or, for languages where we can consider the evidentials primarily truth-conditional, is the sentence containing the evidential true in this new context? If the new sequence is acceptable, and the sentence containing the evidential is true, then the evidence required does not need to be actual knowledge: belief is sufficient. We know this because the skeptical scenario, if taken seriously, destroys knowledge; so if the evidence must be knowledge,

[18] There may be issues with this characterization. Robert van Rooij (p.c.) points out that it is not possible to define knowledge strictly in terms of belief. I would not disagree. I would actually prefer an account of knowledge that takes external factors into account, so that evidence counts as those things that both a) raise subjective probability and b) are in fact true. In any case, the result of this section (to cut to the chase, that evidence for evidentials must be knowledge) is compatible with either of these.

then the sentence with the evidential would be bad. Conversely, if the new sequence is not acceptable, or the sentence with the evidential is false, then knowledge is required.

So that is the test. What are its results? I have tried this test on a number of Japanese speakers. A few 'skeptical' individuals were unwilling to take the skeptical arguments seriously. Disregarding these subjects, no speaker allows sentences with evidentials after the skeptical scenario is introduced. This suggests very strongly that the evidence needed for Japanese evidentials is not belief, but knowledge. This fact in turn has implications for the nature of evidence itself, to the extent that we take linguistic intuition seriously. I will return to this issue in the conclusion.

Here is a possible objection to the test. It might be suggested that my informants are just balking at asserting anything about the world, given that I have called into question all their knowledge of it, and its very existence. This objection has some initial plausibility, but when examined closely, lacks force. It contains two subarguments. The first involves assertion: the unstated assumption is that, without full confidence, one cannot assert anything. This unstated assumption is false. To assert, knowledge is not necessary—we do not even need total belief. Belief beyond reasonable doubt is sufficient, where the level depends on context (again, see Stanley (2005) or Davis et al. (2007) for more discussion). In any case, the objection depends on the particular skeptical scenario chosen above, which did in fact call into question everything about the world. But it is easy enough to change the scenario in such a way that we limit its application to the case at hand. Here is an instance. I give only the English version for readability.

(31) The street is wet. [But you may have a brain tumor that causes all streets to look wet, even though they are not. You cannot be sure if the street is truly wet or not.] It rained-Evid$_{inf}$.

This new scenario only calls into question the speaker's knowledge of street wetness. The rest of the world remains untouched. Nonetheless, speakers are reluctant to use evidentials in scenarios like these as well. I conclude that the apparent flaw in the test is only apparent, and that evidence for evidentials—in Japanese at least—must be knowledge.

For Japanese, then, evidence for evidentials must be knowledge. I do not know if this is the case for other languages—but I suspect that it is. Indeed, I would be very surprised if it was not. It would be very interesting to see whether all languages put the same conditions on what can served as evidence for their evidentials. Here, I think, is a second potential evidential universal, statable as follows.

(U2) *All evidentials require that their evidence be knowledge.*

I find this universal as plausible as (U1), if not more so. Of course, here again more research is needed to determine whether this universal is correct or not. However, I hope that I have demonstrated that an examination of the nature of evidence and how it interacts with evidentiality can provide interesting results in the study of the semantics of evidentials.

6. Conclusions and Directions

The main aim of this paper was to find evidential universals through the examination of the nature of evidence. This direction of research was sparked by the observation that the semantic behavior of evidentials varies a great deal across languages, enough that (I do not see how) any formal system can capture them all in a non-stipulative manner.[19] This line yielded the following two proposed universals:

(U1) *All evidentials make use of the judge parameter; all evidentials are shiftable.*

(U2) *All evidentials require that their evidence be knowledge.*

Both look plausible, and I believe both to be correct. Clearly, however, we are generalizing from a small sample. A great deal more research is needed on the evidential systems of the world's languages to determine if these generalizations hold up over the full range of evidential systems.

I take this paper to have one final moral. Research in formal semantics has had substantial success over the past few decades in helping us understand the semantic behavior of natural language. Much of this success can be put at the door of the use of formal systems. For the purposes of theoretical linguistics, one important thing about formal research is that it requires us to be explicit about what we are doing, to define our terms, to make sure the derivations really go through. I suggested at the beginning of the paper that much formal research on evidentials has missed an opportunity just by not doing so: by taking the notion of evidence as a primitive, a chance to understand how evidentials really work semantically has been—on one level—not taken. I hope the present paper has served in part to fill this gap. But the larger lesson is that we, as formal semanticists, should not be satisfied by working with primitive concepts we are not able to define.

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[19] Stipulative treatments are possible, of course.

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Examining the Mirative and Nonliteral Uses of Evidentials*

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1. Introduction

This paper presents an analysis of how evidentiality contributes to both the mirative and metaphorical interpretations of sentences. The connection between evidentiality and mirativity has received some attention in the literature, particularly in various language grammars and typological studies, yet the category of mirativity has still not found a place within any theory of meaning. In a nutshell, mirativity refers to the grammatical marking of a proposition as representing information which is new and perhaps surprising to the speaker (DeLancey 1997, 2001). A mirative interpretation is associated with the evidential *n̓akw* in the Tsimshianic language, Gitksan (1):

(1) Gitksan

a. *bagw* *n̓idiit*
arrive.PL 3pl
"They've arrived."

b. ***n̓akw**=hl* *bagw=diit*
EVID=CND arrive.PL=3pl
"They must've arrived!"
"Looks like they've arrived!"

Under its evidential reading, the use of *n̓akw* means the speaker has indirect sensory evidence for a proposition, such as a truck parked in the driveway, or noise in the hallway.

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When a speaker witnesses an event, *n̓akw* can be used to express surprise at a situation, such as the unexpected arrival of guests at a party.

However, there is another pragmatic feature associated with *n̓akw*: in addition to its evidential and mirative uses, *n̓akw* has a metaphorical use. Consider a context where the speaker is watching a baseball game. The star batter on the speaker's favourite team keeps missing the ball and striking out, jeopardizing the outcome of the game. Out of exasperation, the speaker exclaims:

(2) *n̓akw=hl* *sins-t*
EVID=CND blind-3sg
"He must be blind!"
"Is he blind or something?"
"Looks like he's blind!"

This is a nonliteral use of *n̓akw*: the speaker is not asserting that the batter is literally blind, rather, they are drawing attention to the poor performance of the batter by attributing his missing the ball as a result of blindness. Whereas there is an established tradition of research on metaphor in literary studies, philosophy, and linguistics, its connection to evidentiality has not been previously explored in much detail. There is suggestive evidence from a variety of languages that there is a connection between the nonliteral uses of miratives and evidentials. This can be observed even in the translations of the Gitksan example in (2), which would also be appropriate nonliteral statements in English in this context.

Cross-linguistically, there is a robust connection between evidentiality and mirativity (DeLancey1997, 2001; Aikhenvald 2004). A classic example of mirativity comes from Turkish, where the evidential suffix *-mIş* can be used to indicate surprise, in addition to its evidential meaning (Aksu-Koç & Slobin 1986):

(3) Turkish (Aksu-Koç & Slobin 1986: 159)

a. *Kemal* *gel-di*
Kemal come-PAST
"Kemal came."

b. *Kemal* ***gel-miş***
Kemal came-MIR/EVID
"Kemal came."

Aksu-Koç & Slobin (1986: 159) report two interpretations of *-miş* in (3)b.[1] The first interpretation involves indirect evidence: the speaker sees Kemal's coat hanging in the hallway, but hasn't yet seen Kemal. Thus, the speaker infers the presence of Kemal from this evidence. The second interpretation involves the speaker's surprise at Kemal's arrival: the speaker hears someone approach, opens the door, and sees Kemal – a totally unexpected visitor. The use of the evidential *-miş* in this context signals the mirative:

[1] See also Stott et al. in this volume for more discussion of *-mIş*.

a speaker's immediate experience of an event does not correlate well with the speaker's expectations. Aksu-Koç & Slobin note that the evidential suffix *-mIş* can also express degrees of metaphorical or "feigned surprise" (1986: 163). Example (4) can be used to convey doubful scorn on someone you know hates exercise:

(4) Turkish (Aksu-Koç & Slobin 1986: 163)

her *gün* *koş-uyor-**muş***
every day run-PRES-EVID
"(It is said that) he jogs every day."

Here the nonliteral interpretation is more subtle, and more sarcastic in intent. Also in English we see the link between evidentiality and nonliteral interpretations in how evidential verbs such as *see* can be used in the following context in (5) (see also Gilmour et al, this volume):

(5) "I see you're working on your project." (nonliteral/evidential)

Context: Your daughter is only allowed to use the computer on the weekends. However, there is an assignment due at school, and she asks to use the computer on a weeknight to finish it. You give her permission, but when you come home, you see her playing computer games instead of working on her project. (Example adapted from Gilmour et al., this volume)

However, a survey of mirativity across languages shows how mirative interpretations can project not only from evidentials (including aspect), but from a wide variety of syntactic and morphological constructions, discourse particles, information structure marking such as intonation, and different speech acts. Hare (Athapaskan) has a lexical item which encode mirativity. In example (6), the mirative marker *lõ* encodes a speaker's surprise that Mary is working on hides:

(6) (DeLancey 2001: 376)

Mary *ewé'* *ghálayeda* ***lõ***
Mary work.3sg.subj.IMPERF MIR
"Mary is working on hides."

Even language-internally, a quick survey of how mirativity is conveyed in English reveals a wide variety of ways of how one can express surprise when a friend unexpectedly shows up at a party:

(7) *You made it!*
I don't believe you made it!
Looks like you made it!
That must be you!
Wow, you're here!
Is that really you?!

That can't be who I think it is!
etc.

There are a number of leading questions that come out of the observations above. The first involves examing the notion of mirativity as a natural linguistic class. Why are lexical evidentials used in conveying mirativity as in Gitksan and Turkish, yet in other languages such as Hare mirativity is encoded lexically on its own? How is mirativity or distributed across a variety of seemingly unrelated constructions, as in English in (7)? Is there are systematic connection between evidentiality and metaphor? Are there any emprical generalizations that can draw these features of mirativity and metaphor together, and can this be approached in a compositional way?

This paper addresses these questions by examining evidentiality as the semantic and pragmatic drivers of mirativity, the constructions and morphemes mirativity is associated with, and its source in the psychological orientation of a speaker to evidence and events. In all of its manifestations, mirativity is shown to be linked the semantics and pragmatics of evidentiality.

From here, steps are taken towards a formal account of mirativity as a pragmatic phenomenon: mirativity operates at the speech act level, and does not contribute to the truth conditional meaning of a sentence. In a nutshell, what distinguishes a mirative statement from a non-mirative statement in an example such as (1) is implicature. Languages divide the labour of expressing of mirativity into two familiar types of implicature:

(8) (i.) *Conversational implicature:* evidential expressions (aspect, lexical evidentials) have a mirative interpretation as the result of a Quantity implicature.

(ii.) *Conventional implicature:* mirativity is lexicalized, and thus mostly independent of evidentiality.

The main claim is that in all languages, mirativity is the result of implicature. Mirativity conversationally or conventionally implicates a speaker's surprise or unprepared mental state at an unexpected turn of events. In languages such as Turkish, Gitksan and Georgian, mirativity is parasitic on evidentiality. When evidentials are used in certain contexts, specifically, where a speaker witnesses an event, a mirative meaning is conversationally implicated. In other languages such as Hare, Dargwa and Chechen (discussed in §4), mirative meaning is formally detached from evidentiality, although it is still dependent on it. Because these languages have morphology dedicated to mirative meaning, mirativity is conventionally implicated.

In a statement of the form EV(p), where p is the proposition associated with the evidential (EV), a speaker cannot know for certain p is in fact true.[2] If a speaker knows p is true, then we expect Gricean considerations to ensure that a speaker assert p, and not EV(p). A mirative statement results when a speaker knows EV(p) is in fact true. Under this view, a mirative statement doesn't assert something new because p is already a part of the common ground, and this is what results in implicature.

[2]This is not the true of all evidentials. For example, in Cuzco Quechua a speaker may use the direct evidential *-mi* if they know p is true (Faller 2002).

This will then serve as a foundation for the examination of metaphorical interpretations as expressed through evidentiality.[3] The flipside of mirativity with regards to the truth value of *p* is the use of an evidential in a metaphorical statement, which arises when a speaker knows EV(p) is in fact false. I take a fairly standard approach to analyzing the nonliteral uses of evidentials, such as the Gitksan example in (2). For example, upon uttering (2), the speaker literally says that 'he must be blind', something he knows is is false. Thus, the speaker is flouting the maxim of Quality ("do not say what you believe to be false"). What the speaker is doing is asserting (2) in order to implicate that the batter is performing counter to expectations, or that the batter has the attributes of blindness.

This forms a three-way formal system for the pragmatic use of an evidential, as give in (9):

(9) (i.) In asserting EV(p), the Speaker does not know if *p* is true or false: *Evidential without any implicated meaning*

(ii.) In asserting EV(p), the Speaker knows *p* is true: *mirativity as Quantity implicature*

(iii.) In asserting EV(p), the Speaker knows *p* is false: *metaphor as Quality implicature*

This bears directly on the status of mirativity as a natural linguistic class, and the debate within the literature as to whether or not mirativity is a separate semantic category, or simply an extension of evidentiality (cf. DeLancey 1997; 2001). One of the outcomes of this analysis is a unified treatment of mirativity: its effects are derived from other components of the grammar in a predictable way through implicature. This analysis also predicts a relation between mirativity and metaphor based on the speaker's knowledge of the truth or falseness of *p*.

The next section examines in detail the meanings and sources of mirativity and its systematic relation to evidentiality. The results of this are divided into two sections: in §3 a formal pragmatic analysis is presented of how mirativity is conversationally implicated, and in §4 how mirativity is still connected to evidentiality, yet mirative meaning has been conventionalized. §4 turns to the nonliteral uses of evidentials in examing the effect of an evidential statement when the speaker knows the embedded proposition is false. §5 concludes.

2. Approaching the Category of Mirativity

Although descriptions of the mirative have appeared in various language grammars and in the typological literature, discussions of mirativity as a cross-linguistic phenomenon usually begin with DeLancey (1997; 2001), who defines mirativity as marking information which is 'new to the speaker', or more specifically:

[3]The features of metaphor and their study are numerous and complex. My intention here is not to offer an account of metaphor in general or argue for a particular approach to metaphor, but only to explore the link between evidentials and metaphorical interpretations.

> [Mirativity] marks both statements based on inference and statements based on direct experience for which the speaker had no psychological preparation, and in some languages hearsay data as well. What these apparently disparate data sources have in common ... is that the proposition is one which is new to the speaker, not yet integrated into his overall picture of the world.
>
> (DeLancey 1997: 35-36)

Mirativity covers semantic dimensions variously described as 'non-expected' information (Egerod & Hansson 1974), information for which the speaker is 'not prepared' (Slobin & Aksu 1982), 'immediate meaning' (Nichols 1986), and 'new knowledge' (DeLancey 1986; and see 2001: 369 for other references). Dickenson (2000: 379) refines the definition of mirativity to include the speaker's immediate experience of an event: if the event does not correlate well with a speaker's expectations, the proposition coding the event receives special marking.[4] However the 'mirative' (and the related 'admirative') include not only expressions of newly emerged evidence, but often also inferences based on such evidence (Friedman 2003; Aikhenvald 2004: 195-215 for an overview).

What these descriptions from various languages and studies suggest is that mirativity, as a conceptual category at least, may be universal: it is a plausible claim that all languages have the means to encode an event or state as occurring outside normal expectations. In order to deepen our understanding of mirativity, and to draw these descriptions together into a more cohesive and focussed picture, it is useful to examine the systematic relationship mirativity has with the better understood categories of evidentiality and epistemic modality. Mirativity forms a conceptual natural class with evidentiality and epistemic modality as these three categories express something about a speaker's physical, psychological and temporal orientation to events and states (cf. Dickenson 2000; DeLancey 2001: 379). The summary in (10) outlines this connection:

(10) (i.) *Epistemic modality marking:* encodes the speaker's attitude towards the proposition in terms of certainty or probability.

(ii.) *Evidential marking:* encodes the source of the speaker's knowledge.

(iii.) *Mirative marking:* encodes the relationship between the proposition and the speaker's overall expectations and assumptions in a given context.

We can examine the various possible links between modality, evidentiality, and mirativity, each in turn.

2.1 Epistemic Modality and Evidentiality

Current research has shown a formal link between epistemic modality marking and evidential marking: in some languages, evidentials are a specialized type of epistemic modal:

[4] Dickenson (2000: 379) also notes another construal of mirativity based on the speaker's past experiences of similar situations and his general knowledge, based on physical interactions or cultural and social norms. I won't be discussing this occurence of the mirative, as I believe the this construal still reduces to a speaker's unprepared state of mind at the time of utterance.

they are semantic operators that contribute to the truth conditions of a proposition (Izvorski 1997; Faller 2002; Matthewson et al 2007; McCready and Ogata 2007; Rullmann et al 2009; Peterson 2010).[5] We can find this kind of conflation between evidentiality and certainty in the epistemic modal system of English, such as the 'must have' construction, as in example (11):

(11) "I must've cut my hand."
Context: You're preparing bait for fishing and you notice blood on the rocks at your feet.

Epistemic modal are identified by Matthewson et al (2007), Rullmann et al (2009), in St'át'imcets (Salish). They analyze lexical evidentials are in fact individual, specialized epistemic modals. In their approach, the individual evidential/modals lexically specify different kinds of contexts. This is achieved through a presupposition which restricts the contexts where a speaker has a specific kind of evidence. Gitksan possesses this kind of evidential modal: in (12) the the use of the modal enclitic *=ima* presupposes that a speaker have indirect evidence for a statement:

(12) *k̲ots-i-n=ima=hl* *'on-n*
cut-TR-2=MODAL=CND hand-2sg
"You might've/must've cut your hand."

2.2 Evidentiality and Mirativity

The primary function of an evidential is to give a speaker a way of talking about events they haven't personally seen, heard, or otherwise taken part in. In the Gitksan example in (13), a the evidential *n̓akw* is used to encode that a speaker has sensory evidence for an event that they have not witnessed directly:

(13) Gitksan

n̓akw=hl *se-hon-(t)=s* *Bob*
EVID=CND CAUS-fish-3=CND Bob
"Bob must be smoking fish"
"Looks like Bob is smoking fish"

Context (sensory evidence): You get to Bob's place and you can smell or see smoke.

At an intuitive level, an event that is witnessed is more certain than one that occurs sight unseen, and an event that is witnessed from beginning to end is less surprising than one that is only inferred or deduced from its results (Dickenson 2000). If we adjust the context slightly to include not only the sensory evidence, but the speaker actually *witnessing*

[5]This same research has shown that in other languages evidential meanings are not a semantic phenomenon (i.e. they are not propositional operators), rather, they operate at the pragmatic level, and thus are characterized as illocutionary operators.

the event of Bob smoking fish, (13) is still felicitous. However, (13) carries an additional meaning: the speaker is surprised or otherwise unprepared for the fact that Bob is smoking fish. This additional meaning of an evidential characterizes the mirative use of an evidential, and illustrates the notion of the 'unprepared mind' (DeLancey 1997): an evidential event is may be percieved to be out of one's control, unexpected, and thus surprising to the speaker if they either experience that event, or come into contact with the results of the event.

However, the distinction between witnessing the event and witnessing the results of the event can be subtle. We saw in the introduction how the the inferential evidential suffix *-mIş* in example (3) has the same effect as *n̓akw* in Gitksan in conveying both evidentiality and mirativity. In example (14), both *n̓akw* and *-mIş* have an evidential meaning when the speaker infers they cut themselves upon observing blood at their feet. When they observe their cut hand, the mirative meaning emerges: the speaker didn't actually witness the event of cutting, but the results of the event are nonetheless surprising to the speaker:

(14) a. Gitksan

n̓akw=n *k̲ots-(t)=hl* *'on-n*
MIR/EVID=1sg cut-3sg=CND hand-1sg
"I must've cut my hand."
"I see I cut my hand."

b. Turkish

el-im-i *kes-miş-im*
hand-1sg.poss-ACC cut-MIR/EVID-1sg
"I must've cut my hand."

Inferential: There is blood at your feet.
Mirative: You see the cut on your hand.

In Gitksan, if a speaker witnesses the actual event of cutting, they can still use a non-evidential statement which would lack a mirative effect. It is only in the context where the speaker uses *n̓akw* when a plain assertion would also be felicitous, that the mirative meaning emerges.

There is also another angle of meaning. The event(s) leading to the cut hand in (14) were likely inadvertent. This implies a lack of involvement or control on the part of the speaker, thus they react with surprise at the outcome. Example (15) also shows this, where a speaker could comment to a mother at the conclusion of her daughter's piano recital:

(15) Turkish (Aksu-Koç and Slobin 1986: 162)

kiz-iniz	*çok*	*iyi*	*piyano*	*çal-iyor-muş*
daughter-2pl.poss	very	good	piano	play-PRES-MIR/EVID

"Your daughter plays the piano very well."

The speaker directly witnessed the entire event of piano playing, but indicates using *-mIş* that he was not psychologically prepared for the high quality of the performance. In addition to its evidential properties, Slobin and Aksu (1982: 196) describe *-mIş* as representing an experience for which the speaker had no 'premonitory awareness' . When *-mIş* occurs with a first person subject, it indicates lack of conscious awareness on the part of the speaker, not simply lack of speaker involvement.

The extended meaning of an evidential to convey a sense of surprise also presents us with a potential contradiction: the use of *n̓akw* when the speaker actually witnesses the event they have evidence for in (13), would appear to undermine its evidential meaning: Gricean considerations would compel a speaker to simply assert "Bob is smoking fish" if the speaker did indeed witness the event of Bob smoking fish. However, we can draw these two interpretations of *n̓akw* together if we view this in terms of distancing: whereas evidentiality indicates *physical* distancing from an event, mirativity meaning includes indicates *psychological* distancing (Dickenson 2000). In some languages these are marked separately (this is discussed §2.4) but in Gitksan and Turkish and many other languages, evidentiality and mirativity are encoded by the evidential markers of the the language.

In languages that do not have lexical evidentials, evidential meanings can arise through the use of the perfect aspect. In a nutshell, the perfect describes a completed event in the past relative to the moment of utterance, but which has lasting consequences perceptible at the time of speech. Comrie (1976: 110) "the semantic similarity . . . between perfect and inferential lies in the fact that both categories present an event not in itself, but via its results." This can be observed in many languages such as Bulgarian, Georgian and Bagvalal, where the 'perfect of evidentiality' (glossed as 'PE') has an indirect evidential interpretation in addition to its aspectual one:

(16) Bulgarian (Izvorski 1997: 228)

Maria	*celunala*	*Ivan*
Maria	kissed.PE	Ivan

PERFECT = "Maria kissed Ivan."
PE = "Maria apparently kissed Ivan."

(17) Georgian (Topadze 2007)

teat'r-ši *bevri* *xalx-i* *q'opil-a*
theatre-in many people-NOM be.PERF-3sg
PERFECT = "There were many people in the theatre."
PE = "As it seems, there were many people in the theatre."
Context: Someone told me about it / In inferred it from the many cars parked outside

Because of the evidential interpretation of the perfect in these languages, it is not surprising that we find a mirative use of the perfect as well. In Bagvalal, the aspectual auxilliary *ek$_\circ$'a* carries a mirative meaning:

(18) Bagvalal (Tatevosov 2001)

di-č' *as* *b-uk'a-b-o* *ek$_\circ$'a!*
1.sg.OBL-CONT money N-be-N-CONV AUX.PRS
"(I see) I have money!"

Context: The speaker looks into his desk and finds 100 rubles there; he had completely forgotten about this money being there.

(19) *ali-r* *butuna* *ẽšа-m-o* *ek$_\circ$'a!*
Ali-ERG hat put.on-N-CONV AUX.PRS
"Ali has put on the hat!"
Context: The speaker watches Ali trying to put on the hat. At last Ali succeeds.

English also lacks lexical evidentials, although a mirative meaning can be attributed to evidential verbs when these are used in the context of witnessing the actual event. Example (20) uses the same context as the Gitksan example in (13) with *n̓akw*: evidential verbs such as *looks like* and *see* are felicitous when the speaker observes the event embedded under the evidential verb. This expresses the mirative:[6]

(20) "**Looks like** Bob is smoking fish!"
"I **see** Bob is smoking fish!"

[6]Intonation is another way to express mirativity in English, and may overlay the evidential statements in (20). A 'surprise' intonation is how a plain assertion such as "Bob is smoking fish!" can register mirativity. Nonetheless, the sentences in (20) can still express the unexpected or unprepared psychological state of the speaker at witnessing Bob smoking fish, although usually with the support of intonation.

2.3 Mirativity and Epistemic Modality

There is also a relation between epistemic modality marking and mirativity. As with evidential-marked miratives, a mirative reading of an epistemic modal in English is mostly clearly obtained where a speaker is surprised at the results of a previous event. In the context given in example (21), a mirative interpretation can be expressed using either the strong epistemic modal *must* in (i.), or a plain assertion in (ii.). A mirative interpretation is less felicitous with the weak epistemic modal *might*, as in (iii.):

(21) (i.) "I must've fallen asleep!"

(ii.) ? "I fell asleep!"

(iii.) #"I might've fallen asleep!"

Context: Said upon awakening over one's books after a long night studying (context adapted from Aksu-Koç & Slobin 1986: 160)

It is beyond the scope of this paper to examine in more detail the mirative use of epistemic modals in languages such as English, as I will be limiting myself to the relationship between evidentiality and mirativity, as described in the previous subsection. However, there are two points worth making. The first point regards the use of modal force: in (21), the strong modal *must* is used to convey mirativity over both the weaker modal *might* and a plain assertion. Because modals don't overtly encode an evidence source/type, they may reveal something different of the nature of mirativity than we find with evidentials. It seems natural that, in encoding a speaker's state of surprise, the 'strongest' lexical item would be used. However, there are other distinctions to be found: mirativity is not exclusive to strong modals. In example (22), the weaker modal *might* is used to convey a speaker's unprepared state, not upon encountering any kind of evidence as in (21), but at the possibility of winning:

(22) (i.) "I might've won!"

(ii.) # "I must've won!"

(iii.) # "I won!"

Context: Your husband tell you that he thinks your lucky numbers came up on the weekly lotto.

This is entirely expected, as when a speaker is surprised at a possibility, a possibility modal is naturally. However, intonation is carrying the mirative contribution in (22), as the possibility is actually part of the proposition a speaker is surprised at. This is different from example (21), where the proposition a speaker is surprised at is the plain one without any modal. It is in those cases where the strong modal must be used for the mirative.

Secondly, a mirative use of an epistemic modal in English is infelicitous in a context where the speaker actually witnesses the event, as in (23):

(23) (i.) "You're here!"
(ii.) # "You must be here!"
(iii.) # "You might be here!"
Context: A friend unexpectedly shows up a party.

This restriction likely follows from the fact that epistemic modals are propositional operators (refs.) This would also predict that evidential modals, such as those in St'át'imcets in §2.1 cannot be used miratively. This is in fact the case in Gitksan with the modal evidential *=ima* in example (24), which cannot be used if the speaker witnesses the event umbedded under it:

(24) *#kots-i-n=ima=hl 'on-n*
cut-TR-2=MODAL=CND hand-2sg
"You might've/must've cut your hand."

Context: Your friend is showing you how to cook something, and while watching them you see them accidentally cut themself.

The lack of mirativity in the modals in (**??**) and (24) is derived in their status as propositional operators. However, in (22) the proposition a speaker is surprised at is the plain one with a weak modal. This shows that if one is really surprised at a necessity statement, *must* would be felicitous in a mirative. As in (22), if you see some evidence that you've won, for example, if there is a person walking towards you holding out the trophy, then you 'I must've won!' would be felicitous. However, it is not the modal that's conveying mirativity, but the intonation.

2.4 Lexical Mirativity

In §2.2 above it was shown that languages in which these evidential and mirative meanings are conflated on the evidential system in many languages. However, there are languages in which evidentiality and mirativity are encoded independently by different lexical items. Both Hare (Athapaskan) and Chechen have lexical items which encode mirativity. In example (25), the mirative marker *lõ* encodes a speaker's surprise that Mary is working on hides. As with the evidential-miratives, (25) can be uttered when while the speaker actually observes Mary working on the hides:

(25) (DeLancey 2001)

Mary ewé' ghálayeda ***lõ***
Mary work.3sg.subj.IMPERF MIR
"Mary is working on hides."

In example (26), Chechen has both an evidential meaning as contributed by the perfect, and a separate suffix for encoding surprise:

(26) Chechen (Molochieva 2007)

a. *Zaara j-iena*
Zara j-come.PERF
"Zara has come."

b. *Zaara j-iena-**q***
Zara j-come.PERF-MIR
"Zara has come!" (I didn't expect her to come!)

Based on evidence from Hare, and other languages, DeLancey (2001) argues that mirativity must be recognized as a distinct semantic and grammatical category. In section §4, an analysis of lexical miratives is presented that claims the kinds of mirative particles in Hare and Chechen are not directly linked to the lexical evidential system as they are in Gitksan, but nonetheless maintain an link to evidentiality through the perfect and imperfective aspect constructions they appear in.

2.5 In sum

These observations and analyses can be drawn together into one generalizaton regarding evidentiality: mirative statements rest squarely upon the distinction between witnessed and non-witnessed events. A mirative statement is felicitous both in contexts where a speaker is reacting with surprise at witnessing the actual event itself embedded under the evidential (cf. (13)), or witnessing the result of some prior event (cf. (14)). This mirative effect is found with both lexical evidentials, and evidentiality that is projected from the prefect. In languages that have both evidentiality and mirative markers (i.e. Hare), this still generalization holds: the only difference is that mirativity is encoded separately when a speaker witnesses the event marked by the evidential.

The next section presents a pragmatic treatment of mirative meaning that not only brings together the various observations outlined above, but also treats mirativity as a unified phenomenon, whether as part of an evidential system, or lexicalized on its own.

3. The Mirative as Conversational Implicature

In this section I work through an analysis that shows mirativity is a pragmatic phenomenon involving implicature. More specifically, when a speaker makes a mirative statement, they are flouting the Maxim of Quantity, the two parts of which are given in (27):

(27) *Maxim of Quantity* (Grice 1989)

(i.) Make your contribution as informative as is required for the current purposes of the exchange.

(ii.) Do not make your contribution more informative than is required.

The central claim here is that what is interpreted as mirativity – a sense of surprise, and/or dealing with new and unexpected information – is the result of the flouting of Quantity, specifically, the part (ii.) of the maxim. A simple example illustrating mirativity as a Quantity implicature can be found in a context where John is standing in the doorway and Gwen says "You're here!". While this statement is true, literally speaking, our intuition tells us that it does not contribute to the discourse in any meaningful way, since we can assume that everyone in the immediate vincinity is well aware of John's presence. This is the first indication that "You're here!" is in violation of Quantity. At this point, John in this context must find some alternative meaning to Gwen's statement in order to maintain the assumption of cooperation.[7] Let us assume that John knows that Gwen is aware that what she said violates Quantity (by making a contribution more informative than required), and assuming that Gwen is cooperative, John concludes that Gwen must be expressing something beyond the statement "You're here!". In attempting to attribute an alternative meaning to this statement, John concludes that his appearance is unexpected and perhaps surprising to Gwen. What is notable is that mirative statement violate (**??**)(ii.): in our scenario involving Gwen's surprise at John's arrival by making the assertion "You're here!", we can assume that it is obvious to both Gwen and John that John knows that John is in fact there (and possible anyone else in the immediate vincinity).

In Gitksan, a simple statement, such as example (28), does not have a mirative meaning. In the given context, the speaker is in full control of the circumstances, and thus carrying no sense of unexpectedness or surprise.

(28) *witxw=t* *John*
arrive=PND John
"John's here."

Context: Calling out to your mother in the other room.
NON-MIRATIVE

The use of the evidential *n̓akw* carries with it the presupposition that the speaker has sensory evidence for a *n̓akw*-assertion (Peterson 2010). In order for the sentence in (29) to be felictous, a speaker must have some kind of sensory evidence available to them in the context, in this case, a pick-up in the driveway:

(29) ***n̓akw=hl*** *witxw=t* *John*
EVID=CND arrive=PND John
"John must be here"
"Looks like John's here"

PRESUPPOSITION: The speaker has indirect sensory evidence of John's presence (i.e. his pick-up in the driveway; you can hear loud music playing inside his house).
ASSERTION: John is here.
NON-MIRATIVE

[7] An interesting aspect to explore is whether this statement is directed at John or more generally to anyone in the vincinity.

There is also nothing inherently mirative about (29): as in (28), we assume the speaker is also making an informative contribution to the common ground; they have visual evidence from which they can infer the presence of John. However, *n̓akw* takes on a mirative meaning in example (30):

(30) ***n̓akw**=hl* *witxw=t* *John*
EVID=CND arrive=PND John
"John's here!"
"Look who's here!"
"I see John's here!"

PRESUPPOSITION: The speaker has indirect sensory evidence (John is standing in the doorway; his pick-up in the driveway; you can hear loud music playing inside his house).
ASSERTION: John is here.
MIRATIVE

As in (29), the use of *n̓akw* in (30) is felicitous because the speaker has sensory evidence for the assertion they're making: John standing in the doorway. The key question here is: what determines the mirative from the non-mirative uses of *n̓akw*? In order to answer this question, it is worth carefully breaking down the circumstances around (29) and (30) in terms of the propositions that make up the common ground, or the set of facts the speakers agree on for the purposes of conversation.

Imagine a common ground made up of the following propositions in (31):

(31) CG = {the proposition that John's pick-up is in the driveway; the proposition that there is loud music playing inside his house; etc...}

Starting with example (29), a speaker, faced with the visual evidence of a pick up in the driveway, makes the *n̓akw*-claim inferring that John is here, reflected in the various translations of *n̓akw* involving sensory verbs (i.e. *look*, *see*). Consider now the context in which John is standing in the doorway. The common ground in this case would already contain the proposition that John is here, as in (32)(i.). The *n̓akw*-assertion in (30) is felicitous in this context: a speaker has visual evidence for the claim that John is here (as he is standing right in front of her), however, because this proposition is already a member of the common ground, as shown in the (32):

(32) CG = {**the proposition that John is standing in the doorway**; the proposition that John's pick-up is in the driveway; the proposition that there is loud music playing inside his house; etc...}

The *n̓akw* statement in (30) is making a contribution to the discourse that is uninformative. Under a Gricean view, (30) is *too* informative, and thus Quantity is flouted. This is the core of the mirative implicature, which can be calculated as follows:

(33) (i.) This information expressed by the proposition is relevant to the context, and the speaker has (sensory) evidence for the proposition's truth.

(ii.) A cooperative speaker generally does not make additional, redundant statements that all the discourse participants already pragmatically presuppose.

(iii.) The speaker must be conversationally implicating that they were previously unaware of this fact, and its discovery possibly counters their expectations.

The notion of 'informative' in the Gricean sense in (27) warrants closer examination. What's actually happening when someone makes a mirative statement is that they are flouting (27) by making an apparently redundant or uninformative statement, which is made non-redundant/informative once we calculate the implicature, as in (33).

In the Stalnakerian sense mirative statements are uninformative – nothing new is added to the common ground (Stalnaker 2002). Mirative statements always make explicit some proposition that is already pragmatically presupposed, as in (32). This in turn drives the Gricean effect: the hearer flouts Quantity in making a statement that is too informative, as the mirative/evidential-marked proposition was already assumed to be a shared belief of the participants in the conversation, crucially including the speaker. This flout triggers implicature which a hearer interprets as one of surprise or unpreparedness on the part of the speaker.

However, there is the issue of the conversational intent of a mirative statement. In English at least, a mirative statement expects, or at least often receives, some explanation or comment. In the case of mirative "You're here!", a response could be "Yeah, I know you weren't expecting me but I decided to come after all."[8] Given this fact, mirative statements, or the implicature that conveys mirativity, can be targeted and reinforced – one of the predicted outcomes of an implicature analysis. Along those same lines, treating mirativity as implicature makes the prediction that you should be able to cancel the 'surprised' or 'unexpected meaning'. We can see this in the English example in (34): the speaker is exclaiming (34) in the context of actually seeing John standing in the doorway. This triggers the mirative implicature. The implicated surprise can be cancelled in (34)a., and the implicated unexpectedness of the speaker can be cancelled in (34)b.:[9]

(34) "Look who's here!"

a. "...not that I'm surprised or anything..."

b. "...not that I wasn't expecting you..."

Context: John is standing in the doorway.

This pragmatic treatment of mirativity applies straightforwardly to the Turkish evidential *-miş*, as introduced in example (3), repeated in (35). Recall that in addition to its evidential function, Aksu-Koç & Slobin (1986: 160) describe the function of *-miş* as representing an experience for which the speaker has no 'premonitory awareness'. This can correspond to both reportative and inferential interpretations, as well as expressing the mirative (Slobin & Aksu 1982: 187):

[8]Thanks to Lisa Matthewson for the example and pointing this out to me.

[9]There are likely more subtle implicated meanings behind a statement such as (34), such as happiness or sarcasm.

(35) Turkish

Ahmet *gel-**miş***
Ahmet came-MIR/EVID
"Ahmet came."

Inference: The speaker sees Ahmet's coat hanging in the hallway, but hasn't yet seen Ahmet.

Hearsay: The speaker has been told that Ahmet has arrived, but has not yet seen Ahmet.

MIRATIVE: The speaker hears someone approach, opens the door, and sees Ahmet – a totally unexpected visitor.

Under the mirativity-as-implicature analysis, when a speaker utters (35) in a discourse context that does not include an event of Kemal arriving, the hearer will interpret *-miş* as an evidential without implicature: the speaker is making an informative assertion that contributes to the common ground similar to the Gitksan exmaple (29). However, when a speaker utters (35), in a discourse context that includes actual witnessing of the event of Kemal's arrival, the mirative emerges through implicature: the speaker is making an apparently uninformative or redundant contribution to the discourse through flouting Quantity, and then the mirative implicature is calculated.

4. The Mirative as Conventional Implicature

What has been presented so far is only part of the mirative picture: it was shown above that there is a class of languages in which mirativity is 'linked' to evidentiality, such as in Turkish and Gitksan. However, a challenge is presented where languages lexically mark mirativity independently of evidentiality, as noted by DeLancey (1997, 2001). For example, de Reuse (2003: 81) identifies the particle *lą̄ą̄* in Western Apache (Athapaskan) in (36) as "more fundamentally a mirative than an inferential":

(36) Western Apache (de Reuse 2003: 81)

*K**ī̄ī*** *N**n̲ēē*** *itisgo* *nłt'ēēgo* *ch'idits'ad* ***lą̄ą̄!***
he Apache more 3sg.IMP.ASP.be.good=SUB sg.IMP.ASP.understand **MIR**
"He understands Apache better!"

The cognate of *lą̄ą̄* can be found in Hare *lõ* in example (37) (DeLancey 1997: 40), which also has primarily a mirative meaning that does not have any evidential function:

(37) Hare

ĩdõ ***lõ***
drink.2 **MIR**
"You're drinking!"[10]

[10]DeLancey leaves *lõ* unglossed – I've added the 'MIR' (mirative) gloss.

DeLancey (2001: 379) claims that languages such as Hare show that mirativity is coded independently of an evidential system. Thus, mirativity cannot be considered simply as a dependent subsystem or extension of evidentiality. In this section I maintain the claim that in all languages, mirativity is the result of a Quantity implicature. In mirative-evidential languages, this is the result of a conversational implicature – mirative meaning is simply an extra pragmatic effect that is parasitic on evidentials. However, in mirative-non-evidential languages such as Apache and Hare, the mirative meaning has become lexicalized, and is thus *conventionally* implicated. This analysis is supported by DeLancey's descrption that "the aspect of the context which licenses the particle *lõ* is not indirect perception but the sudden (direct) perception of an unexpected fact." (2001: 376). There are two important things I take from this description. First, that Hare also has evidential contexts of the aspectual kind as we saw in previous sections with the Bulgarian 'perfect of evidentiality'. Secondly, conventional mirativity still relies on this evidential context, plus the witnessing of the event itself.

In looking more closely at the particle *lõ* in Hare, it appears to have a very similar function as *n̓akw* in Gitksan, and *-miş* in Turkish in expressing a speaker's surprise at an event. However, unlike in Gitksan and Turkish, DeLancey claims that *lõ* functions independently of an evidential paradigm, and is a specialized morpheme the sole function of which is to express mirativity. This is based on the fact the *lõ* does not encode any evidence type, nor does it distinguish between indirect and direct perception. Example (38) shows the use of *lõ* in an inferential context, and example (39) clearly shows witnessing an event may be marked with *lõ*:

(38) *deshĩta* *yedaníyie* ***lõ***
bush be.smart.2sg.subj.IMPERF. MIR
"You're smart for the bush!"

(39) *heee,* *gúhde* *daweda!* *ch'ifi* *dachída* ***lõ***
hey, up.there SG.sit.3sg.IMPERF. guy sitting MIR
"Hey, he's sitting up there! The guy is sitting up there!"

However, *lõ* retains an evidential feel to it, and is similar to Gitksan *n̓akw* (cf. (30)), in that *lõ* can be translated as "I see...", as in example (40):

(40) *ewé'* *ghálayĩda* ***lõ***
work.2sg.subj.IMPERF. MIR
"I see you're working on hides."

Example (41) can be uttered in a context where the speaker had no previous knowledge of the situation: the speaker has just gone to Mary's house and found her working on a hide. As DeLancey describes it, (41) "is most likely to occur in a context where the speaker does have firsthand knowledge, but the information is entirely new and perhaps unexpected" (2001: 376):

(41) *Mary ewé' ghálayeda* ***lõ***
Mary work.3sg.subj.IMPERF MIR
"Mary is working on hides."

The relevant feature to track in these examples is the co-occurence of mirative *lõ* with the aspect of the clause: in the Hare examples above, *lõ* occurs with the imperfective form of the verb. We can observe the interaction between a lexical mirative and aspect in other languages. For example, in Dargwa (Tatevosov 2001: 454), mirativity is lexically marked independently of evidentiality, which is achieved through the perfect aspect:

(42) Non-mirative, inferring evidence:

du-l ka-b-iq-ub-li-da sīka
1sg-ERG PRF-N-kill.PFV-PST-CONV-1sg bear
"(I see) I killed the bear."

Context: The speaker is a good hunter. He sees a bear in the forest and fires. The bear cries loudly and runs away. The speaker, being sure that the bear is wounded and won't go far, follows him. Ten minutes later he finds the bear dead.

The mirative is marked by the suffix *-q'al*, which co-occurs with the perfect:

(43) Mirative, indirect evidence:

*du-l ka-b-iq-ub-li-da****-q'al*** *sīka*
1sg-ERG PRF-N-kill.PFV-PST-CONV-1sg-MIR bear
"(I see) I killed the bear!"

Context: The speaker went hunting for the first time. Suddenly he sees a bear and fires. The bear disappeared in the forest, but later the speaker finds the bear's carcass.

(44) Mirative, direct evidence:

*du-l ka-b-iq-ub-da****-q'al*** *sīka*
1sg-ERG PRF-N-kill.PFV-PST-1sg-MIR bear
"(I see) I killed the bear!"

Context: The speaker went hunting for the first time. Suddenly he sees a bear and fires. The bear falls down and dies.

The mirative in Chechen (Molochieva 2007) is expressed by the suffix *-q*, which does not appear to be dependent on evidentiality and can be combined with it.

(45) a. *Zaara j-iena*
Zara j-come.PERF
"Zara has come."

b. *Zaara j-iena-**q***
Zara j-come.PERF-MIR
"Zara has come!" (I didn't expect her to come!)

We saw in the previous section the association between a perfect construction and the inferential evidential interpretation it has (in languages which have the perfect of evidentiality, such as Bulgarian and Bagvalal). In many languages, an evidential interpretation follows from the inherent semantics of the perfect, which orients a completed event in the past relative to the moment of speech: the occurence of an event, which has lasting consequences perceptible at the time of speech, is known to the speaker only through perception of those lasting results (Comrie 1976; DeLancey, 2001). A speaker may be prepared, or expect an event on the basis of previous knowledge or perception of a chain of events leading up to it. A mirative interpretation is projected only when one witnesses the event itself or secondary evidence for it, and the speaker is unprepared for this. In languages that mark evidentiality through the perfect (i.e. Georgian), or lexically (i.e. Gitksan), sentences of the form EV(p) trigger the mirative implicature. We can take the imperfective in sentences such as (41) as having the same effect. The imperfective can be characterized as taking an inside view of an ongoing event; there is no indication regarding the completeness of the event, however its internal structure is relevant to the present discourse. As with the perfect, it is when the speaker witnesses this internal structure and is surprised by it, it receives special marking such as *lõ*. This both follows and is compatible with DeLancey's claims that the semantics of the imperfective – like the perfect – is what licenses the felicity of mirativity of particles such as *lõ*, and that the mirative, by definition, is restricted to contexts in which the speaker's discovery of the reported fact is relatively recent: "once one has known something for a certain length of time, it can no longer be considered new or unexpected (2001: 378). The use of the perfect and the imperfective enforce this temporal restriction on the mirative.[11]

Given this aspectual restriction, the mirative markers shown in the various languages above do not encode any evidential distinctions. The evidential interpretations associated with these sentences follows from the semantics of the perfect or imperfective, and the mirative markers are specialized for conveying mirativity. Because these mirative markers are independent from evidentiality, I suggest that have conventionalized mirative meaning, and thus are a conventional implicature.

4.1 At-Issue meaning and conventional implicature

Conversational implicatures are based on an addressee's assumption that the speaker is following the conversational maxims or at least the cooperative principle. When a speaker uses a sentence of the form EV(p) when they know p to be true, the flout the maxim of Quantity, thus conversationally implicating their surprise or unpreparedness for event denoted by p. Thus, a mirative expression relies on the context of use of an EV(p) sentence.

[11] So far, I have not come accross examples of a mirative particle used non-perfect/perfective sentences in any of the cited languages. A prediction of this analysis is that they would be infelicitous.

Conventional implicatures differ in that the implicated meaning has a stable association with a particular linguistic expression: they are not subject to the conversational maxims nor the cooperative principle. Conventional implicatures have largely idiosyncratic meanings, although pragmatic information can on specific occasions of use contribute to their interpretation (Potts 2005) All three of these languages use a mirative particle with the perfect or imperfective aspect, thus hinting that a mirative as conventional implicature still either relies on having an evidential context.

As a starting point, I take Potts' (2005) defininition of conventional implicatures as "primarily devices for situating the main clause in the web of information that comprises the discourse (p.2). A sentence with a conventional implicature comprises of two parts: *at-issue* (propositional) content of the utterance, and the conventionally implicated meaning that is added by a particular expression. Example of this are in (46) and (47):

(46) Lara is **still** studying.

AT-ISSUE: Lara is studying.
CONVENTIONAL IMPLICATURE (CI): Lara was studying earlier.

(47) **Even** Bart passed the test.

AT-ISSUE: Bart passed the test.
CI: Bart was among the least likely to pass the test.

The meanings of *still* and *yet* are implicated and not asserted, as they do not contribute to the truth-conditions of the sentence as a whole. Yet, their meanings are fixed to these words. Conventionally implicated meanings vary widely, and are often hard to characterize, but one common feature is that they reveal something of the attitude of the speaker towards the at-issue content. This can be seen in the use of honourifics in Japanese:

(48) Japanese (Potts and Kawahara 2004)

Sam-ga ***o-****warai-****ninat-****ta*
Sam-NOM **subj.HON**-laugh-**subj.HON**-PAST
"Sam laughed."

AT-ISSUE: Sam laughed.
CONVENTIONAL IMPLICATURE (CI): The speaker honours Sam

A CI analysis can be straightforwadly applied to the kinds of lexical miratives observed in the languages above. For example, the mirative particle *lõ* in Hare encodes the speaker's attitude of surprise at the at-issue content. This can be seen by comparing (49)a. with b.:

(49) Hare (DeLancey 2001: 375)

a. *júhye* *sa* *k'ínayeda*
hereabout bear sg.go.around.3sg.subj.PERF
"There was a bear walking around here."
AT-ISSUE: There was a bear walking around here.
CI: ∅

b. *júhye* *sa* *k'ínayeda* ***lõ***
hereabout bear sg.go.around.3sg.subj.PERF MIR
"I see there was a bear walking around here."
AT-ISSUE: There was a bear walking around here.
CI: I'm surprised to see that there was a bear walking around here.

We can see how a CI-mirative behaves independently of the evidential meaning conveyed by the perfect aspect in Dargwa. In comparing examples (50)a. and b., the mirative particle *-q'al* functions independently of the inferential evidence encoded in the perfect: in both examples the speaker has inferential evidence for having killed a bear, but b. is marked with *-q'al* which conventionally implicates a speaker's surprise at killing a bear. What is crucial is that (50)c. requires the CI-mirative *-q'al* in order to express mirativity, even when the at-issue content is witnessed:

(50) Dargwa

a. Non-mirative, indirect evidence (non-witnessed):

du-l *ka-b-iq-ub-li-da* *sīka*
1sg-ERG PRF-N-kill.PFV-PST-CONV-1sg bear
"(I see) I killed the bear."

AT-ISSUE: I killed a bear.
PRESUPPOSITION: There is inferential evidence that I killed a bear. (i.e. the bear's carcass) CI: ∅

b. Mirative, indirect evidence (non-witnessed):

du-l *ka-b-iq-ub-li-da**-q'al*** *sīka*
1sg-ERG PRF-N-kill.PFV-PST-CONV-1sg-MIR bear
"(I see) I killed the bear!"

AT-ISSUE: I killed a bear.
PRESUPPOSITION: There is inferential evidence that I killed a bear. (i.e. the bear's carcass)
CI: I'm surprised to see that I killed a bear.

c. Mirative, direct evidence (witnessed):

du-l *ka-b-iq-ub-da-**q'al*** *sīka*
1sg-ERG PRF-N-kill.PFV-PST-1sg-MIR bear
"(I see) I killed the bear!"

AT-ISSUE: There was a bear walking around here.
PRESUPPOSITION: There is inferential evidence that I killed a bear. (i.e. the bear's carcass)
CI: I'm surprised to see that I killed a bear

Dargwa differs from languages such as Bagvalal (cf. (18)) where the perfect of evidentiality alone can conversationally implicate mirativity when it is used in a context where a speaker witnesses the at-issue content.

This analysis mirativity as conventional implicature makes a number of empircal predictions that haven't been addressed yet. First, this analysis predicts that the perfect in languages such as Hare cannot be used miratively, and require a specialized mirative particle in order for it to have a mirative interpretation. Secondly, that the perfect in these languages would be infelicitous if used when the speaker witnesses the event, since it can't have a mirative meaning. We also predict that in a language such as Dargwa a mirative marker is infelicitous in sentences that lack an evidential. Additionally, what happens in languages which also have lexical evidentials? A prediction would be that a lexical evidential should also be able to license the conventional implicature. There is suggestive evidence for this in Qiang. LaPolla (2003) describes two other morphemes that co-occur with the inferential evidential *-k*: the adverbial particle *-ɳi* which marks surprise and/or disbelief; and the emphatic marker *-wa*:

(51) Qiang (LaPolla 2003:6)

a. *me:* *de-ʑi-**k-wɑ***
rain OR-release-**INFER-EMPHATIC**
"It's raining!"

b. *the:* *ʑdʑyta:* *ɦa-qə-**k-ɳi***
3sg chengdu.LOC OR-go-**INFER-ADVERB**
"He went to Chengdu."

4.2 In sum so far

The two previous sections sketched out a pragmatic approach to mirativity. The main empirical claim was that the expression of mirativity is associated with evidential constructions (evidentials, aspect). The main theoretical claim is that mirativity is the result of a speaker flouting the Maxim of Quantity, the implicature which results is what actually carries the mirative meaning. §3 showed how mirativity is conflated with the evidential system, and when a speaker makes an EV(p) statement when they know p is true, mirativity is conversationally implicated. §4 showed how mirativity is separately encoded from

the evidential system, but still relies on it. Because mirative meaning is fixed to these morphemes, it is conventionally implicated.

The next section turns to the third part of the theoretical typology presented in (9): when a speaker makes an EV(p) statement when they knows p is false, a nonliteral meaning is implicated.

5. Nonliteral uses of evidentials

Aksu-Koç & Slobin note that, in some contexts, evidentiality can be pragmatically extended, expressing degrees of metaphorical or "feigned surprise" (1986: 163).

(52) *her gün koş-uyor-**muş***
every day run-PRES-MIR/EVID
"(It is said that) he jogs every day."
Context: Used to convey doubful scorn on someone you know hates exercise.

The Gitksan evidential *n̓akw* also has a nonliteral (metaphorical) interpretation in addition to its evidential meaning:

(53) *n̓akw=hl sins-t*
EVID=CND blind-3
"He must be blind!"
"Is he blind or something?"
Context: You're watching a baseball game. The star batter on the speaker's favourite team keeps missing the ball and striking out, jeopardizing the outcome of the game.

(54) *n̓akw=hl maalu-(t)=hl smax tust*
EVID=CND crazy-3=CND bear that
"Is that bear crazy or something?"
"That bear must be crazy!"
Context: You're watching a bear wandering around the streets in the village during broad daylight.

There are two things to track in an example such as (53): (i.) The first is that the assertion that the batter is blind is obviously not true in reality: the function of such a statement is to express dissatisfaction at the batter's performance, and (ii.) the speaker is relying on the sensory evidence presupposition, or what they perceive to be sensory evidence for supporting such an assertion in the first place: the fact that the batter keeps missing the ball. In this section, it is shown that these are *nonliteral* uses of evidentials. This is the third part of the theoretical typology introduced in (9): In asserting EV(p), the speaker knows p is false. This involves metaphorical use of an evidential such as *n̓akw*, which is treated below as a Quality implicature.

Broadly speaking, metaphorical statements are made to implicate a realtionship of resemblance or analogy. In interpreting a metaphorical statment, a hearer is required to match or contrast certain properties of a *topic* with a *vehicle*, and then to identify a subset

of properties which they have in common (e.g. Tversky 1977; Ortony 1979a). This is easiest to see when we attrribute the properties of animals to humans. For example, a metaphorical statement such 'my room mate is a pig' would involve considering those properties the hearer has stored as part of his knowledge of the speaker's roomate and of pigs, and selecting a subset of these properties which the speaker's room mate and pigs share, for example the properties of 'being filthy', 'being messy', 'not being hygienic', 'smelling funny' etc. These properties are taken to form the grounds for interpretation (Glucksberg et al. 1997a; example adapted from Morena 2004).

Metaphor has been approached and analyzed in various ways in the literature. However, for the present purposes, I will adopt a fairly standard, Gricean model of metaphor (see Camp 2003 for details, although see Fernández 2007 for an overview and objections to this). Metaphor is a kind of conversational implicature that arises from a violation of Quality. For example, there is a literal reading of blindness in (53) to which a truth condition can be assigned. This serves as an input to some inferential schema that generates a secondary, figurative reading (Nunberg 2004: 345). It may be possible to attribute these interpretations to the flouting of the Maxim of Quality. In (53) the speaker is literally asserting that he must be blind, something the speaker knows to be false, thus potentially violating cooperativity. However, what the speaker implicates with (53) is that the batter is playing *as if* he was blind, and thus the speaker registers his dissatisfaction at his performance. This re-establishes the situation and serves to show that his behaviour is cooperative: the speaker has made the false assetion 'he must be blind' to convey the implicated meaning.

However, it's not quite as simple as this: something new must be added to the common ground. A Quality implicature typically involves a speaker asserting the opposite to what is true, usually resulting in a sarcastic statement, as may be the case in the Turkish example above. However, the assertion "The batter is blind" would amount to implicating that the speaker is *not* blind, which is obviously true in (53), thus violating the condition that $c \cap \phi$ express something that is not already established. The function of *ńakw*-asserted metaphorical statements such as (53) is instead to invite the attention of the hearer to the bad playing, which actually constitutes the sensory evidence (visual in this case) for making a *ńakw*-assertion.

(55) *ńakw=hl* *sins-t*
EVID=CND blind-3
"He must be blind!"
"Is he blind or something?"

PRESUPPOSITION: The speaker has visual evidence (the batter keeps missing the ball).
ASSERTION: The batter is blind.
IMPLICATURE: The batter is performing poorly.

(56) *n̓akw=hl* *maalu-(t)=hl* *smax* *tust*
EVID=CND crazy-3=CND bear that
"Is that bear crazy or something?"
"That bear must be crazy!"

PRESUPPOSITION: The speaker has visual evidence (watching a bear wandering around the village).
ASSERTION: The bear is crazy.
IMPLICATURE: This is unusual behaviour for a bear; it could be dangerous (to the people and bear).

Context: You're watching a bear wandering around the streets in the village during broad daylight.

In both of these contexts, a speaker is witnessing an event that is not only surprising, but also countering their (or perhaps common) expectations regarding the role of a batter at a baseball game, or the behaviour of bears. Also as with mirative expressions, these interpretations rely on the coincidence of sensory evidence perceived at the time of utterance.

We see the same kind of effects with evidentiality in English. English does not have a dedicated system of evidentials, rather, they are achieved paraphrastically through 'sensory' verbs (Gisborne 1996):

(57) a. "He *sounds* foreign"
b. "He *looks* ill"
c. "I *see* you don't believe me"

Example (58) is an unmarked, literal use of the verb *see* along with an appropriate context:

(58) "I see you're working on your project." (literal/evidential)
Context: You come home after work and notice your daughter doing her homework. You want to encourage her.

Likewise, sensory verbs in English can also be used to flout Quality. Consider the context in (59):

(59) "I see you're working on your project." (nonliteral/evidential)
Context: Your daughter is only allowed to use the computer on the weekends. However, there is a assignment due at school, and she asks to use the computer on a weeknight to finish it. You give her permission, but when you come home, you see her playing computer games instead of working on her project.[12]

This nonliteral interpretation of *see* relies on evidential meaning of the verb: example (59) without the matrix verb *see* does not allow a nonliteral reading in this context:

[12]Contexts adapted from Gilmour et al., this volume

(60) #"You're working on your project." (nonliteral)

The same observation holds in Gitksan: plain assertions such as *sins n̓it* "You're blind." only have a literal interpretation. Additionally, the nonliteral use of *see* cannot be embedded without losing this interpretation, confirming a standard test for pragmatic effects such as this:[13]

(61) #"I didn't see that you're working on your homework." (nonliteral)

What the examples above crucially show is how context and evidence play a vital role for the pragmatic uses *n̓akw* and evidential verbs in English: both *see* and *n̓akw* rely on evidence in some specific utterance context in order to have a nonliteral interpretation.

In order to trigger a Quality implicature (your displeasure at a batter's performance) you have to actually witness the poor playing. This amounts to a speaker having sensory evidence for an assertion, and the evidential *n̓akw* must be used. This relates to an observation that can be made in English using the same baseball context in (55). In example (62), the strong *must* is more felicitous than the weaker *might* in expressing a nonliteral meaning:

(62) "He must be blind." (nonliteral)
#"He might be blind." (nonliteral)

I claim that the use of *must* over *might* metaphorically is rooted in the speaker's certainty level about the proposition expressed. Within the possible worlds semantics for modals, variation in certainty levels correlates with variation in the strength of the quantification over possible worlds. Thus, a speaker who uses an existential modal is less certain about the truth of the embedded proposition than a speaker who uses a universal modal. This is related to the evidential use of *must* in conveying mirativity, as was shown in example (11) above.[14] However, it is not the type of evidence that determines this, as metaphorical uses of *must* are also felicitous in indirect evidence contexts:

(63) "She must be crazy!" (nonliteral)
#"She might be crazy!" (nonliteral)
Context: Your sister told you she just gave away all her lottery winnings.

A Quality implicature is supported by the strong degree of certainty, and this certainty is most effectively reinforced by evidence (rather than speculation). Metaphorical interpretations of *n̓akw* are only felicitous if the common ground provides sensory evidence that is interpretable by both the speaker and hearer. It is these evidence contexts that increase a speaker's certainty, which in turn ideally supports the emphatic effect of Quality implicatures of this type. In non-evidential languages such as English, it is predicted that the the universal modal will be used in conveying the implicature.

[13] Testing negation with *n̓akw* is a little trickier, as *n̓akw* cannot embed under negation for independent syntactic reasons. See Peterson 2010 for details.

[14] At this point it may be too strong to claim there is a robust and systematic connection between mirativity and metaphor. However, these data suggest that further research on this would determine if there is a such a connection or not.

6. Summary and Future Directions

There are several typological and theoretical studies devoted to meaning of evidentiality, especially in the area of testing their propositional and pragmatic status. This paper looks in a slightly different direction, and contributes to the research on evidentiality by examining two uses of evidentials in expressing mirativity and metaphor. An analysis was presented that analyzes mirativity as pragmatic phenomenon that is the result of implicature. Specifically, it is context in which an evidential statement of the form $\text{EV}(p)$ is made determines its interpretations as either a statement of inference, or as statement of mirativity or metaphor. When a speaker knows or believes *p* is true (by witnessing the event), mirativity is implicated. When they know or believe *p* is false, a nonliteral meaning is implicated.

However, there are many empirical stones left unturned, and I will only highlight a few. A starting place would be mirativity in English. It was shown above that mirativity is implicated in the modal system in English. However, intonation is what plays a crucial role in conveying the mirative effect. A logical starting place would be to treat intonational mirativity as conventional implicature. However, given the complexities of intonation and how it interacts with other meanings such as focus, a very systematic and focussed study would be required to test intonational mirativity, its interaction with modality, and the felicity of these combinations when an event is witnessed.

Dickenson (2000) discusses in detail mirative marking in Tsafiki (Barbacoan). Mirativity markers in Tsafiki encode the degree to which the information coded in the proposition is *congruent* with the speaker's general knowledge. In (64)a., the speaker knows he has money, which is marked with the congruent marker *-yo-*. In b. the speaker suddenly discovers he has some money he did not think he had; this is marked with the incongruent marker *-i-*:

(64) Tsafiki (Dickenson 2000: 401)

a. *kala* *ta-**yo**-e*
money have-**CONGR**-DECL
"I have money."

b. *kala* *ta-**i**-e*
money have-**INCONGR**-DECL
"I have money!"

There are two notable features in Tsafiki that relate to the discussion and analysis above: first, mirativity is lexically encoded separately from evidentiality; secondly mirative markers are both obligatory and occur in paradigmatic distribution, as seen in (64). This offers an ideal testing ground for examining a conventional implicature analysis of mirativity, as nothing excludes the obligatoriness of mirative marking, nor it's separation from the encoding of evidentiality. In this case, we would need to focus attention on the kinds of contexts mirative-marked statements are used in which could potentially license a conventional implicature.

There is also an interesting link between mirativity and exclamativity. Exclamatives express the emotional attitude of a speaker towards the situation that a sentence or nominal denotes, as in "What a nice guy he is!", or "The strange things that he says!" Portner & Zanuttini (2004) suggest exclamative sentences may be a type of mirativity. They develop an interface theory of exclamatives, as they involve not only the semantics of questions, but also the pragmatic force of an utterance (Portner & Zanuttini 2000, 2004). This is used to capture the various interpretations of exclamatives such as 'a sense of surprise' or 'unexpectedness', but which are question-like statements. Can mirativity, or some sub-type of it be reduced to exclamativity and illocutionary force? Portner & Zanuttini suggest, however, that this may only be partly the case, as "the connection to exclamatives more generally only seems relevant in the use of the mirative marker having to do with unexpected information, not indicating inferential [evidentiality]". This bears directly on the empirical claim made here that mirative meaning is always licenses by evidentiality, and opens the door to examining mirativity as illocutionary force..

Given the diverse range of constructions that mirativity and metaphor can be associated with, this paper presents a set of theoretical tools capable of testing the core link between evidentiality and how it is used in context to project these two kinds of meanings. This would ideally serve as a foundation for more focussed, language-specific studies of mirative and nonliteral meaning in evidential languages. As these emerge in the literature, we may get a more complete and systematic picture of mirativity and its status a natural class of meaning which can cover this diverse collection of constructions.

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The Evidential Shift of WANT[*]

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1. Introduction

Modal verbs are commonly known to be polyfunctional[1] and their status, which is subject to crosslinguistic variation, is often said to be on a scale between auxiliary and full verbs (cf. e.g. Heine 1993, 1995). However, common criteria for the class of modal verbs[2] often do not apply to the volitionality-encoding modal verb WANT[3]: WANT[4] is syntactically peculiar, since it appears in a greater and more varied range of syntactic constructions than the other modal verbs like CAN or MUST (e.g. in control structures, as ECM verbs, with Small Clause complements etc.), and it is semantically peculiar, since it seems to have its own valency frame, including a volitional theta-role assigned to an animate and intentional external argument (cf. also Gerdts 1988, Fritz 2000). WANT, at least in those languages of the world that have such a verb, is often involved in grammaticalisation processes or shows phenomena of synchronic shift: WANT, which can be assumed to be closely connected to the basic modality of necessity, has a purely deontic, non-volitional reading (modal shift) in several constructions; WANT can also develop into a syntactic future auxiliary, as in Greek, Romanian and English (future shift), or into a deontic passive auxiliary, as in Sardinian and several Italian dialects (passive shift); furthermore, it can have an evidential interpretation in certain contexts, as is the case in some constructions specific to German (evidential shift). The following examples taken from Klein (1994: 174-175) illustrate the evidential shift, which will be the main topic of this paper:

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[1]Cf. Kratzer (1977, 1981, 1991), Palmer (2001), Reis (2001), Abraham (2005) etc.

[2]Cf. e.g. those listed in Öhlschläger (1989: 4), Heine (1993: 72), Zifonun et al. (1997: 1253).

[3]This was observed by Calbert (1975: 5-6), Zifonun et al. (1997: 1254f) among others.

[4]WANT, in this paper, stands for the prototypical volitional verb that is instantiated as *want* in English, *volere* in Italian, *wollen* in German, *will* in Old English, *querer* in Spanish etc.

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(1) a. Arnim will *morgen* arbeiten.
A. WANT-3s tomorrow work
'A. wants to work tomorrow.'
b. Arnim will *morgen* gearbeitet haben.
A. WANT-3s tomorrow worked have
'A. wants to have worked (by) tomorrow.'

(2) a. *Arnim will *gestern* arbeiten.
A. WANT-3s yesterday work
'A. wants to work yesterday.'
b. Arnim will *gestern* gearbeitet haben.
A. WANT-3s yesterday worked have
'A. maintains that he worked yesterday.'

The examples in (1) represent control structures with a volitional subject of WANT controlling the subject of the embedded infinitive. Since there is an explicit future reference situation in the embedded infinitive, expressed by the adverb *morgen* (the reference time R is to be situated AFTER the speech time S[5]), there is no ambiguity with respect to the interpretation of *wollen*, since its canonical interpretation is future-oriented (cf. section 3.3). Thus, in (1)a, we get a future interpretation (S_R) for the embedded sentence even if it is a present infinitive (R,E)[6], whereas in (1)b we get a 'past projected into the future' reading (S_R • E_R), since there is an perfect infinitive (E_R). The situation is different in (2): here, the explicit reference situation of the embedded infinitive refers to a past reference situation (hence R BEFORE S) which as such is incompatible with volitional modality and its future-oriented sense: The reference situation cannot lie in the past (R_S), coincide with E (R,E) and be future-oriented at the same time. Thus, (2)a is ungrammatical. However, (2)b is grammatical, but with a different interpretation to (1)b: The volitionality of *wollen* has shifted to an evidential reading, maintaining the time-situational interpretation of the perfect infinitive (E_R) and the explicit time adverbial (R_S), but losing the future-orientation.[7]

The aim of this article is to have a closer look at this evidential shift mainly in the context of the semantics of WANT. It is organised as follows: In the next section, some general observations with respect to evidentiality as a grammatical category are made and the evidential use of German *wollen* is classified. In section 3, the notion of volitionality and the volitional verb WANT are discussed. Section 4 is dedicated to different

[5]In what follows I refer to the system of temporal relations introduced by Reichenbach (1947) and elaborated by Vikner (1985), Giorgi & Pianesi (1997), with R, the reference situation, S, the speech situation (or, if not directly linked to discourse, the time-relational situation of a matrix clause, cf. Enç 1987), and E, the event situation; the underline shows the temporal ordering (BEFORE or AFTER), and a comma between the temporal relations expresses coincidence or inclusion (i.e. EQUALS); for a similar system representing two temporal-aspectual relations cf. also Demirdache & Uribe-Etchebarria (2000).

[6]There is an ambiguity in infinitival forms which allows "the infinitive to be construed as 'present' or 'future'" (Eide 2003: 129).

[7](2)b could, in principle, have a volitional reading in some very restricted and marked contexts, cf. Remberger (in press) for a more detailed analysis of the relation of volitionality and tense.

subchapters of the evidential shift of WANT, analysing the German data at issue and including an excursion to apparently similar data from Italian (and others). In this section, the question will also be raised of whether German *wollen*, in its evidential use, is simply another illocutionary verb like e.g. *behaupten* 'maintain'. Section 5 summarises and concludes this paper.

2. Evidentiality

The grammatical notion of evidentiality has recently been subject to lively debate, which has brought forth several definitions and raised several open questions. Evidentiality is usually defined as "a linguistic category whose primary meaning is source of information" (Aikhenvald 2004: 3) and its name stems from the "evidence a person has for making factual claims" (Anderson 1982: 273).

The main open question is whether evidentiality is a category on its own or whether it is just a subcategory belonging to the system of modality. In research literature, there are three approaches to this problem (cf. also Dendale & Tasmowski 2001: 341-242):

(3) a. *Evidentiality in a narrow sense* (e.g. Anderson 1982, Willett 1988, Aikhenvald 2004): the focus lies on the expression of the "information or sources of knowledge behind assertions" (Dendale et al. 2001: 340); if evidential marking results in an interpretation that reveals the speakers' (e.g. positive or negative) attitudes towards the evidentially marked proposition, this is purely a consequence of pragmatics and has nothing to do with grammatical epistemic modality.

b. *Evidentiality in the broad sense* (cf. Palmer 2001[8]): evidentiality is part of the system of (mainly) epistemic modality (or vice versa), since both characterise the "attitude of the speaker" ("attitudes about the epistemic status of information", Dendale et al. 2001: 340) towards the proposition encoded in an utterance.

c. *Overlapping of evidentiality and epistemicity*: this view is adopted especially in the subfield of inferential evidentiality, which might be easily interpreted as a type of epistemic modality (cf. van der Auwera & Pungian 1998: 86, following to Dendale et al. 2001: 242, and Plungian 2001: 354; also Palmer 2001).

Even if WANT is typically a modal verb, in its evidential use as exemplified in (2)b, it clearly encodes evidentiality in a narrow sense. It does not encode an attitude of the speaker towards the proposition encoded in the embedded infinitive (cf. also section 4.1), but it clearly indicates the fact that there is a source of information, in this case, an explicit one, namely the referent of the external argument of *wollen*. Sometimes, of course, the clear indication of a source of information results in an interpretation that

[8]Palmer (2001) treats evidentiality as a subsystem of modality, but he keeps evidential modal systems clearly distinct from epistemic modal systems.

might include a kind of disbelief or distance on the part of the speaker. However, such an interpretation results from purely pragmatic reasons: If a speaker explicitly encodes the source of information in a language which does not obligatorily need to encode it, this gives rise to the implicature on the part of the hearer that there is something behind it, otherwise the speaker would not have encoded the source of information in such an explicit way.

Although I will adopt the position that evidentiality is a grammatical category standing on its own, *wollen* is not taken to be the typical marker of evidentiality in German. Its main use is still that of a volitional modal verb. Following Aikhenvald (2004), an element whose main use lies in the expression of a lexical or functional meaning other than evidentiality is not a marker of evidentiality proper but one of the "evidential strategies" possible in this language. However, the evidential shift of WANT in German is not only pragmatic inference either, but it has been conventionalised and maybe also grammaticalised to a certain degree. Otherwise the same sentence as (2)b in Italian should be grammatical, which it is not (cf. section 4.6). Aikhenvald (2004) excludes the evidential use of *wollen* from the class of grammaticalised evidential markers since it doesn't satisfy her morpheme-based definition.[9] Others, whose definitions rely more on constructions than on morphemes, assert that German "has grammaticalized evidentiality" without necessarily having an "evidential 'system'" (Narrogs 2005: 385). Aikhenvalds definition of grammaticalisation thus seems to refer to the result of a grammaticalisation process, whereas the evidential use of *wollen* in German is probably at a stage of development between lexical element and fully grammaticalised (= auxiliary) element.

Based on the assumption that evidentiality is a category on its own, Willett (1988:57) has proposed three subtypes of evidentiality, i.e. a) direct evidentiality, based on first-hand sensory evidence, b) indirect evidentiality, based on second- and third-hand evidence (an equivalent of reportative evidence) and c) inferential evidentiality, i.e. evidentiality based on evidence by deduction or inference. In this system, the evidential *wollen*-construction in German clearly belongs to type b) since it encodes an indirect evidentiality, namely the reportative, hence second-hand evidence, but one where the source of information is always explicitly given by virtue of the external argument of the clause. The evidential use of *wollen* often is also called "quotative"[10] (cf. e.g. Diewald 1999).[11]

[9]Aikhenvald (2004) just mentions the evidential use of *wollen* and *sollen*. However, the interpretation that she gives of the German examples cannot be correct since she pairs the evidential use of *wollen* with the English modal *must*, cf. also the review by Narrog (2005).

[10]Plungian (2001:252), for example, has 'quotative' as a hypernym for "reported speech (presupposing a known author) vs. generalized, second-hand information (presupposing an unknown or non-definite 'anonymous' author) vs. tradition or common knowledge (where no personal author is invoked)." For Anderson (2001: 289) the hypernym is 'reportive' and includes four co-hyponyms, namely "hearsay", "general reputation", "myth and history" and "quotative (marginally an evidential)"; Palmer (2001) also sometimes distinguishes between 'quotative' ("indicates that the speaker regards what he has said to be something that everyone knows") and 'hearsay' ("indicates that the speaker was told the information given in the sentence by someone else, but has no evidence of its truth value") (cf. Palmer 2001: 37), but in general he adopts the labels 'Reported(2)', 'Reported(3)', 'Reported(gen)' (cf. Palmer

3. The Volitional Verb WANT

3.1 Volitional Modality

The modal relation: The basic values of modality following Kratzer (1977, 1981 – among others) are possibility and necessity. There are several reasons to assume that WANT encodes necessity: First, instances of WANT in the languages of the world (the ones that have such a modal verb) often are derived from a verb (or noun) of necessity. This, for example, is clearly the case for English *to want*, which derives from an Old Norse element meaning 'lacking' first, then 'to need', and which also in its today's use keeps this flavour of necessity. Second, there are several examples of the above-mentioned shift phenomena from volitionality to necessity, as the following instances from Italian, German, and Sardinian show:

(4) It. Ci vogliono tre uova per fare questa torta
there WANT-3p three eggs to make this cake
'One needs three eggs to make this cake.'

(5) Ger. Dieses Buch will gelesen werden.
this book WANT-3s read-pprt become-inf
'This book should be read.'

(6) Sard. Custa macchina cheret lavata.
this car WANT-3s washed-pprt.f.s
'This car needs to be washed.'[12]

These examples vary in construction, since (4) is an impersonal WANT + locative construction, (5) probably a raising structure, and (6) a WANT-passive; but they all have in common that they encode a modal meaning of pure necessity whereas volitionality is lost. On this ground, I will assume the basic modal meaning of WANT to be that of necessity (cf. also Calbert 1975: 36, fn. 32).

Some analyses of WANT attest that it carries a meaning of possibility in certain constructions (cf. e.g. Maché 2007); however, these meanings commonly come up in contexts of negation. If we interpret modal necessity as universal quantification over modalised worlds, whereas possibility is concerned with existential quantification, it becomes clear why there could be a kind of 'derived possibility' in the context of

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2001:41), a variation of Willett's (1988) terminological division of reportative evidence in 'second hand', 'third hand', and 'folklore'. Since the evidential interpretation of German *wollen* is clearly connected to the syntactic subject as an explicit source for the reportative evidence, it should be labelled 'Reported(2)' in Palmer's, i.e. 'second hand' evidence in Willett's terms.

[11]For a study of another type of "quotative" or "reportative" evidentiality marker in Romance, cf. Cruschina & Remberger (2008), where some of the general notions concerning evidentiality presented here are also discussed.

[12]Cf. also this parallel example from some American English varieties (cf. Murray & Simon 1999, as well as Remberger 2006):
(i) This car wants washed.

(especially implicitly dual) negation (cf. also Ehrich 2001: 156): 'It is necessary that p' then corresponds to 'It is not possible that not p' in the same way as '∀xP(x) ' corresponds to '¬∃x¬P(x)' (cf. Lohnstein 1996: 102; 249).[13]

The modal base: Besides the modal relations of necessity or possibility, established between the actual world and the modalised worlds, a further parameter or ingredient of modality (still following Kratzer 1977, 1981) is its modal base or its conversational background, i.e. the model of knowledge, obligations, norms, ideas, desires etc. against which the modal expression is evaluated. It is an open discussion how the modal base for WANT could be described: for some it is a bouletic model ('that what is wanted in w', cf. Kratzer 1981), in other words, a volitional modal base comprising what is desired or preferred in the actual world. For others, the model of a volitional expression is a doxastic[14] one (the 'doxastically accessible worlds for a', cf. von Fintel 1999:117; Heim 1992), or a model of 'the subject's belief' (Hacquard 2006), i.e. simply an epistemic model (Giannakidou 2007) concerning what, based on world knowledge, can be wanted. The second approach would mean somehow that volitional modality could be part of the system of epistemic modality. However, both an epistemic and a bouletic model for WANT have in common that there is a particular feature in WANT which links this modal base to the subject; this will be explained in the next paragraph.

The source of modality: Farkas (1992) introduced the notion of the 'individual anchor', i.e. an utterance-internal or external entity to which the modal base is connected (e.g. the speaker in epistemic interpretations). It is the individual anchor that plays an exceptional role in the case of WANT, since the individual anchor of the model of the actual as well as the future worlds introduced by WANT is the thematic 'subject', i.e. the external argument of WANT. This individual anchor clearly represents the source of

[13]The interpretation of possibility has been ascribed to WANT in constructions like the following:

(i)	Die	Tür	will	nicht	aufgehen.	
	the	door	WANT-3s	not	open	
	'The door doesn't open (but it should…).'					
(ii)	Diese	Idee	will	mir	nicht	gefallen.
	this	idea	WANT-3s	me	not	please
	'I don't really like this idea (also if I am expected to like it…).'					

The first construction obligatorily involves negation, and includes an adversative element (sometimes visible in expressions like *einfach nicht*, *aber nicht* and similar); the second construction does not need to appear in a negative context and always involves psych verbs, i.e. verbs with an experiencer argument that canonically appears in what can be called the subject position, also this experiencer is marked dative or accusative (quirky subjects). I cannot go into an analysis of these constructions here. For a possible interpretation, cf. Gergel & Hartmann (2009) and Maché (2007).

[14]Also following Giorgi & Pianesi (1997: 212) *want* has a doxastic modal base: „A verb such as *want* requires the subject to believe it possible for the embedded proposition to become true." Giorgi & Pianesi (1997: 266, fn. 24): "[...] *want* is similar to belief verbs in having a doxastic modal base [...]. It differs from them in that it has a non-null *bouletic* ordering source." However, I don't believe that *want* needs this belief of its subject as a prerequisite. As Quer (1998: 44, fn. 32) states, *believe* is a weak intensional verb, whereas *want* is a strong intensional verb: there can't be contradictory beliefs, but there can be contradictory intentions.

modality[15] (the first element of a modal relation following Kratzer[16]), which is not always easy to identify in other modal expressions. In the case of WANT, its subject orientation (cf. also Heine 1995) is obvious: WANT has its own volitional theta-role for an external argument, which must be animate and intentional[17]; furthermore, in the eventual case of an embedded infinitive, this argument has control properties.[18]

The goal of modality: The complement over which WANT takes scope (the second argument of a modal relation) is the goal of modality.[19] As Kratzer (1981) puts it, the function g included in WANT maps from possible worlds into sets of propositions constituting what is wanted by the individual referred to by the (logical) subject. Following Farkas (1992) it targets the 'set of bouletic alternatives anchored to the referent of the subjects' or, as Quer (198: 22) says, a 'set of propositions specifying the preferences of a in w' or a 'set of worlds that are compatible with the wishes of the individual'. The goal of the modality of WANT can consist in a proposition (a finite CP or a CP- or IP-infinitive), a predication (i.e. a Small Clause) or an entity (a DP). Shift phenomena can concern all kinds of complements.

3.2 Shift Phenomena

The interplay of the modal parameters introduced in 3.1 with other fields of grammar (tense, aspect, mood, polarity, lexical and syntactic argument structure, semantic selection etc.) leads to the polyfunctionality of modals mentioned above. As far as the shift-phenomena regarding WANT-constructions are concerned, several types of shift (first pragmatic, then conventionalised, until they end up in grammaticalisation and linguistic change) can result from these dynamics to escape incompatibility:

(7) a. shift of the modal relation, e.g. from necessity to possibility
b. shift of the modal base, e.g. from bouletic/doxastic to evidential

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[15]Cf. the "modal source" according to Calbert (1975); the "Modalfaktor" according to Bech (1949).

[16]I will not discuss the corresponding notion of an "ordering source" (cf. Kratzer 1991) here, since in the case of WANT in its canonical use, the source of modality is quite easy to identify. Nevertheless there might be a need to make a distinction between two modal bases, a bouletic and a doxastix one (cf. Heim 1992), but both of them, as said above, are connected to the subject of WANT.

[17]As far as the theta-role of the subject of WANT is concerned, this has been called an "agentive animate cause" (Calbert 1975: 16, 18, 22), an "agent" (Abraham 2005: 261), an "agent / cognizer" (Gerdts 1988), and the modality of WANT has been related to "agent-oriented modality" (Bybee, Perkins & Pagliuca 1994, Heine 1995). But if we observe how WANT behaves under the agentivity test following Cruse (1973), it results that the theta-role of WANT cannot be agentive, cf. (i):

(i) A: What did John do?
B: ?? He wanted to drink a beer.

It is more appropriate to call it an "experiencer" (Diewald 2000; Hacquardt 2006: 170), a "senser" (Verplaetse 2003: 159), a "bearer of an intentional attitude" (Doherty 1985: 120), or an "intentional force / force of will" (Copley 2002).

[18]Of course, control is not always given in infinitive constructions with WANT, cf. e.g. the English ECM-constructions with WANT, or the Sardinian personal and inflected infinitives (cf. Remberger 2005 for a phenomenology of WANT-constructions in Romance).

[19]Cf. Calbert (1975); the "Modalfeld" according to Bech (1949).

c. shift of the modal source, e.g. from the logical subject to the context
d. shift of the goal of modality, e.g. a proposition to an assertion

The evidential WANT-constructions discussed here may be concerned with (7)a, i.e. the shift of the modal relation, insofar as the modal meaning of volitionality is lost in favour of another, maybe not even modal, meaning (depending on the interpretation of evidentiality according to (3)a, b, or c). They also are concerned with the shift of the modal base, which becomes one of reported speech with an explicit indication of the source of information. Thus, there is no shift of the modal source to the context, since the subject orientation of WANT is maintained in the evidential construction. The goal of modality, however, is also shifted in the evidential use of WANT since it no longer refers to alternative worlds, but to a proposition that is asserted. Before moving on to discuss these shifting mechanisms in section 4, something else should be said on the future-orientation of WANT as mentioned above.

3.3 The Future-Orientation of WANT

It has been stated in literature that root modality is future-oriented, since modality involves quantification over a set of future worlds (e.g. Quer 1998: 22-25). Following Giorgi & Pianesi (1997: 212) WANT introduces "a non-realistic domain". Modals have also been called "pretime verbs" (cf. Klein 1994: 174); in their root interpretation, they are always "future projecting" (Eide 2003: 128). This predisposition of WANT has led to the well-known grammaticalisation process of WANT as a future marker, e.g. in Romanian, Greek, and also English (cf. also Heine & Kuteva 2000: 310-311). However, WANT can refer to an actual situation as well[20], cf. (8), even if this is not the usual or unmarked interpretation:[21]

(8) John wants to work where he works.

Thus, there is a future but possibly also a present reference in WANT. As Quer (1998:50) puts it, WANT does introduce a set of *non-anterior* rather than future alternative worlds. Or, according to Giannakidou, WANT is non-veridical, which means that neither the factivity of the alternative worlds contained in its complement nor the non-factivity is implied.[22]

[20]Cf. Klein (1994: 174): "After all, one can still want to do what one is doing already."

[21]Eide (2003: 128): "Thus, it is possible to utter *This door must be kept closed* in a situation where the door is already (kept) closed. However, the present situation is irrelevant for a root modal; its complement always refers to a future situation. This is a consequence of their semantics. A root modal denotes e.g. that a rational agent X requires/intends/wants/needs/permits Y to hold, where Y is a situation subsequent to the evaluation time of the root modal. A requirement/intention/will/need or permission cannot possibly influence on things that have already occurred. I.e. although I might have wanted my permitting John to have arrived before S to be able to alter the actual events taking place, this is not possible in reality (except in jocular contexts)."

[22]WANT is not factive but it must not necessarily be non-factive; as a desiderative it belongs to the group of predicates containing a non-veridical operator OP; that means that *OP p* does not imply *p*, cf. Giannakidou (2009) and Quer (1998). Thus, it also does not imply ¬*p*. Therefore, *WANT p* can, but does not have to, have a presuppositional reading of non-factivity ¬*p*.

Indeed, there are always two possible relations in which an embedded clause can be linked to the tense specification of a matrix modal clause (cf. Hornstein 1990, Klein 1994, Quer 1998, Eide 2003) and both can be made explicit[23] by the corresponding temporal adverbial:[24]

(9) a. E_m,R_e Anna will/muss/can *jetzt* einen Brief schreiben.
A. WANT/MUST/CAN now a letter write
'A wants to/must/can write a letter now.'

b. E_m_R_e Anna will/muss/can *morgen* einen Brief schreiben.
A. WANT/MUST/CAN tomorrow a letter write
'A wants to/must/can write a letter tomorrow.'

These two relations could also explain the two conversational backgrounds possibly introduced by WANT (cf. fn. 16): one (the epistemic or doxastic model) concerns what can actually be wanted in w, whereas the second (the bouletic model base) is what might be preferred in a future, irrealis, non-factive world.

3.4 The Characteristics of WANT

Summing up, the modal verb WANT in its canonical, unmarked use, i.e. that which yields a volitional interpretation, can be characterised as follows:

(10) The modality underlying volitionality is basically *necessity*.
(11) *Subject Linking*: The modal source of the modal base (the epistemic or bouletic model) introduced by WANT is linked to the external argument of WANT, an animate, intentional entity. A subject-oriented mental necessity results.
(12) WANT as a root modal is future-oriented, i.e. it introduces *non-anterior* alternative worlds.

If we look at the syntactic properties of the modal verb WANT + infinitive, the construction of interest here, it can be stated that this construction is biclausal with a matrix clause and a modalised embedded infinitive clause encoding a dependent proposition. The subject-linking property of the modality of WANT manifests itself syntactically in the control[25] property, by which the subject of WANT and the subject of the embedded infinitive proposition must be co-referent (but cf. fn. 18).

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[23]*Morgen*, 'tomorrow', and *jetzt*, 'now' are not relative time adverbials, but absolute ones, setting the reference situation in a direct relation to the speech situation; however, since the tense structure of the modal itself is the present tense, the reference situation here can be related to the event situation of the modal.

[24]Subscript *m* = *matrix*; subscript *e* = *embedded*.

[25]In German, however, *wollen* is different from other (subject) control verbs insofar as it does not introduce a *zu*-infinitive, as do other control verbs (coherent or not). Also Italian *volere* 'to want' is different from typical Italian control verbs since, on the one hand, it does not allow a complement clause introduced by *di* or *a*, and, on the other hand, it allows restructuring.

4. Evidential Shift

The evidential or quotative use of German *wollen* has often been compared to the epistemic interpretation of other modals in order to find a parallel in the behaviour of the class of modals. Doherty (1985), for example, treats the use of WANT exemplified in (2)b as one of the possible epistemic interpretations of modals in general. However, as exposed in section 2, the construction under discussion here clearly falls into the category of evidentiality marking, even if WANT still cannot be called an evidential proper but just an evidential strategy (i.e. the expansion of the use of a lexical or functional element to mark evidentiality in certain constructions). In this section, I will first show that there is no such epistemic shift for WANT (cf. 4.1), then a time-relational approach for the evidential reading of WANT will be proposed (cf. 4.2), the question of whether WANT is indeed a lexical illocutionary verb will be discussed (cf. 4.3), and an excursion into similar evidential, quotative or illocutionary uses of WANT in Italian and French will be offered (cf. 4.4).

4.1 No Epistemic Shift for WANT

That the use of WANT under discussion here is indeed evidential has been stated by several researchers (cf. e.g. Palmer 2001: 9, 15, Fagan 2001, Reis 2001: 289, Schenner 2007); nevertheless, the idea that WANT can be used as an epistemic is quite common (cf. Doherty 1985: 199f, Diewald 1993, 2000, Abraham 2001, Ehrich 2001). The parallel comes mainly from the fact that the shift from a volitional reading to an evidential reading is encountered in expressions with a tense structure quite similar to those that show a shift from other deontic modal readings to an epistemic reading, cf. the following examples:

(13) a. Hans muss *morgen* arbeiten.
H. MUST tomorrow work
'H. must work tomorrow.'
b. Hans muss *morgen* gearbeitet haben.
H. MUST tomorrow worked have
'H. must have worked (by) tomorrow.'

(14) a. *Hans muss *gestern* arbeiten.
H. MUST yesterday work
'H. must work yesterday.'
b. Hans muss *gestern* gearbeitet haben.
H. MUST yesterday worked have
'H. must have worked yesterday.'

As (13) and (14) show in comparison to (1) and (2), the epistemic shift in German (as in English and other languages) as well as the evidential use of WANT appear mainly when the embedded infinitive is in a compound tense. However, for both the WANT-construction and the constructions with other modals the observation is valid that, as soon

as there is a temporal adverbial that locates the reference situation in the future, a root interpretation is achieved. If there is a perfect infinitive (i.e. one with the second time relation $E_e\_R_e$) in the complement of the modal, a basic ambiguity for the tense interpretation of the construction arises. Examples like the following, where no temporal adverbial is present, are ambiguous:

(15) Anna will ihr Ziel erreicht haben.
Anna WANT-3s her goal reached have
a. 'Anna wants to have reached her goal.'
b. 'Anna claims to have reached her goal.'

Another parallel between the epistemic use of modals and the evidential use of WANT is the following:

(16) *Anna will gestern gearbeitet haben und B. will es auch.
Anna WANT-3s yesterday worked have and B. WANT-3s it too
'Anna claims to have worked yesterday and B., too.'

(17) *Anna muss gestern gearbeitet haben und B. muss es auch.
Anna MUST-3s yesterday worked have and B. MUST-3s it too
'Anna must have worked yesterday and B., too.'

The complement embedded by the modal verb cannot be pronominalised by an *es*-form, neither in the evidential use in (16), nor in the epistemic use in (17) (cf. also Gergel & Hartmann 2009). However, this does not mean that both readings are epistemic; it just means that they both are non-root/non-deontic, which is clearly the case. As for the parallel behaviour concerning the tense structure of the constructions at issue, this can be traced back to the future orientation (or non-anteriority, in Quer's 1998 terms) of root modals in general. Thus the feature common to the evidential WANT-constructions as well as the modal constructions with an epistemic meaning is that both of them are not root/deontic, but something else. However, the common ground ends here (cf. also the analysis proposed in Remberger in press). Evidential shift has little to do with the epistemic shift of other modals if we examine the constructions in which they can appear. Several of the examples Diewald (1993: 225, 228) declared ungrammatical for the epistemic use of modals would hold instead for the evidential use of *wollen*. E.g. evidential *wollen* can be substantivised and can take part in word formation (cf. (18)), it can be the infinitive complement to another evidential modal (cf. (19)), it can also appear in the company of an epistemic modal proper (cf. (20)), and it can be used in the past[26] (cf. (21)):

[26]If *wollen* itself is in a compound tense no evidential interpretation is given, cf. (i); compound tenses in both the matrix and the infinitive clause give a very weird result, cf. (ii), which becomes slightly better if the matrix clause is put in the conditional, cf. (iii); however, no evidential reading results:

(i) A. hat arbeiten wollen.
A. has work WANT-inf/part

(ii) ???A. hat gearbeitet haben wollen.
A. has worked have-inf WANT-inf/part

(18) Das Etwas-Gesehen-Haben-Wollen alleine nützt nichts.
the something-seen-HAVE-WANT-inf alone serves nothing
'The sole claim to have seen something is of no use.'

(19) Er soll die Frau nie zuvor gesehen haben wollen.[27]
he SHELL-3s the woman never before seen have WANT-inf/part
'He is claimed to maintain never to have seen this woman before.'

(20) Er wird die Frau wohl nie zuvor gesehen haben wollen.
he WILL-3s the woman probably never before seen have WANT-inf/part
'He probably will maintain never to have seen this woman before.'

(21) Vor drei Tagen wollte er die Frau noch nie zuvor gesehen haben.
before three days WANT-3s he the woman still never before seen have
'Three days ago he still maintained never to have seen this woman before.'

All these constructions would be inappropriate for an epistemic modal.[28] Therefore the evidential use of *wollen* cannot be epistemic. The subject-linking property of WANT is still maintained in its evidential use since the sentence subject is the source of evidence.[29] Now, if there is an epistemic interpretation of an expression like (2)b, in the sense that the speaker might have doubts on the truth value of p, this is an effect of pragmatics, i.e. an conversational implicature: Since German is a language where declarative sentences are not obligatorily marked for evidentiality (for other languages with this marking, cf. Aikhenwald 2004, Faller 2006), an explicit marking of a situation p as reported gives rise to the implicature that the speaker does not believe that p. However, this implicature can also be neutralised, cf. (22):

(iii) A. hätte gearbeitet haben wollen.
A. had-cond worked have-inf WANT-inf/part

[27]However, (i) is not possible:

(i) *Er will die Frau nie zuvor gesehen haben sollen.
he is WANT-3s the woman never before seen have SHELL-inf/part
'He maintains never to have been claimed to have seen this woman before.'

[28]Abraham (2001: 11) states that modals cannot be interpreted in their epistemic reading in other than declarative sentences; but cf. (i):

(i) Will er den Verdächtigen tatsächlich gesehen haben?
WILL-3 he the suspect indeed seen have
'Does he really maintain that he has seen the suspect?'

However, Abrahams statement must be mistaken since also other modals can keep their epistemic reading in interrogatives, cf. (i):

(ii) Muss er denn reich sein, nur weil er teure Kleidung trägt?
MUST-3 he then rich be only because he expensive clothes wears
'Does it really mean that he is rich only because he wears expensive clothes?'

[29]The source of evidence or the new point of view is certainly not the "deictic origo" as claimed by Diewald (1993: 219) and Diewald (1999).

(22) Er will noch nie in Spanien gewesen sein und das glaube ich ihm.
he WANT-3s yet never in Spain been be and this believe I him
'He maintains never to have been to Spain and I believe him.'

Besides, the speaker's attitude, of course, can never be interpreted in the sense that he or she has doubts about the fact that the sentence subject claims p. WANT cannot function as a speaker-oriented epistemic marker here, but as a propositional marker of evidentiality, as has been also shown by Faller (2006) and Schenner (2007) for embedded sentences with evidential WANT, where the subject-oriented evidential meaning is maintained, even without direct anchoring to the speech act.

4.2 A Time-Relational Approach

As previously stated, when there is an explicit time adverbial referring to posterior embedded reference time, like *bis zum 18. Juli* in (23), the deontic (volitional) reading of WANT is not changed:

(23) *Bis zum 18. Juli* will der Landesverband mindestens 20000 Unterschriften gesammelt haben. (COSMAS: bmp)
until the 18. July WANT-3s the regional-association at-least 20000 signatures collected have
'By July 18th the regional association wants to have collected at least 20000 signatures.'

But also an evidential reading can be disambiguated by temporal adverbials, either by one encoding anteriority or simultaneity (cf. *jetzt* in (24)) or by evidentiality marking adverbials proper as, for example, *angeblich* 'allegedly' (cf. (25)):

(24) F. T. (50) von der Universität Viterbo will die Antwort *jetzt* in Geheimarchiven des Vatikans entdeckt haben. (COSMAS: bmp)
F. T. (50) from the university of Viterbo WANT-3s the answer now in secret-archives of-the Vatican discovered have
'F. T. from the University of Viterbo now claims to have found the answer in secret archives of the Vatican.'

(25) ...P. aus Hellersdorf, der *angeblich* nichts gesehen haben will, … (COSMAS: bmp)
P. from H. who allegedly nothing seen have WANTS
'... P. from H., who claims not to have seen anything, allegedly,...'

However, without a disambiguating adverbial the unmarked reading is the evidential one. A short corpus analysis (COSMAS, *Berliner Morgenpost* 1997-1999) also

shows that of 244 instances of WANT + perfect infinitive, only 40 have a volitional reading.[30]

Taking into account the observations made so far, the evidential shift of WANT can be formalized as follows (with □ as the necessity operator and the colon as a quotative marker):

(26) Evidential Shift (first version)
a. *$S,R_m \circ R_m,E_m \Box E_m,\ R_e \circ E_e\ R_e$ (necessity, M(subj), coincidence, perfectivity)
b. $S,R_m \circ R_m,E_m \Box E_m\_\ R_e \circ E_e\ R_e$ (necessity, M(subj), posteriority, perfectivity)
c. $S,R_m \circ R_m,E_m : E_m,\ R_e \circ E_e\ R_e$ (evidential, M(subj), coincidence, perfectivity)

The time relations expressed in (26)a are not compatible with a deontic reading of necessity, since a deontic interpretation of a modal is future-oriented or, at least, non-anterior, and the combination of coincidence with perfectivity inhibits a non-anterior reading (but see the marked contexts given in Remberger in press). Thus the only possible deontic interpretation for a construction with *wollen* + infinitive is the one given in (26)b, where the first time relation of the embedded infinitive has been reinterpreted as future indicating. The result is a past in the future, which is compatible with deontic modality. However, the evidential shift stems from the representation given in (26)a, and it works as follows: The model introduced by *wollen* is not one of future preferred worlds, but one of the actual world. Since the evaluation time of the proposition coincides with the event time of WANT, not the truth of the proposition with respect to future worlds compatible with the subject's desires is evaluated, but the subject's assertion of the proposition itself with respect to the actual world. That is, the temporal relations remain the same, the subject linking is still valid, but what has changed is the nature of the modal base. The world introduced by the proposition encoded in the infinitive clause is not necessary for the subject as far as a doxastic/bouletic model is concerned, but it is necessary for the subject with respect to its truth-value. Thus *wollen* becomes a marker of evidentiality since, by focussing on the truth-value of the embedded proposition, adding it as an actual proposition provided by the subject instead of introducing it as a set of alternative propositions, it explicitly indicates the speaker's source of information.[31]

4.3 *Wollen* as an Illocutionary Verb?

The evidential shift of WANT sketched in the previous sections may lead to the conclusion that WANT in German, i.e. *wollen*, has obtained a new lexical entry as a lexical illocutionary verb. However, if we compare the use of evidential *wollen* with

[30]The evidential reading is not exclusive to embedded perfect infinitives. Constructions with *wollen* + stative or non-perfective predicates might also be interpreted as evidential:

(i)	Dieser	Politiker	will	tatsächlich	aufrichtig	sein.
	this	politician	WANT-3s	indeed	sincere	be

a. 'This politician really wants to be sincere.'
b. 'This politicians really claims to be sincere.'

However, in this case the unmarked reading would be (i)a, i.e. the volitional one.

[31]For stative, non perfective predicates this works in a parallel way.

other illocutionary verbs, like *sagen* 'to say'[32] or, in particular, *behaupten* 'to maintain', we see important semantic and syntactic differences. These are summed up as follows:

(27) a. The interpretation of *wollen* as a supposedly illocutionary verb is dependent on the time-relational structure, especially aspect (and *Aktionsart*) of the embedded infinitive. Illocutionary verbs can appear in all tenses, but *wollen* as a supposedly illocutionary verb cannot appear in compound tenses.
b. The interpretation of *wollen* as a supposedly illocutionary verb depends on subject co-reference with the embedded infinitive. A proposition with any other or no subject cannot be the complement of evidential WANT.
c. Illocutionary verbs usually can be negated. The supposed illocutionary meaning of *wollen* cannot.
d. The syntactic context with respect to constructions of *wollen* as a supposedly illocutionary verb is thus very restricted. Illocutionary verbs, in German, can usually also take CP-complements, they select *zu*-infinitives, and they can appear in coherent and non-coherent constructions, they appear in bridge verb constructions etc.

That there is only one negation in an evidential WANT-construction and that the evidential WANT-clause cannot be negated on its own is shown by (28), where in (28)a and (28)c the embedded proposition is negated, whereas in (28)d the illocutionary matrix-verb *behaupten* 'to claim' is negated. However, (28)b is not equivalent to (28)d, since here the negation just can take scope over the adverbial *gestern* – not over the whole embedded clause:

(28) a. A. will gestern nicht gearbeitet haben.
A. WANT-3s yesterday not worked have
'A. claims not to have worked yesterday.'
b. A. will nicht gestern gearbeitet haben.
A. WANT-3s not yesterday worked have
'A. claims to have worked not yesterday (but …).'
c. A. behauptet, gestern nicht gearbeitet zu haben.
A. claims yesterday not worked to have
'A. claims not to have worked yesterday.'
d. A. behauptet nicht, gestern gearbeitet zu haben.
A. claims not yesterday worked to have
'A doesn't claim to have worked yesterday.'

It is a typical (even if not universal) property of evidentials (cf. Aikhenvald 2004: 96-97) that they cannot be negated. Also the fact that evidential WANT cannot appear in its whole morphological paradigm, cf. (29), leads us to suspect that the propositional domain of the WANT-clause itself is a reduced structure. The first time relation can

[32]Verbs of saying are a very common source of evidential markers, cf. e.g. Cruschina & Remberger (2008) for some data on Romance evidential adverbials.

encode the EQUALS, AFTER, or BEFORE relation, cf. (29)a, b, and c, but there is no possibility of doing that with a second time relation, cf. (29)d and e:

(29)	a.	A. will	gearbeitet haben.	(evidential and volitional)
		A. WANT-pres.3s	worked have	
	b.	A. wird gearbeitet	haben wollen.	(evidential and volitional)
		A. will worked	have WANT-inf/part	
	c.	A. wollte	gearbeitet haben.	(evidential and volitional)
		A. WANT-past.3s	worked have	
	d.	A. hat arbeiten	wollen.	(only volitional)
		A. has work-inf	WANT-inf/part	
	e.	A. hatte arbeiten	wollen.	(only volitional)
		A. had work-inf	WANT-inf/part	

Because of the temporal and propositional structure of evidential WANT I assume that there is only one temporal relation in the matrix clause (cf. also Remberger in press). In this spirit, the time-relational derivation of the evidential shift of WANT given in (26) must be modified as follows, cf. especially (30)d:

(30) Evidential Shift (second version)

a. *S,R_m º R_m,E_m □ E_m,R_e º $E_e\_R_e$	(necessity, M(subj), coincidence, perfectivity)
b. S,R_m º R_m,E_m □ $E_m\_R_e$ º $E_e\_R_e$	(necessity, M(subj), posteriority, perfectivity)
c. S,R_m º R_m,E_m : E_m,R_e º $E_e\_R_e$	(evidential, M(subj), coincidence, perfectivity)
d. S/R_m : R_m,R_e º $E_e\_R_e$	(reduced clause, evidential, …)[33]

That means that German *wollen* is indeed a grammatical marker insofar as it does not project a fully specifiable temporal structure anymore (with no proper event situation, but still a proper reference situation for which the evidential modal is evaluated) and it appears only in a very restricted syntactic context. *Wollen* is not an illocutionary verb proper, but it can mark evidentiality in certain contexts. It is on a grammaticalisation path, but it is not an evidential marker in the sense of a morpheme, but in the sense of a construction (cf. Narrog 2005 and fn. 9). Thus the difference between an evidential WANT-construction and one with an illocutionary verb is that the first is a constructional evidential whereas the second represents a common lexical means to express evidentiality, i.e. the source of information:

(31)	a.	A. will gearbeitet haben.	=>	constructional evidential
	b.	A. behauptet, gearbeitet zu haben.	=>	lexical evidentiality

In the next section, a further case of encoding evidentiality, which also involves the verb WANT, will be presented.

[33] 'S/Rm' can be instantiated as either as 'S,Rm', or as 'S_Rm', or as 'Rm_S'.

4.4 Excursion on Italian

If we look at other languages and their use of the verb WANT, we can see that the evidential reading of WANT is not common, and thus must be peculiar to German. Italian data, for example, show that there is no such conventionalisation or grammaticalisation of WANT as an evidential marker. Examples like (32) are simply ungrammatical:

(32) a. *Gianni vuole lavorare *ieri*.
G. WANT-3s work yesterday
(no interpretation)

b. *Gianni vuole aver lavorato *ieri*.
G. WANT-3s have worked yesterday
(no interpretation)

However there are examples in Italian that might suggest that WANT can have an evidential reading:[34]

(33) It. La tradizione vuole che la fiera sia iniziata nell'anno 1000.
the tradition WANT-3s that the fair be-3s.subj started in-the year 1000
'The tradition says that the fair was started in the year 1000.'

(34) It. La leggenda vuole Positano fondata da Poseidone.
the legend WANT-3s Positano founded by Poseidon
'The legend claims that Positano was founded by Poseidon.'

(35) It. La storia vuole che invece Todi sia stata costruita dagli Etruschi …
the history WANT-3s that instead Todi be-3s.subj stay.pprt.f.s built by …
'History tells us that Todi was instead built by the Etruscans...'

The same use is observable in French with *vouloir* 'to want': A short survey in FRANTEXT shows us that there are two main groups of subjects with this WANT construction:

(36) Group A: *la légende, le proverbe, la tradition, le paradoxe, la théorie, la logique, l'adage, le préjugé, la verité, la nature de choses, le principe* etc.
Group B: *la loi, la constitution, le règlement, l'usage, la coutume, la mode, le protocol, la convention, la règle* etc.

If WANT is combined with a subject from the first group, the interpretation that results corresponds more or less to 'say', 'tell', 'claim' etc. However, with the second group the meaning yielded is more like 'prescribe', 'dictate' and similar (some of the entries can belong to both groups, depending on the context). This might give us a hint as to the

[34]All following Italian examples are from the www, 15.7.08.

semantic development of the phenomenon. From the volitional meaning of WANT both can be derived easily: Something is wanted, thus prescribed, and then just proclaimed. However, this use of WANT cannot be considered to be grammaticalised: its subject is restricted to a specific class of non-animate nouns, implying either norms (which inherently prescribe), or folklore (which is transmitted orally). The construction seems to stem from a metaphorical use of the verb WANT with a class of inanimate subjects inherently endowed with certain semantic features, which somehow has become an idiomatic expression. A similar use can also be found in German (*Die Legende will*…) and, perhaps to a lesser degree, in English (*The tradition wants*…).

Of course, there is an evidential meaning insofar as the subject indicates the source of information. It is also a typical example for indirect evidence in the sense of Willett (1988). Indeed, Willett (1988: 96) further subdivides indirect evidentiality (cf. section 2, especially fn. 10) into three types, the second-hand evidence with the indication of the source, the third-hand evidence without, and folklore, when the speaker claims that the situation described is part of established oral history (fairy tales, mythology, oral literature, proverbs and sayings). In the case of the WANT-constructions just discussed, in group A it is indeed the subject itself that lexically encodes what can be called an established oral history; the subjects in group B instead comprise established norms, rules and laws. Both groups encode sources of information[35].

5. Conclusions

In this article, the evidential use of WANT in German has been discussed. The volitional verb WANT is predisposed towards grammaticalisation, as synchrony and diachrony of its use show. However, it is only in German that the evidential use of WANT has been grammaticalised to a certain degree. In other languages, WANT may have an evidential reading, but only with a certain kind of subject that represents a source of information and thus encodes an evidential meaning themselves. The German construction under discussion has been identified as an evidential construction proper and not just a lexicalized illocutionary verb like e.g. *behaupten*. To sum up, three phenomena concerning evidentiality have been discussed:

(37) a. the evidential construction:
German *wollen* selecting a specific type of infinitive construction
b. the lexical evidential:
lexical illocutionary verbs
c. the idiomatic evidential
a class of evidentiality encoding nouns (norms, folklore) + WANT

The type in (37)a is peculiar to German, lexical entries for illocution like (37)b are common to all languages, whereas the idiomatic evidential use of WANT, type (37)c, seems to depend on language specific noun classes. The question remains of why WANT should be so appropriate for evidential uses, be it as in type (37)a or type (37)c. This

[35]In the context of modality, one could regard these noun classes as standing for a kind of lexicalised conversational background.

again is probably due to the specific theta-role of WANT, which requires animate intentional subjects: Animate intentional subjects communicate their intentions and say, explicitly or encoded in norms or transmitted by oral history, what they want. This is the evidence for their being intentional.

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Evidentials in Complex Sentences: Foundational Issues and Data from Turkish and German*

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1. Introduction

The past few decades have witnessed a remarkable increase of research on evidentiality. However, most studies focus on evidentials in one particular environment, namely declarative root clauses. Of course, it's a perfectly reasonable strategy to start investigations of evidentials by studying their behavior in maximally innocent and unmarked environments like declarative root clauses. But one should be aware of the fact that it's impossible to draw final conclusions about the semantics of evidentials unless one considers their behavior in other clause types and in complex sentences. Only a very limited number of evidentials has been studied in embedded contexts so far, but the growing interest of formal semanticists in evidentiality will hopefully soon lead to a significant increase of available data.

By limiting one's attention to declarative root clauses, one might be tempted to characterize evidentials as linguistic markers that indicate the type of evidence the speaker has for the proposition expressed by her utterance. Despite the fact that this characterization is actually rather widespread in the literature, it drastically fails for many uses of evidentials. For instance in interrogative root clauses, where evidentials obviously do not indicate the speaker's type of evidence for "the proposition expressed" (however construed), nor the addressee's type of evidence for some proposition (as is informally suggested sometimes), but rather the type of evidence the speaker expects the addressee to have for the true answer (more on this in section 3.1). Another counterexample are evidentials in embedded clauses that may not indicate the speaker's type of evidence for some proposition, but rather that of the matrix subject (e.g. in Tibetan, cf. Garrett (2001, ch. 5)).

The main goal of this paper is to raise a number of questions about evidentials in complex sentences, especially about their occurrences in embedded clauses. It is argued

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that any account of evidentiality is incomplete unless embedded occurrences are taken into consideration. Some of the complexities that arise when studying embedded evidentials are illustrated with data from Turkish and German.

Here is a short overview of the sections to come. Section 2 provides the conceptual and terminological background. In particular, a working definition of the term 'evidential' is presented that determines the empirical coverage of the following arguments (and partly legitimates the use of German examples in discussions about evidentiality). Section 3 discusses several important, but non-definitional properties of evidentials that are relevant for evaluating embedded occurrences. Section 4 finally sets the scene for investigations of embedded evidentials. First, the notions of embedding and subordination are introduced from a cross-linguistic perspective. Second, the little that is known about embedded evidentials to date is reviewed. Third, a set of research questions is formulated and implications of possible answers are pointed out. Sections 5 and 6 contain empirical pilot-studies of embedded evidentials in Turkish and German. Section 7 wraps up the discussion and points to directions for future research.

2. Towards a definition

2.1 Evidentiality vs. epistemic modality

It is still a matter of debate whether evidentiality is a linguistic category in its own right. Some researchers argue that evidentiality is a special kind of epistemic modality. For example, Willet (1988, 52) states that "evidential distinctions are part of the marking of epistemic modality". There are two widespread definitions of expressions of epistemic modality. According to the first, they indicate the degree of commitment of the speaker to the embedded proposition. According to the second, they mark the necessity or possibility of the embedded proposition (the prejacent) relative to some body of evidence or knowledge (von Fintel and Gillies 2007). Using the first conception of epistemic modality, Palmer (1986, 54) argues that evidentials are epistemic modals, because

> "their whole purpose is to provide an indication of the degree of commitment of the speaker: he offers a piece of information, but qualifies its validity for him in terms of the type of evidence he has".

On the other hand, de Haan (2001) and Aikhenvald (2004) argue at length that evidentiality and epistemic modality are (in principle) independent categories, because in a number of languages, evidentials don't carry any epistemic overtones. Their slogan is:

> "Evidentiality is a category in its own right, and not a subcategory of any modality" (Aikhenvald 2004, 7)

These two points of view correspond with two competing construals of the notion of evidentiality. The narrow one, given in (1-a), is defended by de Haan (2001), Lazard (2001), Faller (2002), Aikhenvald (2004) and others. The wide one, given in (1-b), is adopted by Palmer (1986), Ifantidou (2001) and Rooryck (2001) among others.

(1) Two popular conceptions of evidentials:
   a. *The narrow conception:* Evidentials are linguistic markers that indicate the speaker's type of evidence (or source of information) for her claim.
   b. *The wide conception:* Evidentials are linguistic markers that indicate the speaker's type of evidence for her claim and/or the degree of its reliability, probability or certainty.

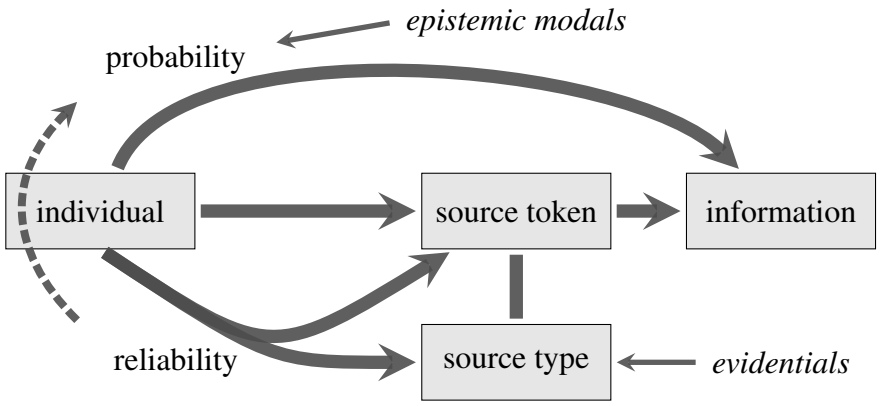
Quite some ink has been spilled discussing which of these construals is to be preferred. But a closer look at the kinds of arguments offered raises the suspicion that there's no consensus about what exactly is at issue. Part of the confusion is that the question "What is the relation between evidentiality and (epistemic) modality?", as it's usually stated, is highly ambiguous, because it leaves implicit what exactly is meant by the terms 'evidentiality' and 'modality': Concepts? Subsystems of Universal Grammar? Subsystems of the grammar of a single language? This lack of precision invites misunderstandings and often leads to unnecessary debate at an abstract level. Once we replace the original question by at least the following three more precise ones, we get a surprisingly clear picture, and most disagreements automatically disappear.

(2) a. *Conceptual relation:* What is the relation between the concept of evidentiality and the concept of epistemic modality?
   b. *Encoding relation:* What is the relation between the encoding of evidential concepts and the encoding of modal concepts in language *L*?
   c. *Formal semantic relation:* Can evidentials in language *L* be analyzed parallel to epistemic modals in formal semantics (involving quantification over possible worlds) or do evidentials require a different kind of analysis?

A satisfactory answer to the first question (2-a) (understood as a psychological, not as a philosophical question) requires a model of the human mind that integrates and explains the interactions between a person's (type of) source of a piece of information and various attitudes towards that piece of information. This question, though important, is seldom explicitly addressed in research on evidentiality, noteworthy exceptions being Chafe (1986), Willet (1988, 85–89) and Nuyts (2001). Among the main components of such a model are the individual's specific source (*source token*), e.g. a certain event in the past in which the individual has been told the relevant piece of information. Source tokens can be classified in various ways at various levels of abstraction. Some common high-level classifications are based on the distinctions between direct and indirect *types of source*, and between reported and inferred information. Two notions that are sometimes not properly distinguished in this context are *(subjective) probability* and *reliability*. Whereas subjective probability relates an individual and some piece of information, reliability relates an individual and a source type or token, as illustrated in the figure in (3) below. They are related, since (ceteris paribus) a piece of information will have a high degree of subjective probability if it stems from a highly reliable source token (both as judged by the individual). Various types of background knowledge are at work that complicate the picture, but we can safely claim that the reliability of the source token and the source type as judged by the individ-

ual are among the main components that influence the individual's judgment regarding the necessity or possibility of a proposition expressing the relevant piece of information and, if uttered, the degree of the person's commitment to the proposition expressed.

(3)



Thus, without going into details, it is clear that at the conceptual level, evidentiality (understood as a person's type of source of information) and epistemic modality (understood as the person's judgment regarding the necessity or possibility of a proposition expressing the relevant piece of information) are different but related: The *type of source* influences the *strength of belief* in the truth of the proposition, but the two concepts are not interchangeable because other contextual factors intervene. If a person considers a proposition necessary, this by itself does not allow any conclusion as to the type of evidence the person has. Similarly, the fact that a person has reportative evidence for the truth of a proposition does not determine a certain strength of belief in this proposition.

The second question (2-b) demands linguistic investigation. The relativization to a specific language is essential, because cross-linguistic research has shown that languages differ in this respect. On the one hand, there are languages that possess clearly distinct systems for evidentiality and epistemic modality. For example, Pawnee, Wintu and Makah have distinct sets of morphemes for coding modal and evidential meanings (cf. Mithun (1999), Stenzel (2004, 338)). On the other hand, there are languages that use a single set of markers to denote evidential source and epistemic strength, e.g. Haanis (Mithun 1999). In general, epistemic modals often acquire evidential meaning extensions (e.g. English *must*, cf. von Fintel and Gillies (2007)) and evidentials may have epistemic extensions (e.g. Cuzco Quechua *-chá*, cf. Faller (2002, 171–189)). Sometimes it's almost impossible to determine whether an expression is primarily evidential or primarily modal (see Aikhenvald (2004, 147–151) for some borderline cases). This suggests that evidentials and epistemic modals form the end points of a continuum allowing expressions at intermediate positions to simultaneously encode evidential and epistemic meaning components.

In the formal semantics literature the question concerning the relation between evidentiality and epistemic modality is almost always understood as in (2-c): Are the same formal tools adequate for analyzing both epistemic modals and evidentials? The influential formal analysis of epistemic modals involving quantification over possible worlds by Kratzer (1978, 1991) has first been used by Izvorski (1997) to analyze evidentials in Bul-

garian, inspiring similar analyses of evidentials in other languages, e.g. Garrett (2001) on Tibetan, McCready (2005), McCready and Asher (2006) and McCready and Ogata (2007) on Japanese, Chung (2005, 2006) on Korean, Matthewson et al. (2007) on St'át'imcets and Sauerland and Schenner (2007) on Bulgarian. However, Faller (2002, 2006a,b) argued convincingly that evidentials are not a homogeneous class cross-linguistically and showed that evidentials in Cuzco Quechua cannot be analyzed as epistemic modals.

To sum up, evidentiality and epistemic modality are conceptually distinct (though related) and encoded independently in the grammars of some (but not all) languages. The linguistic question whether the encoding of evidentiality is part of the encoding of epistemic modality cannot be answered without reference to the grammar of a specific language since there is substantial cross-linguistic variation.

2.2 Defining 'evidential'

The previous section established that evidential and epistemic categories may be encoded independently (though they need not). Thus it makes sense to adopt some version of the narrow concept of evidentials in (1-a). Let's now try to make this more precise. The basic plan is as follows. We first define the conceptual notion of an 'evidential condition'. Then we define the linguistic notion of an evidential via conditions on the mapping of natural language expressions to this concept.

(4) An **evidential condition (EC)** is a proposition of the form '$\textsc{evid}(s,x,p,i)$' that is true iff x has in s evidence of type i that p is true, where s is a situation, x is an agent, p is a proposition, and i is a type of evidence.

This definition incorporates several non-trivial decisions. First, note that an evidential condition is simply a proposition[1] that can be true or false; it's not a speech act. Second, the definition is based on the assumption that the kinds of things we can have evidence for are propositions, or rather the truth of propositions, in accordance with most of the recent formal semantic literature on evidentials. This might turn out to be too restrictive, though. For example, it has been argued that in direct perception reports like (5-a), the embedding predicate selects situations rather than propositions.[2] That explains why co-extensional terms in their complements can be substituted salva veritate, in contrast to indirect perception reports like in (5-b). Thus it seems that (5-a) and (5-b) minimally differ in that Beryl has visual evidence for a certain *situation* in (5-a) and for the truth of a certain *proposition* in (5-b).[3]

[1] If you don't think that propositions have internal structure, you can take evidential conditions to be Logical Forms, mentalese expressions or DRS-conditions with the appropriate truth-conditions.

[2] This was one of the initial motivations for situation semantics, cf. e.g. Barwise (1981), Kratzer (2008). Direct perception reports are sometimes also discussed in the literature on evidentials, cf. e.g. Chafe (1986), Higginbotham (2005), de Haan (2005), Whitt (2008).

[3] Perception reports involve additional complexities. For instance, sentences like (5-b) do not require that the subject has direct visual evidence for the truth of the embedded proposition, but rather visual evidence for the truth of some proposition that entails (with the help of other contextually available assumptions) that the embedded proposition is true.

(5) a. Beryl saw Meryl feed the animals.
b. Beryl saw that Meryl fed the animals.

Another argument against the presumption that evidentials always indicate evidence for some propositional content is put forth by Hengeveld (2006). He argues that there are clear differences between reportatives and (other) evidentials that are due to the fact that the former operate at a higher, interpersonal level, well above the level of propositional content. These observations suggest that ultimately, we might need to modify the definition in (4) in order to allow for non-propositional objects of evidential relations.

Third, the definition in (4) makes use of a variable i that ranges over types of evidence. Let's assume that i is taken from a set I that contains all available types of information source. Now what exactly is in this set? There are at least two ways to go. One way would be to relativize the set I to particular languages or language types. Using the classification system of Aikhenvald (2004), illustrated in (6), we could posit the set $I(B1)$ in (7-a) for Qiang or Quechua or the set $I(C2)$ in (7-b) for Shipibo-Konibo or Tsafiki. However, this would seriously undermine our attempt to define the notion of an evidential condition in a language-independent way. Thus we will assume at this point that I is a fixed set of universally available types of information sources. Since it has to reflect some rather fine-grained distinctions that are not encoded grammatically in every language, we expect that linguistic evidentiality markers are typically associated with bundles of elements of I rather than individual members.[4]

(6)

label	evidential distinctions	languages
A1	Firsthand, Non-firsthand	Jarawara, Yukaghir
B1	Direct/Visual, Inferred, Reported	Quechua, Qiang, Shasta
B2	Visual, Non-visual sensory, Inferred	Washo, Siona
C1	Visual, Non-visual sensory, Inferred, Reported	Tucano, Eastern Pomo
C2	Direct/Visual, Inferred, Assumed, Reported	Tsafiki, Shipibo-Konibo
...		

(7) a. $I(B1) = \{\text{direct, inferred, reported}\}$
b. $I(C2) = \{\text{direct, inferred, assumed, reported}\}$

Fourth, it might turn out that certain distinctions are relevant for the analysis of evidentiality that are not reflected in definition (4) as it stands. For example, no reference is made to the situation in which the evidence was acquired. However, Aikhenvald (2004, sec. 8.4) points out that tense distinctions on evidentials may indicate the time at which the evidence was acquired. The evidence acquisition situation even plays a significant role in certain theories of evidentiality (e.g. Jakobson (1971), Speas (2007)). The notion of an evidential condition in (4) could easily be extended to include a parameter for the evidence

[4]Speas (2004) explicitly argues that the set of evidence types available for grammaticalization is rather small. Following her account, we could posit the universal set $I = \{$Personal Experience, Direct Evidence, Indirect Evidence, Hearsay$\}$. However, it's not that clear that languages only make use of four distinct evidential categories. Moreover, we will allow for lexical evidentials that can encode many more fine-grained sources of information.

acquisition situation. Nevertheless we will stick to the formulation in (4) for the moment, since this extension would not affect the main points to be made in the following.

We can now proceed to defining the linguistic property of having an evidential component and the linguistic notion of an evidential in (8):[5]

(8) a. A lexical item *L* has an **evidential component** iff one of the functions of *L* is to introduce an evidential condition with background status.
b. A lexical item *L* is an **evidential** iff one of the *main* functions of *L* is to introduce an evidential condition with background status.

Although this is quite a liberal definition of 'evidential', it still sides with the narrow concept of evidentiality mentioned in (1-a) that excludes purely epistemic expressions. An important feature of (8) is that evidentials are not required to be grammatical elements (or grammaticalized). It thus makes sense to talk about *lexical* vs. *grammatical* evidentials (cf. sec. 2.3 for discussion).

Another thing to note about (8) is that there are no restrictions as to the level of meaning to which evidentials contribute. Evidentials are not required to be speech act modifiers, presuppositions or conventional implicatures. The only thing required is that the evidential condition be *backgrounded*. This is intuitively clear, since evidentials indicate the source of information *for something* that's at issue. A consequence is that there cannot be inherently negative evidentials, something like 'nobody told me that *p*' or 'there is absolutely no evidence that *p*'. Evidentials serve to supply the basis of some claim (or presented content), they cannot express the lack of every kind of evidence. In other words, evidentials indicate a source for the *truth* of the embedded proposition, never for its *falsity*.[6]

Content can be backgrounded in various ways and at various levels of meaning. Among the most promising candidates are presuppositions (Izvorski 1997), conventional implicatures (in the sense of Potts (2005)) and felicity conditions (Faller 2002). Lexical items may have both backgrounded and non-backgrounded uses, a prominent example being clausal complement-taking predicates (CTPs). Many CTPs have both non-parenthetical and parenthetical uses. In their latter use embedding verbs are backgrounded and in fact often explicitly analyzed as evidentials (cf. Rooryck (2001), Simons (2007)).[7]

[5]Our notion of a lexical item is based on Jackendoff (2002). Lexical items are items stored in the mental lexicon and can be of arbitrary length. In particular, affixes and other elements smaller than grammatical words can be lexical items.

[6]In SDRT this is reflected by the fact that the discourse relation EVIDENCE is veridical, cf. Asher (2000, 36).

[7]Simons (2007) introduces the useful notion of the 'main point of utterance' to characterize parenthetical uses: "the main point of an utterance *U* of a declarative sentence *S* is the proposition *p*, communicated by *U*, which renders *U* relevant" (p.1035). In examples "where the embedded clause has main point status, the main clause predicate appears to be functioning as a kind of evidential" (p.1036). A proposition is backgrounded in our sense if it is not the main point of utterance in the sense of Simons.

2.3 Comparison to other definitions

We have proposed a rather weak notion of evidentiality, but still strong enough not to include purely epistemic elements. In order to bring out its characteristics, our definition is in this section compared to competing ones from the literature. Here is a list of conditions that have been used in definitions of evidentiality.[8]

(9) *Definition template:* A lexical item *L* is an evidential if ...

A. MEANING: semantic/pragmatic criteria

A1. *L* indicates the speaker's/somebody's (type of) source of information (for *p*)

A2. *L* indicates the probability (necessity/possibility) (of *p*)

A3. *L* indicates the degree of speaker commitment (to *p*)

A4. (A1)/(A2)/(A3) is the *primary* meaning of *L*,
not only a pragmatic inference

A5. The contribution of *L* is *backgrounded*
(not the main point of utterance, not the main predication)

(where *p* is the proposition expressed by the complement of *L*)

B. FORM: morpho-syntactic criteria

B1. *L* is a dependent morpheme (e.g. an inflectional affix), clitic or other free syntactic element, not a compound or derivational form

B2. *L* is part of an obligatory paradigm, i.e. exactly/at least one of the markers in this paradigm has to be expressed in every finite (root) clause

B3. *L* is a verbal (not nominal) marker

Individual definitions of evidentiality typically combine several of these conditions. As mentioned above, what is commonly called the 'wide notion' of evidentiality differs from the narrow notion in including purely epistemic meanings, construed either semantically (A2) or pragmatically (A3). In order to count as an evidential, it is natural to require that the evidential meaning component be the primary meaning of the element in question (A4).[9]

There are no definitions of evidentiality that only involve morpho-syntactic criteria, but several researchers use them as necessary conditions in addition to the semantic core conditions. Whereas (B3) is rather unpopular today, something along the lines of (B1)

[8]Explicit definitions of the term 'evidential' are rare; the most influential one is probably Anderson (1986, 274–275). One mostly finds casually mentioned necessary conditions in the literature (see, for example, the quotations from Aikhenvald (2004) below).

[9]"To be considered as an evidential, a morpheme has to have 'source of information' as its core meaning" (Aikhenvald 2004, 3).

is adopted by Anderson (1986), Aikhenvald (2004)[10] and Speas (2007)[11] among many others. An important motivation for (B1) is the wish to exclude lexical means of specifying the source of evidence, e.g. evidential adverbials, parentheticals or certain embedding predicates. According to Aikhenvald (2004, 10),

> "Saying that English parentheticals are 'evidentials' is akin to saying that time words like 'yesterday' or 'today' are tense markers. These expressions are not obligatory and do not constitute a grammatical category; consequently, they are only tangential to the present discussion. Saying that English has 'evidentiality' [...] is misleading: this implies a confusion between what is grammaticalized and what is lexical in a language."

However, the border between what is lexical and what is is grammaticalized in a language is leaky, to say the least. Aikhenvald is well aware of the fact that lexical "evidential strategies" are a major source of grammatical evidentials. Moreover, morphological criteria are of no great help in identifying evidentials since we find a broad range of variation in how source of evidence is expressed cross-linguistically. Even Aikhenvald (2004, 69) admits that "there are hardly any morphological limitations on how evidentials can be expressed."

In our definition in (8-b) we deliberately refrained from adding requirements on the morphological realization of evidentials. It's a purely semantic/pragmatic definition that can be roughly characterized as a combination of A1, A4 and A5. The resulting class of expressions encompasses both "lexical" and "grammatical" elements. Whether elements of this group are called 'evidentials' or 'evidential strategies' is of no crucial importance, but it is useful to have such a notion, at least from a semantic point of view.

Another issue is whether (B2) should be part of a definition of evidentiality. It is sometimes suggested that in languages with "true" (grammatical) evidentials, the expression of the speaker's source of evidence is obligatory.[12] However, it seems that there are not that many languages that require evidential marking in every (root) clause. In fact, de Haan (1999) mentions only one candidate, Tuyuca (Barnes 1984), a Tucanoan language spoken in the border region of Brazil and Colombia. We might add Tariana (Aikhenvald 2003), an Arawak language also spoken in northwest Amazonia, in the multilingual area of the Vaupés. For some languages that have traditionally been taken to feature obligatory evidentiality marking, it has been shown that they do allow for sentences without evidentials, e.g. Quechua (cf. Faller (2002, 23)). Thus, given the current state of knowledge, it's not very likely that in as much as "about a quarter of the world's languages, every statement must specify the type of source on which it is based" (Aikhenvald 2004, 1). In any

[10] "Throughout this book I will be concerned with just the grammatical coding of evidentiality. Grammar is taken to deal with closed systems, which can be realized through bound morphemes, clitics, and words which belong to full grammatical word classes, such as prepositions, preverbs, or particles." (Aikhenvald 2004, 11)

[11] "When I use the term 'Evidentials,' I am referring to the grammaticized morphosyntactic category present in some but not all languages." (Speas 2007, 2)

[12] "In languages with grammatical evidentiality, marking how one knows something is a must." (Aikhenvald 2004, 6)

case, we don't seem to win anything by excluding non-obligatory elements with evidential meanings by definition from the category of evidentials.

The table in (10) summarizes four main characterizations of evidentiality. According to the most narrow definition evidentials are grammatical elements that indicate the source of information (cf. e.g. Aikhenvald (2004)). A common extension is to include epistemic meanings (or group evidentials as epistemic elements, cf. e.g. Palmer (1986)). Another extension is to include elements that do not have the status of highly grammaticalized markers, marked in the table below as [+lexical]. This extension comes in various degrees. Some consider parentheticals as grammaticalized enough to count as evidentials (e.g. Rooryck (2001), Simons (2007)), others do not (cf. Aikhenvald (2004, 10)), while some even include sentence adverbials in discussions of evidentiality (cf. Chafe (1986), Ifantidou (2001)). A combination of both extensions leads to a maximally broad concept of evidentiality (cf. e.g. Chafe (1986), Ifantidou (2001)). We opted here for a notion that is semantically narrow, but morphologically broad.

(10)

	source →	+epistemic
grammatical	Aikhenvald (2004)	Palmer (1986)
↓		Rooryck (2001)
+lexical	our notion in (8-b)	Ifantidou (2001)

3. Properties of evidentials

With these definitions in place, we can start looking for universal and language-particular properties of evidentials. This section will focus on the following three questions that are addressed in turn.

(11) a. How are the arguments of the evidential condition determined?
b. What is the semantic/pragmatic status of the evidential condition?
c. Are there additional meaning effects of evidentials?

3.1 How are the arguments of the evidential condition determined?

Evidentials by definition (8-b) convey an evidential condition of the form in (4). But how are the arguments of the evidential condition determined? Let's look at the example in (12-a) from Tariana, an Arawak language spoken in northwest Amazonia, which features a visual evidential (example taken from Aikhenvald (2004, 2)). A rough characterization of the conveyed evidential condition is given in (12-b).[13]

(12) a. Juse irida di-manika-ka
José football 3SGNF-play-RECENT.PAST.VISUAL
'José has played football (we saw it)'
b. EVID(utterance situation, speaker, λs.José has played football in s, visual)

[13]Propositions are understood as sets of possible situations, cf. e.g. Kratzer (2008).

Everything seems quite straightforward: The evidential indicates that the speaker[14] possesses in the utterance situation visual evidence for the truth of the proposition expressed.[15] Thus the arguments of the evidential condition are resolved as shown in (13). Notice that identifying the target proposition with the proposition expressed presupposes that the evidential condition itself is not part of the proposition expressed. To avoid this presumption, we could characterize the target proposition as the proposition expressed by the complement of the evidential, assuming that the evidential takes the rest of the sentence as an argument.

(13) Evidentials in declarative root clauses:

s	evidence holding situation	$\mapsto$	utterance situation
x	evidence holder	$\mapsto$	speaker
p	target proposition	$\mapsto$	proposition expressed
i	type of source	$\mapsto$	(lexically constrained, e.g. visual in (12-a))

As soon as we consider evidentials in environments other than declarative root clauses, things get more complicated. Evidentials in *interrogative* root clauses show an impressive range of variation cross-linguistically (see Aikhenvald (2004, 242–249) for a very useful survey). However, it is a quite common phenomenon that evidentials in interrogatives indicate the type of source the speaker expects the addressee to have for the true answer to her question.[16] In this case we get roughly the mapping in (14). An additional (probably pragmatic) mechanism has to set the status of the evidential condition to a speaker expectation (more on status issues in sec. 3.2).

(14) Evidentials in interrogative root clauses:

s	evidence holding situation	$\mapsto$	answering situation
x	evidence holder	$\mapsto$	addressee
p	target proposition	$\mapsto$	true answer to the question
i	type of source	$\mapsto$	(lexically constrained)

The shift from speaker-orientation to addressee-orientation in interrogatives does not only occur in the case of evidentials. Many expressions that have traditionally been characterized as speaker-relative show this kind of variation (cf. e.g. Speas and Tenny (2003)). One way to account for this is to assume that these expressions are not speaker- but *judge*-oriented, where the judge is identified with the speaker in declaratives and with the addressee in interrogatives (e.g. via a mechanism of context shift, cf. McCready (2007)).

[14]Interestingly, Aikhenvald uses the first person plural 'we' in the translation to refer to the evidence holder. This reading is plausible if the speaker is speaking on behalf of a group.

[15]Of course, *having* visual evidence in a situation is quite distinct from *acquiring* visual evidence in a situation. For instance, one can have visual evidence for the truth of some proposition in some situation if they acquired appropriate visual evidence in some previous situation. Typically, the evidence acquisition situation temporally precedes the state of having evidence.

[16]Both Garrett (2001, ch. 6) and Faller (2002, sec. 6.3.2) argue that an adequate formal analysis requires a departure from the standard Hamblin/Karttunen account of questions as sets of propositions. For instance, Garrett takes questions to denote sets of answer speech acts, i.e. assertions.

Judge-relativity recently became popular in the analysis of predicates of personal taste (Lasersohn 2005) and epistemic modals (Stephenson 2007).

This idea can be fruitfully applied to certain instances of evidentials embedded in complement clauses. Stephenson (2007) and others have argued that attitude predicates shift the judge parameter to their subject. As a consequence, judge-dependent expressions in the complement clause are evaluated relative to the subject. For example, whereas unembedded occurrences of the epistemic modal 'might', as in (15-a), are interpreted relative to the speaker,[17] occurrences in complement clauses of attitude predicates are interpreted relative to the attitude holder. In (15-b), it is not the belief worlds of the speaker that are claimed to entail that it is raining, but the belief worlds of John.

(15) a. It might be raining
b. John thinks it might be raining

If evidentials likewise are judge-dependent, we would expect their occurrences in complement clauses to receive a subject-oriented reading. This is exactly what happens in Tibetan under verbs of speaking and thinking (cf. Garrett (2001)). Example (16-a) illustrates an unembedded use of the indirect evidential *red*, where it receives a speaker-oriented interpretation. If this evidential marker occurs in complement clauses of *bsam* 'think', as in (16-b), only a shifted interpretation is available, according to which the person in possession of the indirect evidence is the matrix subject, not the speaker, as indicated in (17).

(16) a. yang.chen dge.rgan red
Yangchen teacher IND.COP
'Yangchen is a teacher.'
(Speaker's source: hearsay/inference)
b. bkra.shis kho dge.rgan red bsam-gi-'dug
Tashi he teacher IND.COP think-DIR.IMP
'Tashi$_i$ thinks he$_j$ is a teacher.'
(Tashi's source: hearsay/inference)

(17) Evidentials in declarative complement clauses (shifted reading):

s	evidence holding situation	$\mapsto$	attitude holding situation
x	evidence holder	$\mapsto$	attitude holder
p	target proposition	$\mapsto$	proposition expressed by complement clause
i	type of source	$\mapsto$	(lexically constrained)

However, evidentials do not behave alike in all languages. Whereas embedded evidentials in Tibetan require a shifted interpretation, evidentials in Bulgarian are typically not shifted (cf. Sauerland and Schenner (2007)). We will return to this issue in section 4.3.

The phenomenon that seemingly speaker-relative expressions receive a shifted, i.e. subject-relative interpretation in embedded contexts is by no means limited to evidentials,

[17] At least that's the traditional, simplistic assumption. On closer inspection, unembedded epistemic modals are not simply speaker-relative, see e.g. von Fintel and Gillies (2008) for some of the complexities involved in determining the body of information relevant for the interpretation of an epistemic modal. It's an interesting issue whether unembedded evidentials behave similarly.

epistemic modals and predicates of personal taste. In some languages, the first (second) person pronoun does not refer to the speaker (addressee), but to the subject (direct object) of the higher clause if it occurs in the complement clause of an attitude or utterance predicate (cf. e.g. Schlenker (2003), Anand and Nevins (2004)). In principle, all speaker-relative expressions may be affected by perspective-changing devices like attitude operators (cf. Speas and Tenny (2003) for more examples).

In conclusion, the determination of the arguments of the evidential condition conveyed by an evidential depends on clause type and syntactic structure. It's clear that the evidence holder is by no means always resolved to the speaker. Although there seems to be considerable (cross-linguistic) variation, evidentials behave in many cases similar to other context-sensitive expressions, like epistemic modals. Thus a unified account in terms of judge-dependence or context shift seems viable.

3.2 What is the semantic/pragmatic status of the evidential condition?

One of the major issues in the formal semantics literature on evidentials is the truth-conditional status of the contribution of an evidential, in our terms: What *kind* of meaning is the evidential condition? The exact list of options depends on the overall approach to utterance meaning one adopts, but among the typical candidates are illocutionary operators and modifiers (incl. sincerity conditions, strength etc.), propositional operators and modifiers (part of what is said or the at-issue content), presuppositions, conventional and conversational implicatures and explicatures.

Most of the actual proposals for the analysis of evidentials fall into one of the following two categories.[18] First, speech act level analyses (ILLOC), according to which an evidential modifies the illocutionary force or the sincerity conditions of a speech act (cf. e.g. Faller (2002)). Second, propositional level analyses, according to which evidentials are propositional operators of some sort. The most common variant of the latter type of analysis (MODAL) treats evidentials as epistemic modals with an additional meaning component (typically a presupposition, cf. e.g. Izvorski (1997)). Another variant (WEAK), most popular in the analysis of reportative evidentials, assimilates evidentials to attitude predicates that eat up the embedded proposition. In this case, the evidential condition simply is the proposition expressed.

Various tests have been used to determine whether a given evidential marker operates at the illocutionary or propositional level. The most comprehensive list, compiled in Matthewson et al. (2007, sec. 4), encompasses the following five diagnostic tests.[19]

(18) (P1) Is the sentence felicitous if the embedded proposition is known to be false?

(P2) Is the sentence felicitous if the embedded proposition is known to be true?

(P3) Does the evidential allow speech-act readings in interrogatives?

[18] For more detailed reviews and comparisons cf. McCready (2008), Matthewson et al. (2007, sec. 3) and Sauerland and Schenner (2007, sec. 2.2).

[19] Matthewson et al. (2007) actually list eight tests, but three of them fail to distinguish illocutionary and modal analyses.

(P4) Can the contribution of the evidential be questioned, doubted, rejected or disagreed with?

(P5) Can the evidential be embedded in constructions that do not allow illocutionary operators (the antecedent of a conditional, under a factive attitude verb, under a verb of saying)?

Some of these tests will be discussed in more detail below, when we apply them to Turkish and German expressions (cf. sec. 5 and 6). The crucial point here is that we can use these diagnostic tests to determine whether an illocutionary or propositional (weak or modal) analysis is adequate for a given evidential. Here are the predictions of the three basic analyses ('+' means that the analysis entails a positive answer to the diagnostic question):

(19)

	ILLOC	WEAK	MODAL	
(P1)	+	+	−	felicitous if *p* is known to be false?
(P2)	+	+	−	felicitous if *p* is known to be true?
(P3)	+	−	−	speech-act-readings in interrogatives?
(P4)	−	+	+	pass assent/dissent test?
(P5)	−	+	+	embeddable?

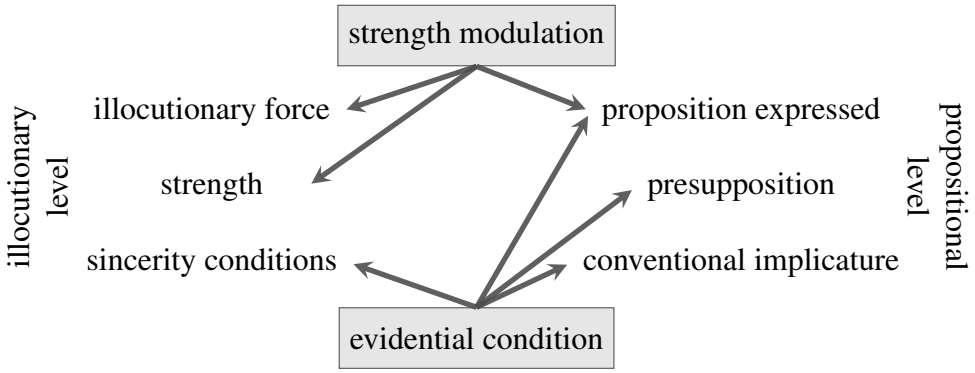
Despite clearly distinct predictions of the three accounts with respect to the properties (P1)–(P5), it's not always easy to determine the adequate analysis for a given evidential marker, neither in fieldwork nor via introspection. The required judgments are often both subtle and controversial. The main reason for these difficulties is the fact that illocutionary and propositional operators may have very similar effects: How to distinguish a weak commitment to a strong proposition from a strong commitment to a weak proposition? Zaefferer (2001, 212) explicitly argued on these grounds that evidentials "straddle the demarcation line between illocutionary and propositional modalities".

However, the tests in (P1)–(P5), when carefully applied, do give us clues for the appropriate analysis. It has been shown that evidentials differ with respect to these tests, hence the now standard assumption that evidentials do not form a semantically homogeneous class (cf. Faller (2006b), McCready (2008)).

3.3 Are there additional meaning effects of evidentials?

In the previous section it already became clear that evidentials do not simply introduce an evidential condition at some semantic or pragmatic level. The most important additional effect of an evidential is its ability to modify the degree of the speaker's commitment to the target proposition. This is especially easy to see in the case of reportatives, where the speaker is not committed to the truth of the reported proposition. The formal accounts of evidentials mentioned in the previous section locate the strength modulation at different levels. The figure in (20) shows which kinds of meaning have been used in the literature to model the two main effects of evidentials: (a) the introduction of the evidential condition and (b) the modulation of the strength of the target proposition.

(20)



Each of the three main analyses of evidentials mentioned in the previous section (ILLOC, WEAK, MODAL) locates both effects of evidentials at a single level. For example, in her analysis of the Quechua reportative *-si*, Faller (2002) locates the strength modulation in the illocutionary force (mapping from ASSERT to PRESENT) and the evidential condition in the sincerity conditions. By contrast, the Bulgarian indirective in the analysis of Izvorski (1997) only operates at the propositional level. The evidential condition is treated as a presupposition, the strength modulation as an epistemic modal in the proposition expressed. In WEAK variants of the propositional analyses, both effects are achieved by a single operation on the proposition expressed, namely by embedding the target proposition under an evidential predicate (or an evidentially loaded modal operator). In addition, there are various mixed accounts that locate the two effects of evidentials at different levels. An early example is the analysis of the Quechua conjectural in Faller (2002) that operates both on the proposition expressed (strength modulation) and on the sincerity conditions (evidential condition). Another mixed approach is suggested in Davis et al. (2007), where the strength modulation is handled via changes in Gricean quality thresholds and the evidential condition is located somewhere at the propositional level (e.g. in a conventional implicature or in a presupposition).

There is another effect of evidentials that will be largely ignored in the following, since it can be derived via independent pragmatic principles. When there are multiple (types of) sources of information for the truth of a proposition, there is a tendency to use the *strongest* evidential. The reason for this is clear: By using a weak evidential, you implicate that you are not in a position to use a stronger one, thus you convey that you do not have stronger evidence than indicated. This seems like a regular instance of scalar implicature. In order to make this work, we need *evidential scales* that tell us which evidentials are stronger than others. This is less trivial than it might appear at first, and people have come up with conflicting proposals. For instance, is reportative evidence stronger or weaker than inferential evidence? For an insightful discussion of these issues see Faller (2002, ch. 2.4), including an argument that these implicatures are not quantity-, but quality-based.

4. Evidentials in complex sentences

We are now ready to turn to evidentials in complex sentences, in particular embedded occurrences of evidentials. We start with a clarification of the term 'embedded' in subsection 4.1. Next, a short typological overview is given in subsection 4.2, based on the little that

can be found in the literature about embedded occurrences of evidentials. Finally, we lay out a set of questions for future research on embedded evidentials in 4.3. These are taken up in the following sections, where we turn to more detailed studies of embedded evidentials in Turkish (section 5) and German (section 6).

4.1 Complex sentences, embedding and complementation

Languages differ considerably in their syntactic structure, especially in their types of complex sentential constructions. But at least some sort of embedding seems to be available in every known language (pace some claims to the contrary in the literature, e.g. Everett (2005)), and in cross-linguistic research, three basic kinds of subordination are established (cf. e.g. Cristofaro (2003)): Complement clauses, adverbial clauses and relative clauses. In addition, we need to distinguish between structural or (morpho-)*syntactic* embedding and *semantic* (or pragmatic) embedding (subordination). For our purposes, the following characterizations are sufficient:

(21) a. An expression is *syntactically embedded* if it occurs in a clause distinct from the root clause (e.g. in an adverbial, relative or complement clause).
b. An expression is *semantically embedded* if it is interpreted in the scope of some non-speech-act operator.

To see the difference, consider syntactically embedded supplements (appositives, parentheticals) in English, e.g. the appositive relative clause 'who I met yesterday' in example (22-a). Crucially, it is not interpreted in the scope of the belief operator denoted by 'thinks', even though it occurs in its complement clause, i.e. in its syntactic scope. There are several classes of expressions that systematically remain semantically unembedded, even if they occur in syntactically embedded positions (cf. Potts (2005) for an analysis in terms of conventional implicature). Thus syntactic embedding does not entail semantic embedding. Nor is there an entailment in the other direction, i.e. semantic embedding does not entail syntactic embedding. Classic examples of semantic subordination in absence of syntactic embedding are cases of modal subordination (Roberts 1989), as in (22-b), where the second sentence is interpreted as semantically subordinate to the proposition expressed by the first sentence. A related example is (22-c) from Portner (1997), where the second sentence, obviously syntactically independent from the first one, is not interpreted as an independent assertion, but as elaborating the dream-content introduced in the first sentence.

(22) a. Anna thinks that her sister, who I met yesterday, bought a new PC
b. A thief might break into the house. He would take the silver.
c. I had a dream last night. My friend came to visit me.

If we combine the distinction between syntactic and semantic embedding with the traditional three-way typology of embedded clauses, we arrive at the table in (23).

(23)

	syntactically embedded	semantically embedded
complement clauses		
adverbial clauses		
relative clauses		

In investigating the embeddability of evidentials, we will minimally want to fill this table with a $+/-$ matrix for every evidential under consideration. That is, for each evidential we have to determine whether it can occur syntactically and/or semantically embedded in complement, adverbial and/or relative clauses. However, it will soon turn out that this matrix is much too simple. The acceptability of an evidential in complement clauses, for instance, may depend on the type of the matrix predicate or the type of complementation, and an embedded evidential may allow both unembedded and embedded interpretations.

4.2 Embedded evidentials: Typological overview

Embedded occurrences of evidentials did not receive much attention in the literature so far. Maybe that's because evidentials simply don't occur in embedded environments, one might speculate. After all, evidentials are very high operators, proven by the simple fact that they typically cannot scope under negation. In section 3 we've already encountered the view that evidentials operate at the speech act level and do not affect the propositional content. Since speech act operators cannot be embedded,[20] we expect evidentials to be unembeddable. And indeed, evidential markers are claimed to be unembeddable in many languages, including Abkhaz, Eastern Pomo, Turkic languages, Baniwa, Fasu and Quechua (Aikhenvald 2004, 253). But there is cross-linguistic variation, and many languages do allow evidentials in embedded contexts, on closer inspection even some of the languages just mentioned.

In the following we will concentrate on evidentials in complement clauses. Unfortunately, most descriptive grammars of languages with grammatical evidentials keep silent about the acceptability of evidentials in complement clauses. The most comprehensive overview to date spans merely four pages and can be found in section 8.1.3 of Aikhenvald (2004). The lists in (24) are based on her summary of the available findings, the only additions being Tibetan (cf. Garrett (2001)) and Bulgarian (cf. Sauerland and Schenner (2007)), for which the embeddability of evidentials has been shown in detail.

(24) a. Languages that do not allow evidentials in complement clauses:
Abkhaz, Eastern Pomo, Baniwa, Fasu, Chinese Pidgin Russian, Quechua, Panare, Jarawara, Tucano, Tariana

b. Languages that do allow evidentials in complement clauses:
Shipibo-Konibo, Estonian, Kombai, Qiang, Tibetan, Bulgarian

[20] That's a widely accepted assumption, cf. e.g. Green (2000), although it needs some qualification. The unembeddability of speech acts has recently been questioned in various frameworks, including formal semantics (Krifka 2001) and Functional Discourse Grammar, where it is assumed that complement clauses can be of a variety of types, including speech acts and even discourse moves (cf. Bastos et al. (2007)).

Clearly, these two lists only provide a very broad orientation. But they do make one point: The embeddability of evidentials is subject to cross-linguistic variation and thus not a completely trivial matter. In the next subsection, several substantial questions about embedded evidentials are listed that will help develop a more detailed typology of embedded evidentials.

In discussions of evidentials in complement clauses utterance predicates are dominantly used as embedding operators. This allows us to directly contrast languages that do allow evidentials in indirect speech complements, like St'át'imcets (cf. (25-a)) or Lezgian (cf. (25-c)), and languages that do not, like Cuzco Quechua (cf. (25-b)). Notice that the grammatical version of the Cuzco Quechua example does contain an instance of the reportative marker *-si* on the embedded verb. However, Faller (2002) argues that the marker is part of the main clause in this position.

(25) a. tsut kw s-Lémya7 kw sqwemémn'ek **ku7** s-Mary
say DET NOM-Lémya7 DET pregnant REP NOM-Mary
'Lémya7 said that Mary is pregnant.' (Matthewson et al. 2007)

b. Marya ni-wa-rqa-n Pilar-(***si**) chayamu-sqa-n-ta-**s**
Marya say-1O-PST1-3 Pilar-(*REP) arrive-PP-3-ACC-REP
'Marya told me that Pilar arrived.' (Faller 2002, 222)

c. Gzaf čir xu-n, aq'ullu insan-r.i
much know ANTIC-MSD smart person-PL(ERG)
luhu-zwa-j-wal, zarar ja-**lda**
say-IMPF-PART-MAN harm COP-REP
'As smart people say, knowing too much is harmful.' (Aikhenvald 2004, 32)

If a reportative evidential is embedded under an utterance predicate, as in all of these examples, two kinds of interpretation are conceivable. First, a *concord reading*, where the evidential does not make any contribution on its own, but only harmonically supports the meaning of the utterance predicate.[21] This reading is clearly intended in (25-c). Second, an *assertive reading*, where the evidential introduces a report on its own, in addition to the report denoted by the utterance predicate. The reportative markers in St'át'imcets and Cuzco Quechua allow for both readings. However, since the reportative marker cannot be embedded in Cuzco Quechua, the only assertive reading available is one, where the evidential has scope over the utterance predicate (the speaker was told by someone else that Marya told the speaker that Pilar arrived). This supports Faller's argument that the clause-final *-si* in (25-b) is part of the matrix clause. In St'át'imcets, by contrast, the utterance predicate may have scope over the reportative evidential, if the latter occurs in the complement clause of the former. These data are taken to show that for Cuzco Quechua evidentials, a speech-act level analysis is appropriate, whereas evidentials in St'át'imcets should receive

[21] Similar phenomena in English are discussed under the headings 'mood-indicating modals' and 'modal concord' by Portner (1997), Geurts and Huitink (2006) and Zeijlstra (2007).

a propositional-level analysis.

We conclude that the embeddability of evidentials is subject to cross-linguistic variation. There are some recent discussions about the embeddability of evidentials under utterance predicates in the formally oriented literature, but no in-depth studies of the general effects of embedding evidentials. In the next section, a number of issues are listed that such studies should address.

4.3 Questions about embedded evidentials

Aikhenvald (2004, 385–390) provides a very useful "Fieldworker's Guide" for gathering information about evidentiality systems. In the section on "Evidentiality and other grammatical categories" the following question is listed: "Are evidentials used in dependent clauses of any type?". Our goal here is to elaborate on this question, since there is more to test about embedded evidentials than their mere acceptability in various environments.

Since languages differ in their types of complex sentential constructions, we cannot build a universal questionnaire that's applicable to every language. One has to know about the kinds of embedding constructions a language possesses before one can systematically test for embedded evidentials. If, for instance, a language only allows for non-finite complementation and evidentials are fused with finiteness marking in this language, it will come as no surprise that evidentials cannot be embedded in complement clauses of this language (Turkish might be a case in point, cf. section 5). For the sake of concreteness, we will focus in the following on complement clauses, but is should be clear how to transfer the listed questions to other kinds of embedding constructions.

There are two main types of questions. First, we have to identify constraints on the *distribution* of embedded evidentials (e.g. under which types of clausal complement taking predicates they can occur). Second, we have to find out about their *interpretation* (e.g. whether they allow non-concord readings). Lets start with the first point. The acceptability of evidentials in complement clauses may depend on a variety of factors that have to be checked, including the ones in (26).

(26) **Distribution**

- a. Type of the (higher) embedding predicate(s): e.g. factive vs. non-factive
- b. Type of the complementizer
- c. Type of the complement clause: e.g. finite vs. infinite, declarative vs. interrogative
- d. Tense and aspect of the complement clause
- e. Tense and aspect of the higher clause(s)
- f. Discourse status of the higher clause(s): e.g. parenthetical vs. non-parenthetical
- g. Depth of embedding
- h. Presence of additional evidentials in the higher clause(s)

Of course, these factors are not totally independent from each other, but mostly due to language-specific properties of complementation structures. For instance, certain types of complementizers may require certain types of complement clauses, as we'll see in section

5.2 on Turkish complementation.

If an evidential ε can be shown to occur in complement clauses of an embedding predicate Φ, i.e. in the syntactic scope of Φ, then at least the semantic questions listed in (27) arise.

(27) **Interpretation**

a. Is ε interpreted in the scope of Φ?
b. How are the arguments of ε's evidential condition determined?
c. Can the arguments of ε's evidential condition be bound by a quantifier?
d. Can the arguments of ε's evidential condition be anaphorically resolved?
e. Does ε support concord readings?
f. Does ε support non-concord (assertive) readings?

Assuming that the predicate Φ takes a proposition as an argument, the question in (27-a) asks whether ε is contributing to this proposition. This need not be the case, the contribution of ε might well be scopeless (like conventional implicatures). The second question in (27-b) can be split into at least three parts. First, is the *evidence holder* resolved to the speaker, the subject argument of Φ or in some other way (e.g. to the highest subject argument in cases of multiple embedding)? This is the question about the shiftability of evidentials, prominent in recent discussions of embedded evidentials (cf. Garrett (2001), Sauerland and Schenner (2007)). Second, is the *evidence holding situation* resolved to the utterance situation, the situation argument of Φ, or is it resolved in some other way? Third, is the *target proposition* resolved to the proposition expressed by the complement clause or the matrix clause or in some other way? An interesting issue in this context is how complex the target proposition can be. Hengeveld (2006) argued that the target of reportative evidentials may contain epistemic modifiers, whereas the target of non-reportative (i.e. inferential or direct) evidentials may not.[22]

If the matrix subject is a quantified phrase, question (27-c) becomes relevant: Is there a reading in which the agent of the evidential condition is bound by the quantified subject phrase? For instance, are there structures of the kind in (28-a), where the embedded evidential indicates that *everybody* had EVID-type evidence that it was raining (or that *everybody* thought that there was EVID-type evidence that it was raining)? And if yes, are there constraints on the type of quantifiers that are permitted in such configurations that exclude, for instance, negative quantifiers as in (28-b).

(28) a. Everybody thought that it was raining-EVID
b. Nobody thought that it was raining-EVID

The questions in (27-e) and (27-f) test for the availability of concord readings, which have been discussed in section 4.2 for reportative evidentials under utterance predicates. Concord readings may arise with evidentials of any type, provided they are embedded under semantically similar predicates. These readings may also involve a certain degree of co-

[22]However, it's not clear how to handle indirective markers in languages like Bulgarian or Turkish that are compatible with both reportative and inferential readings, if a strict border is drawn between reportative and non-reportative evidentials.

ercion (as has been discussed for the German reportative subjunctive by Fabricius-Hansen and Sæbø (2004)).

Questions similar to the ones in (26) and (27) arise for evidentials embedded in relative clauses and adverbial clauses. Clearly, some additional factors will play a role, e.g. in the former case the distinction between appositive and restrictive relative clauses (evidentials may be easier to embed in appositive clauses, since they typically receive scope-less interpretations and are sometimes even treated as independent speech acts). In the latter case, various types of adverbial clauses may be distinguished that may behave differently regarding the embeddability of evidentials. In particular, the distinction between central and peripheral adverbial clauses advocated by Haegeman (2006) may play an important role here. With the notable exception of conditional clauses, prominent in the formal semantics literature to test for truth-conditionality, the behavior of evidentials in adverbial clauses has not been systematically studied so far.

5. Turkish

Turkish and Turkic languages in general are often claimed to lack evidential distinctions in complement clauses (cf. e.g. Aikhenvald (2004, 253)). The main point of this section is to contest (or at least qualify) this claim.[23]

5.1 Evidentials in Turkish

Two well-described evidential morphemes in Turkish are the indirective markers *-mIş*, a verbal suffix that also marks relative past tense and perfective aspect, and *(y)mIş*, a copular suffix that is a pure indirective marker with no tense or aspect content (cf. e.g. Göksel and Kerslake (2005, §21.4.3)). Their core meaning is the indication of *indirect* evidence, encompassing both reportative and inferential evidence, but they may additionally convey a mirative or dubitative component (Lazard 1999).

In the past tense Turkish speakers have to choose between the indirective marker *-mIş* and the non-indirective past tense marker *-DI*, as illustrated in (29).

(29) a. Ahmet gel-di.
Ahmet come-PAST
'Ahmet came.'
b. Ahmet gel-miş.
Ahmet come-INDR
'Ahmet apparently came.'

According to the traditional picture (Aksu-Koç and Slobin 1986), there is a one-to-one mapping between evidence type and linguistic marker. That is, *-DI* marks direct (firsthand) experience, whereas *-mIş* marks indirect experience, as shown in (30) (read '+' as 'is compatible with', '−' as 'is not compatible with'):

[23]This section is partly based on Schenner and Coşkun (2008). I'm indebted to Hatice Coşkun for her help in constructing examples and gathering native-speaker judgments as well as for providing (and translating) the corpus data cited in this section.

(30)

Aksu-Koç and Slobin (1986)	*-DI*	*-mIş*
direct experience	+	−
indirect experience	−	+

More recently, Johanson (2000, 2006) convincingly argued for an asymmetric division, as shown in (31), according to which *-DI* is an evidentially unmarked past tense marker and *-mIş* is a marked indirective marker. The marker *-DI* is not only used in evidentially neutral contexts (where the speaker doesn't care about about evidentiality), but also in contexts where it is clear that the speaker did not witness the reported event (e.g. in historic narratives).

(31)

Johanson (2006)	*-DI*	*-mIş*
non-indirective	+	−
indirective	+	+

Another difference to the traditional picture is Johanson's use of a notion of *indirectivity* that must not be conflated with indirectness of experience or non-firsthand information. Johanson (2006) provides the following definition: "A content marked for indirectivity is characterized by reference to its reception by a conscious subject." As a consequence, indirectivity is not tied to any specific type of source of information. Johanson stresses that Turkish indirectives are equally compatible with reportative, inferential and even perceptual evidence.

In section 3.2 several tests were mentioned that were used to distinguish propositional from illocutionary operators. The results of applying the tests to Turkish *-mIş* and *(y)mIş* partly suggest an illocutionary analysis of these elements (cf. Schenner and Coşkun (2008)). For instance, *-mIş* may be used if the proposition expressed is known to be true, a clear case in point being the perceptual uses mentioned in Johanson (2006), e.g. (32).

(32) Burnun kanamis
nose-POSS.2.P.SG bleed-INDR
'Oh, your nose has bled [as I see].' (Johanson 2006)

It's more difficult to come up with clear examples where the proposition expressed is known to be false. A sentence of the form '*ϕ–mIş and not ϕ*', as in (33-a), sounds odd, unless another reportative element is added, e.g. the adverbial *güya* 'allegedly' in (33-b) or *Ali'ye göre* 'according to Ali' in (33-c).

(33) a. # Yağmur yağ-ıyor-*muş*, ama yağ-mı-yor.
rain rain-PRES-3SG-INDR but rain-NEG-PRES-3SG
'*I heard/infer that* it is raining; but it is not raining.'

b. *Güya* yağmur yağ-ıyor-*muş*, ama yağ-mı-yor.
allegedly rain rain-PRES-3SG-INDR but rain-NEG-PRES-3SG
'It is *allegedly* raining; but it is not raining.'

c. *Ali'ye göre* yağmur yağ-ıyor-*muş*, ama
Ali-DAT according to rain rain-PRES-3SG-INDR but

yağ-mı-yor.
rain-NEG-PRES-3SG
'*According to Ali* it is raining; but it is not raining.'

Lets turn to the embeddability properties of the Turkish evidentials. First, it comes as no surprise that *-mIş* and *(y)mIş* cannot scope under negation, as illustrated in (34), almost a universal property of evidentials (but cf. Aikhenvald (2004, 256)).

(34) Ali parti-ye gel-mi-yor-muş.
Ali party-DAT come-NEG-PRES-INDR-3SG
= '*I heard/infer that* it is not the case that Ali is coming to the party.'[INDR > NEG]
≠ 'It is not the case that *I heard/infer that* Ali is coming to the party.'[*NEG > INDR]

With respect to embeddability in a general sense, a more complex picture emerges. Indirective *-mIş* can be used in indicative and interrogative, but not in imperative root clauses. Further it is uncontested that *-mIş* and *(y)mIş* may occur in certain dependent clauses, for instance in various types of adverbial clauses, as illustrated in (35-a) for conditionals and in (35-b) for causal adverbial clauses.

(35) a. <Ev-i beğen-miş-se> hemen kirala-r.
house-ACC like-INDR-COND-3SG immediately rent-AOR-3SG
'If he likes the house (*as I heard/infer*), he will immediately rent it.'
b. Ali <sınav-ı-nı geç-eme-miş diye> çok üzgün.
Ali exam-3SG-ACC pass-IMPOSS-PERF/INDR-3SG COMP very sad
'Ali is very sad, because he didn't pass his exam (*as I heard/infer*).'

In contrast, there are very strict claims that *-mIş* cannot occur in complement clauses. In particular Johanson (2006) argues that "Turkish lacks [...] the possibility of embedding indirective clauses" since "Turkic evidentials are limited to main clauses with a stated, contradictable content. Oppositions with respect to indirectivity are not possible in embedded clauses." The table in (36) summarizes these observations about the clause type distribution of the Turkish indirective markers *-mIş* and *(y)mIş*.

(36)

root clauses			dependent clauses		
indicative	interrogative	imperative	complement	adverbial	relative
+	+	−	(−)	+	+

In section 5.3 we will argue for a qualification of this pattern. In particular, there is no strict ban on evidentials in complement clauses in Turkish. In certain types of complement clauses we do find evidentials even in Turkish. In order to see this, some general background on complementation in Turkish is required.

5.2 Complementation in Turkish

Canonical complementation structures in Turkish involve infinite clauses which can be indicative (factive), e.g. with the subordinating suffix *-DIK*, or subjunctive (non-factive), e.g. with the subordinating suffix *-mA*.[24] In addition to these infinite complementation types, Turkish also allows for *finite* complement clauses, introduced by the complementizer *ki* or *diye* or without any complementizer. Finite complementation in Turkish is subject to various restrictions. Most importantly, these structures are largely confined to informal styles of speech and writing (Göksel and Kerslake 2005, 405) and require certain types of embedding predicates (mainly verbs of communication or cognition).

Finite complement clauses introduced by *ki* show a number of interesting properties. They do not allow for recursion, that is, they typically cannot be embedded in embedded clauses, whereas all other types of complement clauses can (cf. Göksel and Kerslake (2005, 404, 409)). The complementizer *ki* is borrowed from Persian, including its word order: Unlike other complementizers in Turkish, *ki* precedes its complement (cf. Johanson (1992, 254–255)). Pragmatically, *ki* has the effect of backgrounding the embedded clause and highlighting the matrix clause, which is rarely interrogative or negative. It can introduce both direct and indirect speech, as illustrated in (37-a) and (37-b).

(37) a. Bana genellikle de-n-iyor-du ki: “Sen küçük-sün,
me in general tell-PASSIVE-PAST-3SG COMP you small-2SG
gel-emez-sin”.
come-impossible-2SG
‘I was usually told: “You’re too young; you can’t come”.’
(Göksel and Kerslake 2005, 410)

b. Bütün çocuk-lar san-ıyor <ki baba-ları hemen
all child-PL think-PRES-3SG COMP father-3PL immediately
dön-ecek>.
come-back-FUT-3SG
‘All children think that their fathers will be back immediately.’

Kornfilt (2003) distinguishes three structurally distinct types of complement clauses in Turkish. First, subjunctive infinite complement clauses (sub-ICC) that cannot bear tense or aspect (or evidentiality) marking, but do bear case-marking. Second, indicative infinite complement clauses (ind-ICC) that are similar to sub-ICCs, but allow for a restricted set of TAM markers. Third, finite complement clauses (FCC) that lack case marking, but show the full range of TAM marking, just like independent clauses. Kornfilt (2003) argues that FCCs are fully verbal and thus headed by only verbal functional categories (CP-layer), whereas sub-ICCs are fully nominal, headed by only nominal functional categories (DP-layer). In between are ind-ICCs that involve both verbal and nominal functional layers. The syntactic analysis of Kornfilt (2003) is summarized in (38).

[24] This section is mainly based on Kornfilt (2001, 2003) and Göksel and Kerslake (2005).

(38)

	type	verbal morph.	nominal morph.	structure
FCC	fully verbal	full TAM	bear no case	$[_{CP} \dots]$
ind-ICC	hybrid	restricted TAM	case-marked	$[_{DP} \dots [_{CP} \dots]]$
sub-ICC	fully nominal	no TAM	case-marked	$[_{DP} \dots]$

5.3 Evidentials in complement clauses in Turkish

Having distinguished three structurally distinct types of complement clauses in Turkish, we can now investigate their capabilities of embedding evidentials. The verdict that "Turkish lacks [...] the possibility of embedding indirective clauses" (Johanson 2006) turns out to be absolutely correct for canonical – that is, infinite – complementation structures. This is also fully expected on the analysis of Kornfilt (2003): (Sub-)ICCs lack a CP level and thus leave no room for verbal evidential markers. However, this does not imply that there is a strict ban on evidentials in all types of complement clauses in Turkish. In fact, all types of FCCs easily allow for indirective markers, as illustrated in (39) for *ki*-FCCs, in (40) for *diye*-FCCs and in (41) for bare FCCs.[25] The example in (40-a) is taken from Kornfilt (2003), where it is used as an illustration of finite complementation in Turkish. The examples in (39-c) and (40-b) show that not only *-mIş* but also the purely indirective marker *(y)mIş* can occur in embedded clauses. The indirective markers can occur in both object clauses and subject clauses (cf. (39-b), (39-c) for the latter) and in both declarative and interrogative clauses (cf. (40-b) for the latter).

(39) a. Öğren-d-ik <ki aşk aslında sadece gönül yarası
learn-PAST-1PL COMP love in effect only heart-pain
bırak-ır-mış>.
leave-AOR-INDR-3SG
'We found out that love *apparently* only leaves pain behind.'
www.eczantrik.com/forum/showthread.php?p=120884

b. Yine ortaya çık-t-ı <ki pek çok şirket-te kayıt-lar
again emerge-PAST-3SG COMP many company-LOC registration-PL
doğru dürüst tut-ul-ma-mış>.
correctly correctly perform-PASS-NEG-PERF/INDR-3SG
'It emerged that in many companies the registration *apparently* wasn't correctly carried out.'
www.radikal.com.tr/haber.php?haberno=202867

c. Yazık <ki adam çok hasta-ymış>.
pity COMP man very sick-INDR-3SG
'It's a pity that the man is *apparently* very sick.'

(40) a. <Sen dün sabah ev-de yemek
you[sg.] yesterday morning home-LOC food
pişir-iyor-muş-sun diye> duy-du-m
cook-PROGR-REP.PAST-2.SG COMP hear-PAST-1.SG

[25] More examples with various types of matrix predicates are given in Schenner and Coşkun (2008).

'I heard that you were cooking food at home yesterday morning.'

b. <Kitap-tan para kazan-ıl-ıyor mu-ymuş diye> sor-d-um.
book-ABL money earn-PASS-PRES INTR-INDR-3SG COMP ask-PAST-1SG
'I asked whether one can earn money with a book.'
www.tunakiremitci.com/basin.asp?id=17

(41) Ali, <Ahmet-i gel-miş> mi san-ıyor?
Ali Ahmet-ACC come-INDR-3SG INTR think-PRES-3SG
'Does Ali think that Ahmet *apparently* has come?'

Interestingly, there are claims in the literature that indirective *-mIş* can even occur in certain types of *infinite* embedded clauses. In particular, Schroeder (2000) mentions constructions with the converbal suffix *-CEsInE*, as in (42-a), and constructions with the postposition *gibi*, as in (42-b).

(42) a. Bir zafer kazan-mış-casına sevinçli-ydi.
a victory win-INDR-CONV pleased-DPST-3SG
'He was as pleased as if he had won a victory.' (Schroeder 2000, 132)

b. Kolonya-sı-nın alkol-ü düşük ol-duğ-u halde
aftershave-POSS-GEN alcohol-POSS low be-PRT-POSS though
yüz-üm şapla-n-mış gibi yan-ıyordu.
face-POSS-1SG smack-PASS-INDR like burn-IMPF-3SG
'Even though there was not much alcohol in the aftershave lotion, my face burned as if it had been smacked.' (Schroeder 2000, 133)

However, closer inspection reveals that *-mIş* cannot have an *indirective* meaning in these examples. Csató (2000, 34), in a similar context, correctly points out that "the synchronic meaning of these forms is not indirective but counterfactual". This observation is important for all claimed occurrences of *-mIş* in unexpected contexts, including our own examples of *-mIş* in embedded finite clauses. We therefore made sure to include examples with the purely indirective marker *(y)mIş*, where the evidential component is uncontroversial. However, more research on synchronic non-indirective uses of *-mIş* is needed to clarify the status of examples like (42-a) and (42-b).

To sum up, Turkish indirectives can occur in complement clauses, but only in finite ones. The basic distributional facts are summarized in table (43).

(43)

	ki-FCC	*diye*-FCC	bare FCC	ind-ICC	sub-ICC
-mIş	+	+	+	−	−
(y)mIş	+	+	+	−	−

There are various conceivable lines of explanation, ranging from purely morphosyntactic to semantic or even pragmatic approaches. Here is an attempt of a pragmatic explanation that requires only two basic ingredients. First, the assumption that Turkish indirectives can only occur in *assertive* contexts (cf. Johanson (2000)). Second, the assumption that finiteness and assertiveness are linked in Turkish. In particular, finite clauses (including

finite complement clauses) are assertive, whereas non-finite clauses are non-assertive. Evidence for this assumption comes from the observation that finite complement clauses in Turkish are only licensed by certain types of embedding predicates – typically predicates of type A, B or E in the influential classification of Hooper and Thompson (1973) in (44). These predicates have been characterized as being *assertive*. Related reflections of the split between ABE- and CD-type predicates are embedded root phenomena (e.g. German embedded verb-second clauses) and parentheticals (which are typically required to be non-negative or assertive).

(44) Classification of complement taking predicates (Hooper and Thompson 1973):

A	strongly assertive	*say, report, exclaim, assert, claim, vow, be true, be certain, be sure, be obvious*
B	weakly assertive	*suppose, believe, think, expect, guess, imagine, it seems, it happens, it appears*
C	non-assertive	*be (un)likely, be (im)possible, be (im)probable, doubt, deny*
D	factive	*resent, regret, be sorry, be surprised, bother, be odd, be strange, be interesting*
E	semi-factive	*realize, learn, find out, discover, know, see, recognize*

In combination with the results of the truth-conditionality tests mentioned in section 5.1, this suggests an analysis of Turkish indirectives as illocutionary operators. This would immediately explain their restriction to assertive contexts. However, there are some obstacles to this approach that require further research. One potential problem not yet mentioned is that Turkish embedded evidentials allow for both concord and cumulative readings in examples like (45), just as languages with propositional-level evidentials like St'át'imcets (cf. sec. 4.2) or German (cf. sec. 6.2). Still, this is no knock-down argument, since we could also account for the cumulative readings by assuming that assertive embedding predicates can take whole speech acts as arguments.

(45) a. Ali de-d-i <ki Maria dün bir şiir yaz-mış>.
Ali say-PAST-3SG COMP Maria yesterday a poem write-INDR-3SG
'Ali said that Maria (*apparently/reportedly*) wrote a poem yesterday.'

b. Ali, <Hasan eski model-ler-i gör-müş diye> bil-iyor.
Ali Hasan old models-PL-ACC see-INDR COMP think-PRES-3SG
'Ali thinks that Hasan (*apparently*) saw the old models.'

To conclude, we have shown that the widely accepted claim that evidentials cannot occur in complement clauses in Turkish has to be qualified. While it is true that canonical infinite complement clauses (structurally DPs) do not permit the indirective markers *-mIş* and *(y)mIş*, there are no such restrictions for finite complement clauses. The acceptability of evidentials in the latter type of clauses (*ki-*, *diye-* and bare finite complement clauses) has been linked to the fact that they are semantically restricted to assertive embedding predicates. Thus our results support the generalization of Johanson (2000) that Turkish

indirectives can only occur in assertive contexts.

6. German

German is one of the least likely languages one thinks of when talking about evidentiality. However, even if we restrict our notion of an 'evidential' from section 2 to *grammaticalized* means of expressing the type of source of information, we can find several expressions in German that seem to fit this description. The availability of reportative evidence can be conveyed by the modal verbs *sollen* 'should' and *wollen* 'want', inferential evidence may be indicated by means of the evidential constructions *scheinen* 'seem', *drohen* 'threaten', *versprechen* 'promise' plus *zu*-infinitive and *werden* 'become' plus infinitive. Diewald and Smirnova (2008) even argue that the latter four constructions build a paradigm in present-day German. This section will focus on the reportative modal verbs (cf. sec. 6.1), especially on some of the complexities involved when they occur in embedded contexts (cf. sec. 6.2).

6.1 Evidentials in German: Reportative *sollen*

The German modal verb *sollen* 'should' systematically allows for both a circumstantial (deontic) and an evidential interpretation, as illustrated in (46). This kind of polyfunctionality is a characteristic property of all German modal verbs (cf. e.g. Reis (2001)), although the non-circumstantial reading is typically epistemic rather than evidential in nature.

(46) Anna soll im Garten sein
Anna should in.the garden be
Circumstantial reading: 'Anna should be in the garden (in view of her obligations)'
Evidential reading: 'It is said that Anna is in the garden'

The use of *sollen* is never obligatory, even if it is clear that the speaker only has reportative evidence, as in B's first utterance in (47).

(47)

A:	Wo ist Maria?	'Where is Maria?'
B:	Sie ist nach Paris gefahren.	'She went to Paris.'
A:	Woher weißt du das?	'How do you know?'
B:	Peter hat es mir erzählt.	'Peter told me.'

It is sometimes argued that *sollen* conveys a certain degree of doubt or skepticism on part of the speaker. However, one has to carefully distinguish between the degree of speaker commitment and the speaker's probability judgment. The latter may be expressed by epistemic modals (cf. figure (3) on p.4) or special dubitative markers in some languages. We've seen in section 2.1 that evidentials can come without such epistemic overtones, and German *sollen* is a clear case in point. A speaker may use this reportative device even if he is fully convinced that the embedded proposition is true (cf. Mortelmans (2000) for a related corpus study). The point of using *sollen* is not to indicate doubt, but to shift responsibility: The speaker is not committed to the truth of the embedded proposition, but only to the existence of a relevant report by someone else.

Based on our definition in (4) we can formulate the evidential condition conveyed by *sollen* in the following way:

(48) x has in s evidence of type REPORT for the truth of p

Note that this condition need not exhaust the evidential contribution. Reports are communication events that typically have authors and addressees that can be made explicit in a sentence, the former for instance by adverbials headed by *laut* 'according to' in German:

(49) Anna soll laut Bea im Garten sein
Anna should according.to Bea in.the garden be
'According to Bea, Anna is in the garden.'

The results of applying the tests from section 3.2 to reportative *sollen* clearly support a propositional-level analysis (cf. Faller (2006b), Schenner (2008)). For example, *sollen* can be embedded in the antecedents of conditionals or in complement clauses of utterance predicates, as we shall see in section 6.2. Among the propositional analyses we mentioned an important distinction between MODAL and WEAK approaches in section 3.2. A crucial piece of evidence in favor of the latter type of approach in the case of *sollen* is given in (50) (taken from Haider (2005, 285)). The example shows that *sollen* can be used when the embedded proposition is known to be false.[26]

(50) Er soll, was aber nicht stimmt, in Harvard studiert haben
'It is said that he studied in Harvard, but this is not true'

Ehrich (2001, 168) sketches a formal account of *sollen* that has the appropriate characteristics. A lexical entry based on her proposal is given in (51). Note that even though the semantics utilizes quantification over possible worlds, in the terminology of section 3.2 this approach is not a *modal* but a *weak* one due to the reportative (not epistemic) nature of the modal base.

(51) $[\![soll]\!]^w = \lambda p.$[for every world $w'Rw$ in which the claims of x_c in w are true, it holds that $w' \in p$] (where x_c is understood as the contextually supplied source of the relevant claims)

This entry correctly predicts the properties of *sollen* mentioned above. A noteworthy peculiarity of this entry is the built-in reference to the original source of the reported claim.

[26] It is less clear whether it is felicitous to use *sollen* when the embedded proposition is known to be true, but in this case additional pragmatic factors are in play, e.g. the pressure to base contributions on the best evidence available (cf. the last paragraph in sec. 3.3). A felicitous use of *sollen* when the embedded proposition is known to be true might require special contexts, where the reportative component is foregrounded, as in the following dialog:

(i) A: Was wird über ihn erzählt?
'What is being told about him?'
B: Er soll, was auch stimmt, in Harvard studiert haben.
'It is said that he studied in Harvard, and in fact that's true.'

While it is possible to explicitly specify the source, as in (49), there are many uses of *sollen* where not even the context supplies a definite source. These rumor-like readings probably involve some sort of quantification over communication events in some contextually salient spatiotemporal region (cf. Schenner (2008)). In the following, we will ignore this complication.

6.2 Embedded evidentials in German

The lexical entry in (51) predicts that reportative *sollen* can be embedded in clausal complements and keep its normal semantics. This prediction is only partly borne out, though. As has been shown in detail in Schenner (2008), both acceptability and interpretation of embedded occurrences of *sollen* depend on a variety of factors, including the type of complement taking predicate and the discourse status of the matrix clause.

Three interpretations of embedded reportative *sollen* have to be distinguished. First, the *assertive* reading predicted by the entry in (51). This reading is predominantly found under factive and semifactive predicates, as in (52-a). Second, a *concord* reading, where the embedded reportative does not make any contribution of its own, but only reinforces a reportative embedding predicate, as in (one reading of) (52-b). This reading is restricted to complement clauses of communication predicates and has already been discussed for other languages in section 4.2. Third, a *global* reading, where the evidential component of *sollen* essentially behaves like a conventional implicature in the sense of Potts (2005) in being interpreted at the global level, outside the scope of the embedding predicate. This latter reading is mostly limited to denial and doubt predicates, as in (52-c).

(52) a. Anna weiß, dass die Frau bereits im Ausland sein *soll*
'Anna knows that *it is said that* the woman is already abroad'
b. Anna erzählte, dass Bernhard seinen Scheck zurückgeschickt haben *soll*
'Anna said that Bernhard sent back his check'
c. Es ist schwer zu glauben, dass Bernhard der Vater dieses Kindes sein *soll*
'It is hard to believe that Bernhard is the father of this child (*as it is alleged*)'

There are two main options for revising the analysis of *sollen* proposed in (51), both discussed in greater detail in Schenner (2008). First, *ambiguity* analyses that treat reportative *sollen* as lexically ambiguous between these readings. Second, *non-ambiguity* analyses that try to derive the various readings from a single lexical entry. In the following we will explore a novel non-ambiguity approach different from the presupposition-based variant discussed in Schenner (2008).

Our starting point is the following analysis of two readings of reportative *sollen* in the framework of Potts (2005). The assertive (non-parenthetical) interpretation is given in (53-a), the global (parenthetical) interpretation is given in (53-b). Here '$\Delta(p)(x_c)(w)$' stands for 'x_c claims in w that p', a simplified evidential condition for *sollen* in the spirit of (51).

(53) a. $sollen_1 \rightsquigarrow \lambda p \lambda x_c \lambda w.[\Delta(p)(x_c)(w)] : \langle\langle s^a, t^a\rangle, \langle e^a, \langle s^a, t^a\rangle\rangle\rangle$
b. $sollen_2 \rightsquigarrow \lambda p \lambda x_c \lambda w.[\Delta(p)(x_c)(w)] : \langle\langle s^a, t^a\rangle, \langle e^a, \langle s^a, t^c\rangle\rangle\rangle$

The difference between (53-a) and (53-b) is that the assertive entry (53-a) contributes the reportative component to the at-issue content, while the parenthetical entry (53-b) contributes it as a conventional implicature.

The next step is to derive the parenthetical interpretation from the assertive one. In a sense we need a *parentheticalizer*, an operator that type-shifts the at-issue content of $sollen_1$ to the CI content of $sollen_2$. The basic format of such a backgrounding operator, call it BGRDER, is given in (54). Its exact semantics depends on additional factors that are irrelevant for the current discussion, but it should be clear how to proceed. Another instance of such an operator is the COMMA feature, in the analysis of Potts (2005), that is responsible for *parentheticalizing* the contribution of supplemental expressions (e.g. appositives).

(54) BGRDER $\rightsquigarrow \lambda X \lambda x.X(x) : \langle\langle \sigma^a, \tau^a\rangle, \langle \sigma^a, \tau^c\rangle\rangle$

In order to render this account explanatory, we have to motivate restrictions on the placement of the BGRDER in the semantic structure. Unlike with COMMA, there is no associated phonological component that helps us identify the presence of the operator. Here are two principles that might guide the positioning of the BGRDER:

(55) a. Do not commit the speaker to p if she uttered '$\ldots soll(p)\ldots$'
b. Prefer the strongest meaning, i.e. use the BGRDER whenever possible

The first principle correctly predicts that unembedded occurrences of *sollen* and occurrences under factive predicates can only receive an assertive interpretation. The second principle is responsible for deriving the global (and possibly also concord) readings in the other cases. Obviously the first principle has to be ranked higher than the second (e.g. to prevent occurrences of the BGRDER in root clauses).

The main advantage compared to a presuppositional account is that we do not need to rely on a mechanism of local accommodation in the unembedded cases. Still, this advantage does not come for free. The BGRDER account has to posit a hidden operator that threatens to lead to serious overgeneration, unless carefully crafted and motivated principles can be formulated that regulate its distribution.[27] For example, it's not at all clear how to account for the fact that reportative *sollen* requires an assertive reading in indirect questions, or for the ambiguity between assertive and concord readings under communication predicates.

In addition, there are types of examples that are problematic for all accounts based on purely non-epistemic entries for reportative *sollen*. These are cases of *sollen* in factive complement clauses like in (56). What makes Werther feel wretched is neither the fact that there *are* such people, nor the fact that *it is said that* there are such people, but rather that there *probably are* such people.

[27] A possible independent motivation for an operator like the BGRDER comes from examples like (i), discussed in Lakoff (1974). Here we have a similar situation where the embedding predicate *obvious* is transparent for the head of the adverbial clause.

(i) The Knicks are going to win, because *it's obvious* that the Celts can't handle Frazier.

(56) Man möchte rasend werden, Wilhelm, daß es Menschen geben soll ohne Sinn und Gefühl an dem wenigen, was auf Erden noch einen Wert hat.
'It makes me wretched, Wilhelm, to think that there should be men incapable of appreciating the few things which possess a real value in life.'
(from Goethe's *Die Leiden des jungen Werther*, translation from `http://www.gutenberg.org/dirs/etext01/sywer11.txt`)

In order to account for such examples, we have to allow for an epistemic component in the meaning of reportative *sollen*. Since this weakening only affects the embedded clause in cases like (56), an approach in terms of illocutionary strength or quality thresholds (Davis et al. 2007) cannot be applied, at least not straightforwardly. Resorting to standard treatments of epistemic modality, on the other hand, leads to unwelcome predictions in other cases (e.g. in (50)).

In sum, the BGRDER approach is a valid, but not superior competitor to the presuppositional variant of the non-ambiguity approach to reportative *sollen* (discussed in Schenner (2008)). At present, neither account can fully explain this expression's complex behavior in embedded contexts. It is likely that an adequate explanation of the distributional facts will require reference to the conversational structure, including the current discourse topic. A presupposition-based approach comes well equipped for this kind of discourse sensitivity, especially if it's embedded in a broader theory of discourse structure like SDRT (Asher and Lascarides 1998). However, we probably won't escape the need for positing a specific *projection profile* for reportative elements (maybe evidential expressions in general), and it remains to be seen whether the resulting explanatory strength can outperform rival approaches.

7. Conclusion

We have argued that semantic theories of evidentiality are likely to be incomplete, unless they take occurrences of evidentials in embedded contexts into account. In section 2 we started by characterizing evidentials as expressions whose main function is to convey an evidential condition with background status, where an evidential condition is roughly a proposition of the form 'agent x has in situation s evidence of type i that proposition p is true'. Next, in section 3, we identified important properties of evidentials that are especially relevant for evaluating embedded occurrences, notably the flexible determination of the arguments in the evidential condition and the additional effect of *strength modulation*.

In section 4 we finally zoomed in on *embedded* evidentials. After distinguishing various types of embedding in section 4.1, a typological overview of embedded evidentials was presented in section 4.2, unfortunately rather short due to a serious lack of available data in the literature. We then formulated a set of questions in section 4.3 that should ideally be addressed in research on embedded evidentials.

The final two sections discussed in somewhat more detail embedded evidentials in Turkish and German. Turkish is one of the languages for which it has long been claimed that evidentials cannot be embedded at all. We argued in section 5 that this claim has to be qualified: While canonical infinite complement clauses do indeed disallow the verbal

indirective markers under consideration, this is not true for other types of complementation, including finite *ki-*, *diye-* and bare complement clauses. Finally we turned to German in section 6 that possesses several grammaticalized means of expressing the type of source of information. The modal *sollen* 'should' in its reportative reading was shown to be embeddable, albeit subject to various restrictions. Embedded occurrences allow for at least three distinct types of interpretation whose availability again depends on a variety of factors, including the type of the embedding predicate. Predicting the correct reading in all environments poses a serious challenge for all current theories of the semantics of German modal verbs.

It is obvious that the previous sections could only scratch the surface of the wide and largely unexplored topic of embedded evidentials. Still, it should have become clear that embedded occurrences of evidentials are worth a closer look, especially from a semantic perspective.

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On what has been said in Tagalog: Reportative *daw*[*]

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1. Introduction

One of the main functions of human language is the exchange of information. Grammatical elements that indicate the source of information are called evidentiality markers (cf. Aikhenvald 2005). Their systematic study has begun only rather recently, and the analyses proposed differ considerably. But this seems to be faithful to the underlying facts: detailed investigation suggests that the encoding of information source differs considerably across languages. For anyone interested in questions of learnability, this should raise considerable worries. How many different mechanisms are employed by natural languages? Do they have anything in common? In this paper, I add a further language from a language family that has hitherto not received systematic study for encoding of evidentiality, namely the Austronesian language Tagalog. I will argue that it shows evidentiality marking which, even is syntactically realized by a particle, is semantically similar to the reportative modal *sollen* in German. I will first explain some basics about Tagalog grammar in general and with respect to evidentiality marking. I will then present the main types of evidentiality analyses currently available, and discuss in how far they are applicable to Tagalog. In the end, I will come up with a presuppositional analysis for Tagalog reportative *daw* which renders it similar to reportative strategies in Bulgarian and German in general (as presuppositional) and, in particular, to the German modal verb *sollen* (in terms of what is the actual semantic impact). Yet, the match is not perfect. I propose an analysis that is fine-grained enough to capture the remaining differences.

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2. A Brief Introduction to Tagalog

2.1 Tagalog in General

Tagalog is an Austronesian language spoken in the Northern part of the Philippines (central and southern Luzon, around Manila); together with English, it is the official language of the Republic of the Philippines. The vocubulary displays a strong Spanish influence, but nowadays English has the main impact. Noteworthy, there is a high acceptance of mixing English and Tagalog (known as Taglish).

Tagalog is a predicate-initial language, else, word-order is relatively free. Predicates can be verb phrases, adjective phrases, prepositional phrases, or noun phrases. Noun phrases in non-predicate position are preceded by 'articles' that mark them as nominative (*ang*), genitive (*ng*) and dative (*sa*), plural is marked by adding *mga* (cf. Kröger 1993).[1] Tagalog is well-studied for its rich verbal inflection. With Schachter and Otanes (1972), I assume that verbs are inflected for aspect, but not tense, and distinguish PERFECTIVE, IMPERFECTIVE, and CONTEMPLATED aspect. Moreover, we find infinitives (which are also used as the main verb in imperative clauses), as well as verbal roots (used in imperative clauses exclusively). Furthermore, the system opposes agent focused verbal forms (AGF), where it is the agent that carries the nominative marker, and various non-agent focused verbal forms (GOALF). In the latter case, depending on the verbal form, the nominative marked constituend can be the patient (object focus, OBJF), the location/indirect object (directional focus, DIRF), the beneficient (BENF), etc. A particular element called linker *na/-ng* (LK) marks agreement within a phrase or functions as a finite (declarative) or infinite complementizer.

2.2 Evidentiality in Tagalog

Tagalog does not have a fully grammaticalized evidential system. As in English, marking of evidential source is not obligatory. A plain declarative sentence involving any of the verbal forms does not carry any commitment as to how the information has been gained. It only commits the speaker to be convinced of the truth of what he is saying. The English dialogue in (1) can be translated directly as exemplified in (2-e). A's opening statement in Tagalog is equally open to possible justifications as its English counterpart in (1).

(1) A: Tina is at home, you can call her.
B: How do you know?
A: She told me she'd be there now./Magda told me she'd be there now./I just called her on the home phone./I can see her sit up there on the balcony./She's usually at home at that time./...

(2) A: Nasa bahay si Tina, puwede mo siyang tawagan.
at home the Tina, can you.GEN she.NOM-LK call

[1] These forms are used for common nouns exclusively. With proper nouns, we find *si/ni/kay* in the singular and *sina/nina/kina* in the plural. The status as case markers is highly controversial, but entirely irrelevant to my concern here.

'Tina is at home, you can call her.'
B: Paano mo nalaman? - A:

a. Sinabi kasi niya sa akin na nandoon siya ngayon.
say.OBJF-PFV because she.GEN to me LK was-there she.NOM today

b. Sinabi kasi sa akin ni Magda na nandoon siya ngayon.
say.OBJF-PFV because to me.DAT the.GEN Magda LK was-there she today

c. Tinawagan ko lang siya ngayon sa telepono.
call.DIRF-PFV me.GEN just she.NOM now on telephone

d. Nakikita ko siya ngayon na naka-upo sa balkonahe.
see.OBJF-IMPFV me.GEN she.NOM now LK get-seated.AGF-PFV on balcony

e. Madalas na nasa bahay siya ng ganitong oras.
often LK in house she.NOM at these hours

The source of information was left unspecified in A's original utterance, upon B's request, A uses lexical material to specify what it was. But Tagalog also has a rich particle system (about 18, cf. Schachter and Otanes 1972, Bader, Werlen, and Wymann 1994), three of which are related to the marking of source of information. Tagalog particles usually occur in a designated position following the clause-initial predicate. As far as their semantics permits it, more of them can co-occur and their order is determined by phonological factors. The particles that relate to the source of information are the 'reportative marker' *daw*, as well as the 'speculation markers' *yata* (in statements) and *kaya* (in questions and imperatives; in statements, *kaya* means 'therefore'). For Philippino languages in general, Aikhenvald (2005) cites Ballard (1974) who describes them as 'reportative vs. rest'. This seems to single out the marker *daw* as indicating reportative evidence vs. non-*daw*-marked, non-reportative evidence. But that is too strong: as we have seen in (2-e), *daw* need not be used if the speaker relies on reportative evidence only, and, conversely, absence of *daw* does not indicate that the source for the expressed information is non-reportative in nature. Moreover, we will see a usage of *daw* that marks dependence on an operator of a certain type, and not that the proposition it modifies has been asserted by some reportative source or other. On first inspection, *kaya* and *yata* display interesting similarities with *daw*; all three particles and their interplay merit closer investigation, of course. But for the time being, I will confine my interest to *daw*. In particular, I will investigate how it compares to other reportative markers that have recenctly been studied in detail (e.g. Faller 2002, 2006, McCready and Ogata 2007, Sauerland and Schenner 2007).

3. Reportative Particle *daw*

Like all other particles in Tagalog, *daw* occurs preferably in second position, following the predicate. After vowels, *daw* is normally realized as its allomporh *raw*. Semantically,

adding *daw* to a simple declarative sentence with propositional content ϕ expresses that ϕ has been asserted previously by some source x (henceforth, I will call such a ϕ the `prejacent`). The nature of x is to be determined by the context of utterance: it is often one of the arguments of the predicate, but it can also be any other salient individual;[2] If no particular individual is salient as a suitable source, it is often the general opinion that functions as the source.[3]

(3) Darating daw si John.
come.CONT daw the John
'According to *X*, John will come.'
x = *subject*: 'John said he will come.'
x = *salient individual*: 'According to him/her/them, John will come.'
x = *general opinion*: 'It is generally said that John will come.'
x = *some individual*: 'Someone said that John will come.'

When using *daw*, the speaker can distance himself from the prejacent, endorse it, or remain entirely neutral. Only if *daw* is stressed, the neutral report is lost and the speaker expresses doubt as to the truth of the prejacent. In particular, unstressed *daw* is perfectly compatible

[2]The resolution of x to an overt argument is insensitive to what is realized as the nominative. In (i), if John or Maria are to be the source, this has to be made clear in the preceding context:

(i) Tatawagan daw ni Maria si John.
call.CONT-GOALF DAW the.GEN Maria the.NOM John
'According to x, Mary will call John.'

The absence of a preference for the nominative is surprising given the connection between diathesis and information structure that is usually assumed for Tagalog. The issue merits further study.

[3]Examples like (i) require an indefinite reading which is reflected by the possibility of 'x = *some individual*'. I am indebted to Ede Zimmermann (p.c.) for bringing up the issue and to Philippe Schlenker (p.c.) for coming up with (i) as a test, which lead to the correction of an error in a previous version.

(i) Darating daw si John, pero hindi ko alam kung sino ang nagsabi.
come.CONT-AGF DAW the.NOM John but not my knowledge if who the.NOM say.PFV-AGF
'Someone said that John will come, but I don't know who it was who said it.'

More cases needs to be considered to understand the exact status of the source x in such contexts of exitential closure. It is clear though that a *daw*-modified sentence differs from an explicitly expressed existential quantification in information structure. Assume it is general knowledge that John dislikes Mary and would never go to her birthday party and that both A and B are well aware of this. B was at a party at Hong's place. The following day, A meets B and asks 'What happened at Hong's party last night?'. B can reply (ii), but not (3).

(ii) May nagsabi na darating daw si John sa bithday ni Maria next
exists say.PFV-AGF LK come.CONT-AGF DAW the.NOM John to birthday the.GEN Maria next
week.
week
'Someone said that John will go to Mary's birthday party next week.'

In (3), the foregrounded part is about the future. Therefore, it cannot be used in reply to a question about what happened yesterday.

with the speaker having reliable evidence as to the truth value of the modified proposition, *daw* can e.g. be contrasted with another particle emphasizing the truth of the proposition it modifies (*nga* 'indeed'):[4]

(4) Si Vicky 40 years old daw, at 40 years old nga siya.
the Vicky 40 years old DAW, and 40 years old indeed she
'According to X, Vicky is 40 years old, and she is indeed 40 years old.'
(*most likely:*) 'Vicky says that she is 40 years old, and she is indeed 40 years!'

It is crucial that the source be third person. *daw* cannot be used to report an utterance by the speaker or the hearer:

(5) A: Darating ako sa isang oras. - B (half an hour later): Kailan
A: come.AGF-CONT I.NOM in one hour. - B: when
ka {ulit, *daw} darating?
you.NOM {again, *daw} come.AGF-CONT
A: 'I'll come in an hour.' - B (half an hour later, failing to remember): 'What did you say when you'd come?'

Finally, *daw* can occur in complement clauses of report or attitude operators (verbs of saying, thinking, asking,... adverbials like *according to x*,...). Here, the most prominent reading is one under which *daw* does not make any semantic contribution. In these cases, it is optional.[5]

(6) Ayon sa radyo bubuti daw ang panahon bago
acccording to radio, get-better.AGF.CONT daw the.NOM weather before
gumabi.
get-night.AGF.INF
'According to the radio, the weather will get better before tonight.'

(7) Tinanong ng estudyante kung puwede daw niyang
ask.OBJF.PFV the.GEN student if can DAW he.GEN-LK
hiramin ang libro.
borrow.OBJF.INF the.NOM book.
(secretary to professor): 'A student asked if he could borrow your book.'

The hypothesis that will be pursued in this paper is that all these usages of *daw* can be derived from a single lexical entry.

4. Comparing Approaches to Evidentiality

In the recent literature on evidentiality, we find three main types of analyses. This, however, does not constitute a matter of theoretical dispute, but pays respect to the fact that

[4]Note that the sentence is not predicate initial. Inversion is usually marked by *ay* between subject and predicate, but it can be omitted in informal speech.

[5]Alternative readings, under which *daw* is not optional, will be discussed in detail in section 6.2.

evidentiality markers differ cross-linguistically in various respects.The theoretical distinctions rely on what aspects are emphasized of the linguistic objects uttered in a discourse. For each distinction, we have to determine where a particular evidentiality marker makes its contribution, and what that contribution is.

Faller (2006) argues that the relevant distinction for evidentials in Cusco Quechua is the one of illocution (indication of a particular speech act type) vs. propositional content; cf. (8-a). In contrast, for Bulgarian (cf. Izvorski 1997, Sauerland and Schenner 2007), German (cf. Fabricius-Hansen and Sæbø 2004, Schenner 2008) and Japanese (cf. McCready and Asher 2006), it has been argued that the relevant distinction is the one between presupposed and asserted/questioned/commanded content (I follow Brasoveanu and Farkas 2007, who call the latter `at issue-content`); cf. (8-b). Finally, McCready and Ogata (2007) argue that the impact of Japanese evidentials should be captured in a dynamic logic that allows elements to modify the context change potential of a sentence in a particular way; cf. (8-c).

(8) a. illocution (indicating speech act type) (propositional content)

b. presupposition vs. `Illocution`(propositional content proper)

c. context change potential

For Tagalog, I will argue that *daw* does not affect illocutionary force or context change potential directly, hence, it operates on the propositional level and belongs to the semantic object proper. Moreover, I will argue that *daw* is not part of the *at issue*-content, but triggers a particular presupposition.

5. Evidentials as Speech Act Modifiers

Faller (2002, 2006) argues that evidentials in Cusco Quechua do not contribute to the propositional content of an utterance. Rather, they modify the illocutionary force that is conventionally indicated by the sentence. In other words, evidential markers modify illocutionary operators. This results in modification of the sincerety condition of the speech act that can be accomplished with a linguistic object. The reportative evidential in Cusco Quechua modifies the commitment that is usually associated with an assertive operator, the result being as follows:[6]

(9) The speaker's evidential commitment is that some speaker S_3 at some point said β from which α follows.

Let's see if this analysis carries over to Tagalog *daw*.

From what we have seen above (cf. (3)), it seems that the content of the modification is not inappropriate for *daw*. But we have to evaluate if the type of modification is suitable for explaining *daw*.

[6]Faller (2006) assumes that such rules operate on SDRT-representations in the sense of Asher and Lascarides (2003).

5.1 *daw* as an Illocutionary Modifier?

At first glance, it looks quite plausible that *daw* might indeed be an illocutionary modifier. Tagalog generally employs particles to express (or modify) illocutionary force. E.g. polar interrogative clauses are formed by adding the question particle *ba*, imperatives are softended with another particle *nga*. Moreover, *daw* meets one of Faller (2006)'s *sine qua non*-conditions for being a speech act modifier: *daw* has to scope out of (clause-mate) negation:

(10) Hindi daw umuulan.
not daw rain.AF-IMPFV
'According to *x*, it's not raining.'
not: '*x* doesn't/didn't say it's raining.'/'It's not the case that according to *x* it is/was raining.'

On closer examination, however, *daw* does not seem to be a modifier of illocutionary force. First, *daw* occurs in embedded sentences without taking wide scope; this is generally held impossible for illocutionary modifiers.[7]

(11) Akala ni Tashi guro daw siya.
opinion of Tashi teacher daw he
'Tashi thinks he's a teacher.'
not: 'According to *x*, Tashi thinks he is a teacher.'

Second, if *daw* occurs in an embedded position, it does not outscope matrix clause negation. Note that such a sentence induces no requirement as to whether someone else has asserted the complement proposition.

(12) Hindi sinabi ni Florian na nasa bahay daw si Magda.
not say.OBJF-PFV the.GEN Florian LK in house daw the.GEN Magda
'Florian didn't say that Magda was home.' (in fact, no-one said so/it was Tina, who said so)

Third, in contrast to what Faller (2006) observes for Cusco Quechua, in Tagalog, assent or dissent can target the evidentiality marker. Consider (13) in a scenario where B has just been on the telephone with Florian:

(13) A: Ano ang sinabi ni Florian? . B: Nasa bahay daw si
A: What the say.OBJF-PFV the.GEN Florian - B: in house daw the.NOM
Magda. - C: Hindi totoo yun. Nasa bahay nga si Magda, pero hindi
Magda - C: not true that. in house indeed the.NOM Magda, but not
sinabi ni Florian.
say.OBJF-PFV the.GEN Florian

[7]Note that *daw* is semantically vacuous on the preferred reading for these embedded occurrences. For a discussion of additional non-vacuous readings, cf. section (41).

A: 'What did Florian say?' - B: 'He said that Magda is at home.' - C: 'That's not true. Magda is at home indeed, but Florian didn't say so.'

Example (4) (repeated as (14)) shows that is also possible to explicitly contrast *daw*-marked information with information modified by *nga* 'actually'. Normally, different illocutionary forces cannot be contrasted as such.

(14) Si Vicky 40 years old daw, at 40 years old nga siya.
the Vidky 40 years old DAW, and 40 years old indeed she
'Vicky says that she is 40 years old, and she is 40 indeed!'
(*literally*: 'According to X, Vicky is 40 years old, and she is indeed 40 years old.')

Fourth, illocutionary operators (or operators on illocutionary force) cannot usually come on their own, e.g. (15). In contrast, *daw* can. In such cases, it indicates correction or weakening of the propositional content asserted in the preceding utterance, cf. (16).

(15) A: Maaaring bumalik si John. - B: #Ba?
A: might come-back.INF the.NOM John. - B: INT-PART
('A: John might come back.' - intended: 'B: Will he?')

(16) A: Darating si John. - B: Daw. (with B = A or B $\neq$ A)
come.CONTEMPLATED the John. - DAW
'A: John will come. - A: Or, so he says./B: That's what he says.'

I take these issues to constitute strong evidence that *daw* is not a modifier of illocutionary force. We can now proceed to test the behaviour of *daw* in relation to other operators related to illocutionary force. Even if the results are not as clear-cut as we might wish them to be, they support the hypothesis that *daw* is not an illocutionary modifier.

5.2 *daw* in Imperatives

Crosslinguistically, it is extremely rare for evidential markers to occur in imperatives. As exceptions Aikhenvald (2005) mentions Tariana, Northern Embera, Shipibo-Konibo and West Greenlandic.[8] All these languages have in common that the imperative containing a reportative marker constitutes not the report of someone else's command, but is rather a genuine command itself, which is backed by the will (implicit or explicit) of a third party. In some cases, it is also that third party who takes responsibility for the command/request/... performed by the actual speaker.

Things are different in Tagalog. Here, too, we observe the rare case of a reportative marker occurring in an imperative clause. Yet, the result is not an imperative on behalf of a third party, but rather an entirely neutral report of an imperative that has been issued by

[8]Tariana has a particular second-hand imperative form for commands that are motivated by the requests of a third party, cf. Aikhenvald (2003). Quiang, a Sino-Tibetan language, does not allow for its reportative marker to occur in commands, but adds the verb of saying to imperatives to achieve the same effect, cf. LaPolla (2003). Cf. Valenzuela (2003) for Shipibo-Konibo, a Panoean language spoken in the Perivian Amazon.

a third party. As a mere report, it imposes no obligation on the addressee to fulfill what is reported to be requested, nor to get the recipient of the original imperative to do so.

In general, imperative clauses in Tagalog are described as containing either infinitives or verbal roots.[9] Both form types share the variety of usages observed for German or English imperatives and, again like those, do not render accessible a truth value:[10]

(17) A: Kumain/Kain (ka)! - B: #Hindi totoo!
eat.AGF.INF/eat.VROOT (you)! - not true
A: 'Eat!' - B: 'That's not true.'

Adding *daw* turns the imperative into a report of someone else's imperative:

(18) Kumain/Kain (ka) daw.
eat.INF/eat.VROOT (you) DAW
e.g.: 'Mommy/They/. . . said that you should eat.'

Being a mere report (18) can be countered by *Hindi totoo!* 'That's not true!'. In this case, the only source of disagreement is the reportative component, that is, it means 'that person did not say so'.

Now, the issue is partly resolved, and partly rendered more complicated, by another peculiarity of Tagalog imperatives that has gone unnoticed so far. In contrast to what is the case in most other languages (cf. Schwager 2005, for discussion), at least imperatives formed from infinitives can occur in embedded position. Imperatives formed from verbal roots are judged as somewhat less felicitious, but not as ungrammatical. A possible explanation for the contrast in acceptability is that verbal root imperatives are generally felt to be highly informal, which might clash with the somewhat more formal embedding constructions.

(19) Sa huli, sinabi ni Tina na kumain/[??]kain na (daw)
at recent say.OBJF.PFV the.GEN Tina LK eat.AGF.INF/eat.VROOT now (DAW)
si Joao.
the.NOM Joao
'Recently, Tina said to Joao that he should eat.'

Now, if imperative clauses can occur embedded under ordinary propositional operators in general, it is not surprising to find them modified by reportative *daw* as well.

5.3 *daw* in Interrogatives

Evidential markers inherently depend on the evidential perspective of some agent (the `evidential origo`). The evidential perspective relevant for declaratives is normally the speaker. In contrast, evidential markers in interrogatives are often related to the hearer's evidential perspective. They specify the body of information w.r.t. which the question should

[9] Certain denominal verbs do no form root imperatives, cf. Račkov (2001).

[10] Cf. e.g. Schwager (2005) for a general discussion of imperatives.

be answered. In short, assertions are normally about what the speaker knows (evidential origo = speaker), whereas questions are usually about what the hearer knows (evidential origo = hearer). This phenomenon is known as `evidential flip` (cf. Faller 2006).

For Cusco Quechua, Faller (2006) observes that the evidential shift is optional. She argues that, in either case, the evidential marker outscopes the interrogative marker. In the following, I will compare her observations to the situation in Tagalog.

Faller describes the case of evidential flip in Cusco Quechua as in (20-a); she argues that this constitutes a reportative evidential outscoping an interrogative. I find this hard to tell apart from the inverse scope which could be described as in (20-b).

(20) a. REP > INT: "According to reportative evidence you have, what x is s.t. $\phi(x)$?"

b. INT > REP: "What x is such that you have reportative evidence that $\phi(x)$?"

Cases of evidential flip can easily be found in Tagalog. Yet these examples seem to instantiate the scopal order of "`Int` > *daw*". The reportative information is taken to be part of what has been asked. It seems weird to reply with "I don't need to rely on hearsay because I actually know what the facts are:...".[11]

(21) Bakit naman daw ikaw ang tinext niya?
why now DAW you the textOBJF-PFV sheGEN
'What reasons did she give for texting you?'
(*literally:* 'What were the reasons such that *x* said it was for these reasons that she texted you?')

The context of occurrence[12] disambiguates the sentence in favor of the reading in (21).

(22) "Naghiwalay na ata sila ng boyfriend niya. Nagtext siya sa kin kagabi kung pwede daw kaming magkwentuhan. Di pumunta ako. Parang wala naman kaming pinagsamahan kung di ako pupunta, di ba?" - "Sa bagay. *Bakit naman daw ikaw ang tinext niya?* Wala ba siyang ibang matext?
"She and her boyfriend, they probably broke up. She texted me last night if we could talk to each other. So I went. It would seem that we were not friends if I didn't go, right?" - "Well, yeah. *What reasons did she give for texting you?* Doesn't she have someone else to text to?"

As an example for a question without evidential flip (the speaker remains the evidential origo), Faller (2006) cites the dialogue in (23-b) (her example (27)). Here, the scopal relations are clearly of the type "REP > INT", which means that "I have reportative evidence that third person asked ϕ?". But as a paraphrase, this is still too weak: Faller describes such cases as "asking a question on someone else's behalf" and reports the following interaction with her consultant (=C)'s mother in law, who is hard of hearing:

[11] Note that, syntactically, we do not expect an ambiguity of whether the *wh*-element modifies the saying or the texting: the reportative part does not contain a trace position for the wh-element *bakit* 'why', hence, it can only modify the texting.

[12] `http://www.peyups.com/article.khtml?sid=4357`

(23) a. MF: Imayna-n ka-sha-nki.
how-BPG be-PROG-2
'How are you?'
b. C: Imayna-s ka-sha-nki.
how-REP be-PROG-2
'(She says) how are you?' Cusco Quechua

If the exchange is translated to Tagalog using *daw*, we lose the notion that C is asking a question 'on behalf of A':

(24) A: Kumusta ka?
How-are you?
B: Pardon?
C: Kumusta ka raw!
how-are you daw!
'She asks how you are.'

In Tagalog, the scopal relation "REP > INT" without evidential flip does not amount to asking a question on behalf on someone else, but constitutes a report of a previous question. In (25), I give an example from a context that disambiguates the sentence in favor of that particular scopal order, cf. (26).[13] In this case, we can also see that such cases are not quotational, since the indexicals have shifted (consider *me*). This reading of (25) is best analyzed as an instance of free indirect speech as familiar from English or German.

(25) Bakit daw hindi ko siya tinawagan.
why DAW not me she call.DIRF-PFV
'(She asked) why I didn't call her."

(26) B: "Ano naman kwinento sa iyo?" - A: "Birthday niya kasi nung December. *Bakit daw hindi ko siya tinawagan.* Hindi ko rin daw siya niregaluhan noong pasko. Hindi ko nga siya maintindihan kasi hindi naman niya ako boyfriend. "
B: "So what did she tell you?" - A: "(It's) because her birthday was in December. *She asked why didn't I call her*, and that I hadn't given her a Christmas present either. I don't understand her because Im not her boyfriend anymore."

5.4 Summing up: Interaction with other Operators

The interaction of *daw* with other operators can be summed up as follows: *daw* can shift assertions, questions, and commands to reports of speech acts of the same type. In either case, the speaker remains the evidential origo, and the resulting speech act is an assertion that some other speech act has taken place. It is only for questions that we find the alternative possibility that the original illocutionary force is retained, hence, the modified sentence still constitutes an interrogative and is used to ask a question. Only in this case,

[13] http://www.peyups.com/article.khtml?sid=4357

the evidential flip occurs and the hearer becomes the evidential origo.

assertion	→	report of an assertion
question	→	report of a question
	↘	question about what has been said
command	→	report of a command

I take this to indicate that *daw* can indeed affect illocutionary force. Nevertheless, it does not modifiy the impact of a particular illocutionary operator, but shifts the modified sentence to its corresponding indirect counterpart. If *daw* were to be treated as a modifier of illocutionary force, it would have to constitute a rule like (27):

(27) For any semantic object ϕ that is associated with speech act α by default, '*daw* ϕ' is associated with speech act REPORT. The evidential commitment a speaker undertakes with REPORT(DAWϕ) is that at some point some speaker S_3 performed $\alpha(\phi)$.

But (27) does not take care of the interrogatives with evidential flip (as evidenced by (22)). For that case we would need an alternative rule like (28):

(28) To '*daw* ϕ?' assign QUESTION'(ϕ) where QUESTION' is QUESTION with the evidential basis shifted to what has been asserted by some speaker S_3.

The ambiguity for *daw*-modified main clause interrogatives is genuine, the rules are not weighted w.r.t. each other. Moreover, there is no systematic connection between the two rules, and it is unclear why a rule analagous to (28) is absent for imperatives (for assertions, a report of someone else's assertion seems impossible to tell apart from a statement based on what someone else has asserted). It should give rise to effects as observed for Tariana and other languages (cf. above).

For these reasons, and in view of the evidence discussed in section 5.1 against a treatment of *daw* as an illocutionary modifier, I will resort to a treatment along the following lines: *daw* does not modify illocutionary force, but it introduces information at a lower, propositional level. Yet, it does not contribute to the at-issue content (e.g., what is asserted), but introduces a presupposition. In embedded cases, the presupposition is often satisfied (bound) by the matrix clause. If *daw* occurs in a main clause, the prejacent ends up as embedded under the description of a contextually salient or accommodated previous utterance event with that content. I will argue further that *daw* in an interrogative with evidential flip (e.g. (25)) is an instance of genuine wide scope of the interrogative operator. Now, why don't we find this type of scope reversal with imperatives? Simply, because the embedded proposition would have to be a description of some past speech act event, roughly 'Make it the case that: *x* said that ϕ'. But of course, this is not something the hearer could influence. If the reportative component is treated as presuppositional (cf. section 7), given that the resolution of presuppositions is subject to pragmatic considerations, such a reading is excluded as inherently non-sensical.

6. Evidentials as Part of the Semantic Object Proper

In contrast to Cusco Quechua, for a couple of languages it has been shown convincingly that their evidential markers do not modify illocutionary force. This holds in particular for Japanese (cf. McCready and Asher 2006, McCready and Ogata 2007) and Bulgarian (cf. Izvorski 1997, Sauerland and Schenner 2007). Still there is general hesitation to treat the respective elements at the propositional level proper, that is, as at issue-content. The main arguments are the following: first, there is a general resistance against embedding under negation (but cf. McCready and Ogata 2007, for embedding under higher negation). Second, often, if the markers can occur below an attitude operator, the evidential information should not be repeated as part of the complement proposition (e.g. Sauerland and Schenner 2007 against Izvorski 1997). In contrast, if the marker occurs in the matrix clause, only the thus modified proposition should be asserted, and there is no commitment with respect to the underlying proposition to be true (but compare Bulgarian, section (31)). We have already seen that the latter holds true for Tagalog as well. That is, we seek to capture the following behaviour: (29-a) does not commit the speaker to the fact that it is raining, but only to the fact that some source *x* said so. In contrast, (29-b) commits the speaker to the truth of the proposition that Pedro has said that it is raining - not to the proposition that Pedro has said that according to some *x* (or according to himself) it was raining.

(29) a. Umuulan daw.
raining DAW
'According to x, it is raining.'

b. Sinabi ni Pedro na umuulan daw.
said-GF.PFV the.GEN Pedro LK rain.IMPFV DAW
strongly preferred: 'Pedro said that it was raining.'

In short, when occurring in a matrix clause, *daw* makes a crucial contribution to the information expressed; when occurring in an embedded clause of the right kind, *daw* is mostly treated as vacuous. In the following, I will compare a few approaches to evidential markers that do not modify the illocution, and I will evaluate if any of them is apt in content and type of modification to account for the facts in Tagalog.

6.1 Reportative Markers in Dynamic Modal Logic

If evidential markers were to introduce presuppositions, we would expect them to confirm to the quite well-studied behaviour of presupposition projection. McCready and Ogata (2007) argue that the evidential impact of Japanese modals does not confirm to the usual pattern of presupposition projection. Therefore they depart from the presuppositional proposal by McCready and Asher (2006), and develop a new solution in terms of dynamic modal logic. As always in dynamic semantics, semantic objects denote relations between information states. Moreover, their proposal is irreducibly dynamic: some semantic objects are assigned an impact on an information state that cannot be described in terms of eliminating all those points (possible worlds) at which the classical proposition is not true.

In contrast, the framework allows for a linguistic object uttered in discourse to change the subjective probabilities assigned to its truth by the hearer, and to model the degree of conviction on the side of the speaker.

Although the proposal is very interesting in itself and looks very promising for Japanese evidentials, it does not provide us with a good handle on Tagalog evidentials. *daw* does not convey any information as to the degree of conviction the speaker holds with respect to the underlying proposition. In that, it is exactly like the Japanese hearsay evidential *sooda* + ϕ_{st} (reportative), which McCready and Ogata (2007) analyze as in (30).

(30) $H_a^i\phi$ is a test on elements in an information state that passes them on if there is a past time at which the agent a experienced a hearsay event of ϕ with index i, else, they are eliminated.[14]

It is now easy to see that this cannot be applied to *daw*: it works well for matrix declaratives (although we would need to add a stipulation against narrow scope with respect to clause mate negation), but it makes incorrect predictions with respect to embedded *daw*: there, the reportative meaning would, incorrectly, be added to the embedded proposition. While McCready and Ogata (2007)'s framework allows for binding into the hearsay operator (in the sense of specifying the source a), it does not allow to bind the hearsay operator H itself by a higher *verbum dicendi*. Hence, the framework does not offer any new insights into our problem.

6.2 Reportative Markers between Presupposition and Assertion

I will now take a closer look at reportative markers in a few languages that have rather recently received detailed analysis in terms of a split between *at issue*-content and presupposed content. In particular, I will compare *daw* to evidential modals in Japanese (cf. McCready and Asher 2006), to the reportative mood marker in Bulgarian (cf. Izvorski 1997, Sauerland and Schenner 2007), as well as to the modal verb *sollen* (cf. Schenner 2008) and to the reportative subjunctive marker in German (cf. Schlenker 2003, von Stechow 2003, Fabricius-Hansen and Sæbø 2004). I will show that, semantically, *daw* is highly similar to German *sollen* and that a version of Fabricius-Hansen and Sæbø (2004)'s proposal (intended for the German reportative subjunctive) makes the correct predictions for *daw*.

Weak Assertion in Japanese

McCready and Asher (2006) advocate a presuppositional treatment for the Japanese reportative marker *soo-da* + p_{st}. According to them, it comes with the *at issue*-content and the presuppositional meaning component in (31):

[14] I depart from McCready and Ogata (2007)'s usage of the term `information state`. When they speak of hearsay evidentials as constituting 'tests on information states', this is not intended in the sense of Veltman (1996). The reason is simply that, for McCready and Ogata (2007), 'information state' means point within an information state in the more standard understanding of Veltman.

(31) *at issue*: there is some individual who believes *p*
presupposition: the speaker has hearsay evidence for *p*

While the predictions are considered largely accurate for Japanese (apart from the non-standard projection behaviour which motivates the alternative account in McCready and Ogata (2007), cf. section 6.1), the proposal would make grossly incorrect predictions for Tagalog *daw*. In the matrix case, the assertion is too strong (it may be known that not even the person who originally uttered the proposition believed it). In the embedded case, the assertive part is in the way (there is no report with respect to an utterance of someone believing *p*), moreover, the presupposition is too strong. E.g. in the case of a negated *verbum dicendi*, no hearsay evidence for *p* is presupposed (cf. (12)).

(No) Modals for the Bulgarian Reportative

Besides a direct and a dubitative verbal evidential marker, Bulgarian possesses also a reportative verbal marker, henceforth Bul_{Rep}. Izvorski (1997) analyzes it as an epistemic modal much like English *must*. Yet, Bul_{Rep} differs from English *must* in adducing an additional presupposition that the speaker has indirect evidence for her claim of the resulting modal proposition. The same contrast holds between *must* vs. *apparently* as two expressions of epistemic necessity in English.

(32) Knowing how much John likes wine...
a. ...he must have drunk all the wine yesterday.
b. #...he apparently drank all the wine yesterday.

For Bul_{Rep}, Izvorski (1997) adopts the interpretation in (33):

(33) The Interpretation of Bul_{Rep}(p):
at issue: *p* is necessary in view of the speaker's knowledge state
presupposition: the speaker has indirect evidence for *p*

Even if Tagalog *daw* shares the requirement that there is a (particular) body of evidence for the thus modified proposition, the analysis does not carry over: already the plain matrix usages would come out wrong. For *daw*, the presupposed content is much too weak, given that not any kind of indirect evidence is allowed, and in particular, that existential quantification over the reportative source is disallowed (cf. the discussion of (3)). The at issue-content is inadequate, since *daw* is entirely neutral as to whether the speaker believes or disbelieves the modified proposition.[15]

[15]If anything, we should try another necessity modal as the at issue-part of *daw*'s meaning, resulting in something like (i), modelled along the lines of Izvorski (1997)'s proposal.

(i) *at issue*: *p* is necessary in view of background *P* and *P* is the saying/thinking of *x*
presupposition: *x* is some contextually salient agent

As it stands, this still fails to explain the interpretation of *daw* in emedded position where it appears to be semantically vacous. A theory of modal concord or modal underspecification might get this right. In addition,

Sauerland and Schenner (2007) show that, thanks to the assertive modal component, Izvorski (1997)'s analysis makes incorrect predictions for embedded occurrences of Bulgarian Bul_{Rep}. A modal analysis would predict Bul_{Rep} to shift: embedded epistemic modals like (34) express necessity with respect to the matrix subject, not with respect to the speaker.

(34) John thinks that it must be raining.

This makes wrong predictions for Bulgarian, because evidential markers do not shift. If the speaker has direct evidence, but the matrix subject has indirect evidence, the clause has to be marked with the direct marker, the reportative marker is inacceptable. Sauerland and Schenner (2007) test this in the following scenario:

(35) Milena told Maria that Todor has red hair and Maria believes her. Maria says 'Todor has.REP red hair'. I saw Todor's red hair with my own eyes and assert:

a. Maria kaza če Todor $\{^{ok}$ima/*imal$\}$ červena kosa.
Maria said that Todor $\{^{ok}$has.DIR/*has.REP$\}$ red hair

Hence, the evidential origo of an evidentiality marker in Bulgarian declaratives is the speaker, no matter how deeply embedded it occurs. In the same situation, (36) is fully felicitious. So, obviously, *daw* is unlike Bul_{Rep} in that respect.

(36) Sinabi ni Maria na pula daw ang buhok ni Todor.
say.PFV-OBJF the.GEN Maria LK red DAW the.NOM hair the.GEN Todor
'Maria said that Todor has red hair.'

At first glance, we might take this as in indication that *daw* is unlike Bul_{Rep} in that it shifts in embedded contexts. But we have already seen that *daw* is compatible with the evidential origo having perfect information in addition to reportative information (cf. (4)). Analagously, (36) is felicitous if both I (the speaker), and Maria have seen Todor's red hair with our own eyes.

For Bulgarian, further problems arise because the modal at-issue content should not appear embedded under the saying. Izvorski (1997) predicts (35-a) to mean (37-b) instead of its actual meaning (37-a).

(37) a. Maria said that Todor has red hair (and I have heard that Todor has red hair).
b. Maria said that **I know** that Todor has red hair.

On the basis of these criticisms, Sauerland and Schenner (2007) propose an alternative solution to capture reportative markers in embedded and unembedded cases, as well as in their interaction with the dubitative marker (only in embedded cases). The latter phenomenon forces them to assume an ambiguity of Bul_{Rep}. Given that Bulgarian and Tagalog differ with respect to how evidential origo is treated in embedded cases (e.g. (35-a) vs. (36)), it is not surprising that neither of the two entries captures the meaning of *daw*.

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one has to be careful as *daw* is not closed under logical inferences. I leave it to further research to spell out a modal analysis for presuppositional elements like *daw* as an alternative to what I propose in section 7.

For the simple reportative marker, Sauerland and Schenner (2007) propose the meaning components in (38-a) and back it with the Binding Condition in (38-b).

(38) a. $[\![\text{REP}(y, v)(p)]\!]$
at issue: p
presupposition: y has in *v* reportative evidence for *p*
b. *Binding Condition:*
The arguments of REP *y* and *v* must be bound by the context operators of the matrix clause (= Bul_{Rep} does not shift).

It is immediately clear that, even for *daw* in matrix sentences, this could not be the right analysis. In analogy to Cusco Quechua and Japanese, it is perfectly possible to assert "ϕ-REP & $\neg\phi$" without contradiction. '*daw* ϕ' does not commit the speaker to the prejacent ϕ.

(39) Dadating #(daw) siya sa isang oras, pero hindi talaga.
will-come DAW he in one hour, but not really
'He #(says he) will come in an hour, but in fact he won't.'
literally: 'According to X, (s)he will come in an hour, but in fact (s)he won't.'

Sauerland and Schenner (2007) show that the analogous conjunction is contradictory in Bulgarian, and this is exactly what their semantics in (38-a) predicts thanks to the strong assertive meaning.

For embedded cases, the assertive meaning component fits Tagalog just as well as it fits Bulgarian. But here, the presuppositional meaning component makes unwanted predictions. As observed in section 5.1, (12) (repeated as (40)) can be uttered in a scenario which is entirely neutral as to whether the speaker has reportative evidence from someone other than Florian with respect to whether I am at home or not.[16]

(40) Hindi sinabi ni Florian na nasa bahay daw si Magda.
not say.OBJF-PFV the.GEN Florian LK in house daw the.GEN Magda
'Florian didn't say that Magda was home.' (in fact, no-one said so/it was Tina, who said so)

This problem will be solved if we give up the general presupposition of 'the speaker has reportative evidence' in favor of something more specific with respect to the source.

Sauerland and Schenner (2007)'s second entry for Bul_{Rep}, which is needed to capture the semantics of the reportative marker in when combined with the dubitative marker (occurring in the scopal order of Bul_{Rep}(DUB(p)), is given in (41).[17]

[16]Therefore, even if the presupposition can be accommodated flexibly, we do not obtain the right result. (40) entails neither that (i) the speaker has reportative evidence that Magda is at home (global accommodation), nor that (ii) the speaker does not have reportative evidence that Magda is at home (accommodation below *not*), nor does the entire sentence mean (iii) the same as *Florian did not say that Magda is at home and that I do not have reportative evidence for this.* (local accommodation).

[17]Sauerland and Schenner (2007) point out that the ambiguity is always resolved correctly if trivially true or inconsistent results are to be avoided.

(41) $[\![\text{REP}_a]\!](y,v)(p)$
at issue: y has in v indirect evidence for p
presupposition: -

Of course, this cannot be the meaning of *daw*, either: it is obvious that the at issue-content would make completely incorrect predictions in the embedded case.

Reportative Marking in German

The two main grammatical strategies of reportative marking in German are modal verbs (*sollen*[18], in particular) and the reportative subjunctive (GRS). Two recent analyses (Fabricius-Hansen and Sæbø (2004) for the GRS; Schenner (2008) for *sollen*), argue that these elements induce a presupposition that the prejacent has been asserted (in case of a declarative) or asked (in case of an interrogatve) prior to the current utterance. In the following, I will show that *daw* behaves just like *sollen* in declaratives (main clauses as well as subordinate clauses), but when taking into account interrogatives, *daw* and *sollen* part company. I will argue that, first, *daw* and *sollen* have to be distinguished from the GRS in terms of what I call `strong` vs. `weak reportativity`. Second, the difference between *daw* and *sollen* in interrogatives reduces to different flexibility in logical type. I briefly sketch an account for *daw* that relies on utterance events (argued for on independent grounds by Brasoveanu and Farkas 2007) and an idea from Schenner (2008).

In main clause declaratives, *sollen* and *daw* behave alike, and the GRS behaves differently. *daw* and *sollen* can be interpreted as saying that some third person, a particular contextually salient individual or people in general have claimed the prejacent.[19] The German reportative subjunctive differs from the other two elements in only allowing an interpretation of free indirect speech.

(42) Anna soll in Oslo sein.
Anna should in Oslo be.
'According to x, Anna is in Oslo.'
'It is generally said that Anna is in Oslo.'
'Someone said that Anna is in Oslo.'

(43) Nasa Oslo daw si Anna.
in Oslo DAW theNOM Anna
'According to x, Anna is in Oslo.'
'It is generally said that Anna is in Oslo.'
not: 'Someone said that Anna is in Oslo.'

[18]Throughout, I ignore its alternative deontic reading.

[19]Note that there is a difference w.r.t. the person parameter: in Tagalog, any individual that is neither the speaker nor the hearer can be the agent of the previous utterance, in particular, the subject is a highly probable choice. The latter is excluded for *sollen*. (42) cannot mean 'Anna claims to be in Oslo.'; but (43) can. In German, this is the only reading we get when *sollen* is replaced by *wollen*. Another issue that is ignored for the moment is the fact that, at least for *sollen*, the evidential source may not be known to have withdrawn his/her claim.

(44) Anna sei in Oslo.
Anna beREPSUBJ in Oslo
'And, according to *x*, Anna is in Oslo.'
not: 'It is generally said that Anna is in Oslo.'
not:'Someone said that Anna is in Oslo.'

In embedded clauses, *daw* and *sollen* behave alike, too. They allow the same range of readings: in both cases, the preferred construal is what Schenner calls the `concord interpretation`, cf. German (45-a) and Tagalog (6) (repeated as (45-b)). On this reading, the reportative marker does not contribute anything and is also optional in both languages.

(45) a. Die Zeitung hatte fälschlicherweise behauptet, daß sich die Prinzessin ihren Adelstitel unredlich erworben haben soll.
'The newspaper had wrongly claimed that the princess gained her peerage dishonestly.'
b. Ayon sa radyo bubuti daw ang panahon bago gumabi.
acccording to radio, get-better.AGF.CONT daw the.NOM weather before get-night.AGF.INF
'According to the radio, the weather will get better before tonight.'

Second, there is a `local interpretation` on which the reportative component is added below the matrix operator and embeds the proposition it modifies.[20] Example (46-a) is like (46-b). Such readings arise more easily if the concord reading is excluded for some reason or other (e.g. in Tagalog if the embedding predicate is first or second person).[21]

(46) a. Ich weiß, dass Anna in Oslo sein soll.
I know that *it is said* that Anna is in Oslo.
b. Aalam akong nasa Oslo daw si Anna.
know I-LK in Oslo DAW the.NOM Anna
'I know that Anna is said to be in Oslo.'

Finally, there is what I will call the `global interpretation`. Here, the reportative content is not part of the attitude complement, but is predicated of the content independently.

(47) a. Daß Legrenzi sein Lehrer gewesen werden soll, ist unwahrscheinlich.

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[20] Schenner calls this the `assertive` interpretation

[21] Syntactic facts also seem to play a role.

(i) May ilang estudyante P1 na nagsabi na darating P2 sila.
exists some student LK say.AF-PFV LK come.AF-CONT they
'Some students said they would come.'
a. *daw* in P1 (amb.): 'Allegedly, some students said they would come.'
'Some students said they would come.'
b. *daw* in P2 (unamb.): only 'Some students said they would come.'

This seems related to clitic climbing, which leads to argument pronouns from embedded clauses to appear in the particle slot of the higher clause, cf. Kröger (1993).

'That Legrenzi had been his teacher (*as it is allged*), is unlikely.'

b. Hindi marahil na naging guro daw niya si Legrenzi.
not probable LK was teacher DAW his the.NOM Legrenzi

The GRS is different: clearly, it has a concord reading:

(48) Maria behauptet, dass Anna in Oslo sei.
'Maria claims that Anna is in Oslo.'

Contexts that trigger a local reading for *sollen* result in ungrammaticality when we replace it with the GRS (cf. (46-a) vs. (49)), so obviously, the GRS does not allow for a local reading.

(49) *Ich weiß, dass Anna in Oslo sei.
I know that Anna in Oslo be.GRS

Fabricius-Hansen and Sæbø (2004) argue that it does have a global reading in addition and adduce examples like (50).

(50) Er dementierte nicht, Geishas für Liebesbeziehungen bezahlt zu haben, **bestritt** he disclaimed not geishas for love-relations paid to have denied aber, dass das unmoralisch **sei**.
however that that immoral be.GRS
'He didn't deny that he had paid geishas for love relations, but he did deny that that was immoral.'

Indeed, if the GRS contributes a presupposition that some *x* said/asserted *p* previously, this cannot constitute a concord interpretation: a denial of the prejacent 'it is immoral to pay geishas for love-relations' is clearly not an assertion of that proposition. Nevertheless, denying something presupposes that someone has previously asserted it. Hence, *deny* presupposes a previous utterance that can at the same time globally satisfy the presupposition of the GRS.[22] Yet, I do not think that this is the correct analysis. Consider (51). Again, the matrix predicate *it is improbable* does not allow for a concord interpretation, and the previous context assures that the presupposition attributed to the GRS is satisfied globally. Still, the sequence is inacceptable. Hence, I conclude that the GRS does not have a global reading.

(51) (Hans hat gestern behauptet, dass Legrenzi sein Lehrer gewesen sein soll.) #Es ist jedoch höchst unwahrscheinlich, dass Legrenzi sein Lehrer gewesen sei.
(Hans has claimed yesterday, that Legrenzi was his teacher.) Yet, it is highly improbable that Legrenzi wasREPSUBJ his teacher.

But how do we account for the apparent global interpretation in (50)? I would like to argue that we have to resort to an entirely different analysis of the GRS. Schlenker (2003) and von Stechow (2003) claim that the German subjunctive is a `logophoric mood`. As such,

[22] The same goes for verbs like *hören* 'hear'.

it requires binding by a higher attitude operator. Independently of how the analysis is spelt out in detail, it is assumed that the world variable is marked (syntactically or semantically) as obligatorily bound by the closest attitude operator, requiring e.g. a feature [+log] and a structure like (53).

(52) [+log]: has to be bound by an attitude operator *P*

(53) Jon said he daw come to the party.
$w_1\ t_1$ Jon say $\lambda w_2 \lambda t_2 \lambda x_2$ [$x_2^{[+3p]}\ w_2^{[+log]}\ t_2$ come to the party]

Crucially, there is no presupposition of 'some *x* said *p*' which could be accommodated locally or globally; if the binding is established as required, the result looks just like the concord interpretation as long as a concord interpretation is possible. The difference becomes apparent with matrix predicates that do not allow for a concord interpretation: as long as they are attitude operators, their propositional complement counts as bound by an attitude operator, and the GRS is licensed, although a concord interpretation is not available. In contrast, if the matrix predicate is not an attitude operator (e.g. *it's improbable*), the GRS is ungrammatical and *daw* and *sollen* receive a local or global interpretation.

This difference amounts to a distinction of two types of reportative markers, which I will call strong and weak reportativity. `Weak reportativity` is just modal logophoricity: the element requires binding by an attitude operator.[23] `Strong reportativity` consists in the introduction of a presupposition of the sort 'some *x* said/asked/asserted *p*'. The difference between *daw* and *sollen* on the one hand, and the GRS on the other hand, falls out from the fact that the former are strongly reportative, whereas the latter is weakly reportative.

But there are also important differences between *daw* and *sollen*. Consider embedded interrogatives. Schenner (2008) observes that in German, indirect questions trigger the local reading, cf. (54). But in fact, the concord reading is unavailable at all.[24]

(54) Anna fragte, ob Charly zur Party kommen soll.
'Anna asked whether it is said that Charly is coming to the party.'

In Tagalog, interrogative predicates behave like their assertive counterparts in that both local and concord construal are available:[25]

(55) Nagtanong si Anna, kung dadating daw sa party si
ask.AGF-COMPL the.NOM Anna if come.AGF-IMPFV DAW to party the
Charly.
Charly
R_a: 'Anna asked if Charly was coming to the party.'
R_b: 'Anna asked if it was said that Charly was to the party.'

[23] Note that there is a certain flexibility as to what counts as an attitude operator.
[24] For the moment, I ignore the global reading which may be hard to get for independent reasons.
[25] As always, the the embedding is also grammatical without *daw*. In that case, only R_a survives.

Second, *daw* and *sollen* differ in their interaction with other illocutionary operators.[26] We cannot compare them w.r.t. imperatives, because Tagalog and German already differ in the possibility of whether imperatives can be embedded at all. In section 5.2, I have suggested that the behaviour of *daw* in imperatives relies crucially on the fact that Tagalog imperatives can occur in embedded positions. German imperatives cannot occur in embedded positions, and, similarly, they cannot be modified by the modal verb *sollen*. But *daw* and *sollen* are comparable and differ in their interaction with interrogative marking. In section 5.3, we have established that sentences like (57-a) are ambiguous between interpretation as a main clause question and a free indirect speech reading that reports a question. In contrast, (57-b) does not allow for a free indirect speech interpretation.[27] The two readings we have to distinguish are the following:

(56) a. [$\text{Int}_1 >$ Rep $> [\ldots t_1 \ldots]$] R_1
b. [Rep $> \text{Int}_1 > [\ldots t_1 \ldots]$] R_2, free indirect speech

(57) a. Bakit ko ba daw napiling magsulat?
'What did x give as reasons why I had chosen to write?' R_1
'(x asked) Why had I chosen to write.' R_2

b. Warum soll ich zu schreiben angefangen haben?
'What did x give as reasons why I had chosen to write?' R_1
not: '(x asked) Why had I chosen to write.' R_2
'What is evidence that I started to write?' ("Why is it that some x claims that I started writing?")

Note that the GRS allows R_2 (the free indirect speech reading), but not R_1. That is again predicted correctly under the assummption of weak reportativity. The GRS does not introduce an independent reportative content that could outscope the interrogative; instead, the interrogative denotation is marked as dependent on a higher attitude operator that can

[26] The issue is not discussed in Schenner (2008).

[27] Additionally, (57-b) permits a higher construal of a *because*-clause (and thus the trace of a *why*-phrase). The resulting reading R_3 is highly salient for the following naturally occurring examples:

(i) Warum soll ich plötzlich an Osteoporose erkrankt sein, obwohl ich doch das ganze Leben lang nie mit meinem Skelett Probleme hatte?
'Why should I be suffering from osteoporosis all of a sudden, given that I've never had problems with my bones?'
`www.bergische-apotheke.de/ downloads/journal/journal-2007-06.pdf`

(ii) Warum soll ich schwul sein, nur weil ich gerne tanze?
'Why should I be gay, just because I like dancing?' (= What reason is there to assume that I'm gay, just because I enjoy dancing?')

Such readings are unavailable for Tagalog *daw* (and also the GRS). Clearly, in contrast to a predicate like *say*, a particle does not itself contain a trace position for a *wh*-element. But most likely, the modal verb does not either. Hence, I would like to argue that *daw* stands in a syntactically higher position than *sollen* and can thus not be outscoped by a *because*-clause.

embed non-declarative complements.

(58) Warum habe der Angeklagte das Opfer angerufen?
why haveGRS the defendant the victim called
*'What were the reasons x gave for the defendants calling the victim?' R_1
'(and then *x* asked) why had the defendant called the victim?' R_2

Analagously, embedded interrogatives marked with GRS can only get the concord interpretation.

For the strongly reportative elements *daw* and *sollen*, both the difference in matrix interrogatives, as also the difference in embedded interrogatives, is predicted correctly, if we assume with Schenner (2008) that *sollen* requires a propositional complement, but adopt a flexible logical type for *daw*: *daw* can combine either with a proposition or with an interrogative denotation (a set of propositions, cf. Karttunen 1977).

7. An Analysis for *daw*

In this last section, I will give a brief sketch of a formal analysis for *daw*.

As I have argued above, a presuppositional analysis seems most promising to account for the volatile behaviour of the reportative meaning component. Moreover, *daw* has turned out to be strongly reportative and thus to introduce a presupposition of the form 'some *x* said *p*'. Standard assumptions of presupposition satisfaction will then allow us to predict concord, as well as local and global readings.

For *daw* in particular, we also have to take into account (i) the restriction to third person sources,[28] (ii) the ability to embed both interrogative and declarative complements.

I assume that *daw* combines with a declarative p_t or an interrogative prejacent $q_{\langle st,t\rangle}$.[29] Brasoveanu and Farkas (2007) argue that verba dicendi introduce event arguments for utterance events. Drawing on their proposal, the presupposition introduced by *daw* can be spelt out as follows:

(59) there is a particular *x* and a particular utterance event *e* such that *x* is the agent in *e* and is neither the speaker nor the hearer, the content of *e* is $^\wedge p/^\wedge q$

The *at issue*-content is more problematic. If *daw* occurs in a clause that is embedded under an attitude operator, it should be just $^\wedge p/^\wedge q$ (apart from what happens on the local interpetation, where the reportative information has to "intervene" between the embedding operator and the prejacent). But if *daw* occurs in unembedded position, we do not want it to have the effect an unembedded occurrence of the prejacent might have - namely, that *p* is asserted or that *q* is asked.

So, in the unembedded case as well as in the case of local accommodation, *daw* need not make any at issue-contribution; it is the presupposition that turns out to be the

[28] *sollen* seems to be similar on that account, to my knowledge, this has not been studied in detail yet. The GRS is more liberal: only first person present is normally disallowed, and cf. Fabricius-Hansen and Sæbø (2004) for cases where it is possible after all.

[29] I assume that imperatives are special modalized propositions, cf. Schwager (2005).

main proposition expressed[30] or functions as the complement of an attitude operator. But if *daw* modifies a clause that is embedded under a higher attitude operator, and has its presupposition bound or non-locally accommodated, it is the prejacent $^{\wedge}p/^{\wedge}q$ as such that needs to be passed on as the complement for the attitude operator. In order to achieve this, I will follow Schenner (2008)'s analysis for *sollen* and require `local informativity`. If the resolution of the presupposition is such that *daw* would not have an effect in its local context (e.g. the complement clause, where it occurs), then an optional at-issue value $^{\wedge}p/^{\wedge}q$ is activated as a last resort. (60) is to be understood as a formula of presuppositional DRS, cf. van der Sandt (cf. 1992). The DRSs are displayed in linearized form and carry their presuppositions as a subscripted DRS. [31]

(60) $daw \rightsquigarrow \lambda K_{t\cdot[x,e,K_2|\text{UTTERANCE}(e),\text{AGENT}(e,x),x\neq speaker,x\neq hearer,\text{CONTENT}(e,K_2),K_2=K]}$
where $\alpha = t$ or $\alpha = \langle st,t\rangle$,
unless the resolution of the presupposition violates local informativity. If local informativity would be violated, $^{\wedge}K$ is additionally activated as at issue content.

A verbum dicendi like *sabi* 'say' is translated as follows:

(61) $sabi \rightsquigarrow \lambda K_{\langle s,t\rangle}\lambda x.[e\,|\text{UTTERANCE}(e), \text{AGENT}(e,x), \text{CONTENT}(e,K)]$

Hence, if the *daw*-modified clause is embedded under such an attitude operator, thanks to local informativity, its *at issue*-content is of the right logical type to act as the operator's argument. The presupposition can either be bound to the discourse referents that are introduced by the attitude operator or be accommodated locally or globally (for details of how presuppositions can be resolved, cf. van der Sandt 1992). In the case of local accommodation, the presupposition itself is resolved to constitute the clausal argument of 'say'.

8. Conclusions and Outlook

In this paper I have given a detailed account of the reportative particle *daw* in Tagalog. I have argued that it is neither an illocutionary marker nor a dynamically modal element, but that it introduces a presupposition that the thus modified content has been the content of a previous utterance event. This presupposition can be bound or accommodated at various levels, which accounts for the different readings that arise. It comes out that *daw* is very similar to the German modal *sollen* (on its reportative reading). An analysis for *daw* is provided in terms of a translation into presuppositional DRT.

From the comparison of various elements across languages, we know that reportative markers differ in terms of the level at which their grammatical impact comes into play. Moreover, we have now seen that the class of presuppositional reportative elements in itself also displays a great amount of variation. But the elements differ according to relatively well-identifiable parameters, in particular, in whether we are dealing with weak or strong reportativity, what restrictions on the person parameter are to be found, and what is

[30] Even if this is different from what counts as foregrounded information, cf. footnote 3.

[31] UTTERANCE has to be understood coarsely enough so as to allow for embedding under operators like *akala* 'belief'.

the logical type of the reportative element. Further work needs to be done in order to spell out all the technical details arising from interaction with other operators and especially interrogatives.

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Expressivity in Russian

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1. Introduction

In this paper, I deal with expressivity in Russian. Expressivity in Russian is indicated by productive expressive suffixes which are used to express the speaker's attitudes and emotions toward the referent. Under some views, evidentials and expressives are closely related as markers of epistemology (see Willett 1988 for a literature review). For example, according to Rooryck, evidentials "put in perspective or evaluate the truth value of a sentence both with respect to the source of the information … and with respect to the degree to which this truth can be verified or justified" (Rooryck 2001:125). Under this view, evidentials indicate both the source and reliability of the information.[1] Here we understand reliability as *evaluation* of the information source by the speaker. In this respect, expressives and evidentials are viewed as similar, as they both involve evaluation. They are, however, different with respect to what is being evaluated: evidentials evaluate the source of information, while expressives evaluate the referent.

I argue that expressive suffixes in Russian do not have the same formal properties. Their formal properties vary along two dimensions: (i) how they merge (as a head or as a modifier), and (ii) where they merge (with category-free √Roots in the sense of Marantz 1997 or with categories). The current analysis makes empirical predictions that are borne out both in Russian and cross-linguistically.

This paper is organized as follows. In §1, I discuss the semantics of expressive suffixes in Russian. In §2, I identify a problem concerning their distribution. In §3, I propose a syntactic analysis according to which expressive suffixes can either be nominal heads or modifiers of nouns. In §4, I present evidence that expressive suffixes can be heads or modifiers. In §5, I present evidence that they can combine either with categories or with category-neutral roots. In §6, I discuss syntactic variation across languages. Finally, in §7, I present the conclusions.

[1] See Blain & Déchaine 2006 on a different view: Evidentials only code the source of information.

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University of British Columbia Working Papers in Linguistics, volume 28. Vancouver, Canada, 2010.

2. Expressive Suffixes in Russian

An utterance is expressive if it conveys information about attitudes and emotions of the speaker (Potts 2007). So-called expressive suffixes in Russian do just this: they express the speaker's attitudes and emotions (Bratus 1969; Dementiev 1953; Fentslova 1985; Plyamovataya 1955, 1961; Polterauer 1981; Popoff-Böcker 1973; Popov 1967; Protasova 2001; Rakušan 1981; Shvedova et al. 1982; Spiridonova 1999; Stankiewicz 1968; Volek 1987, etc.). There are two semantic types of expressive suffixes in Russian: *attitude* suffixes and *size* suffixes. Attitude suffixes express an affectionate or vulgar attitude of the speaker toward the referent. Size suffixes indicate the size of the referent (small or big), in addition to expressing an attitude. Size suffixes that indicate small size are traditionally called diminutives, while those that indicate big size are traditionally called augmentatives. Russian expressive suffixes are classified in Table 1.[2]

Table 1: Expressive suffixes in Russian

Attitude suffixes	affectionate	*-án', -áš, -ón, -úl', -ún', -úr, -ús', -úš*
	vulgar	*-ág, -ák, -ál, -án, -ár, -áč', -áx, -íl, -in, -ób, -ot, -óx, -úg, -úk, -úx*
Size suffixes	diminutive	*-k* (allomorphs*: -ok/-ek/-ik*), *-c* (allomorphs*: -ec/-ic*)
	augmentative	*-išč'*

3. Some Distributional Properties of Expressive Suffixes

Although the suffixes in question are all expressive, their distributional properties are different. The differences concern a change in syntactic category, a change in grammatical gender, and a change in inflectional class. For example, in (1b), the attitude suffixes *-uš* and *-ul'* turn the adjective *gr'áz-n-ɨj* 'dirty' into a noun, while in (1c) and (1d), size suffixes cannot turn an adjective into a noun.

(1) Change in syntactic category

a. gr'áz-n-ɨj
dirty-ADJ-MASC.SG
'dirty'

b. gr'az-n-**úš/úl'**-a
dirty-ADJ-EXPR-MASC/FEM.SG
'dirty person (affectionate)'

[2]Here I deal only with simplex expressive suffixes. Russian has also complex suffixes (e.g., *č'-ik*, *on'-k*, *en'-k*) that are out of the scope of this paper. One interesting difference between complex and simplex expressive suffixes in Russian is that complex suffixes can attach to an adjective and return an adjective (e.g., *gr'áz-n-ij* 'dirty' – *gr'áz-n'-**en'-k**-ij* 'dirty (affectionate)'); while simplex suffixes cannot (e.g., *gr'áz-n-ij* 'dirty' – **gr'áz-n'-**us'/ul'**-ij* 'dirty (affectionate)')—they can only attach to an adjective and return a noun (1b).

c. *gr'az-n-(o/e)**k**/(e/i)**c**-(a)
dirty-ADJ-EXPR.MASC.SG-(FEM.SG)
'dirty person (diminutive)'

d. *gr'az-n-**išč'**-e/a
dirty-ADJ-EXPR-MASC/FEM.SG
'dirty person (augmentative)'

In (2b), the attitude suffix *-in* changes the grammatical gender of the base from neuter to feminine, while in (2c) and (2d), the size suffixes *-c* and *-išč'* do not change the grammatical gender of the base.

(2) Change in grammatical gender

a. bolót-o
swamp-NEUT.SG
'swamp'

b. bolót'-**in**-a
swamp-EXPR-FEM.SG
'swamp (vulgar)'

c. bolót-**c**-e
swamp-EXPR-NEUT.SG
'swamp (diminutive)'

d. bolót'-**išč'**-e
swamp-EXPR-NEUT.SG
'swamp (augmentative)'

In (3b), the attitude suffixes *-ul'* and *-us'* change the inflectional class of the base from Class I to Class II. In Russian, Class I and Class II nouns differ in their morphological properties. For example, Class I nouns have the morphological ending -Ø in the Nominative case (3a); while Class II nouns have the morphological ending -a in this case (3b).

In (3c) and (3d), the size suffixes *-ok* and *-išč'* do not change the inflectional class of the base.

(3) Change in inflectional class

a. sɨn
son.MASC.SG (CLASS I)
'son'

b. sɨn-**úl'/ús'**-a
son-EXPR-MASC.SG (CLASS II)
'son (affectionate)'

c. sɨn-**ók**
son-EXPR.MASC.SG (CLASS I)
'son (diminutive)'

d. sɨn'-**íšč'**-e
son-EXPR-MASC.SG (CLASS I)
'son (augmentative)'

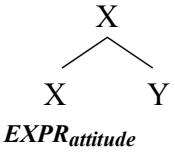
In sum, Russian attitude and size suffixes have distinct distributional properties. In this context, the question arises as to whether we are dealing with one syntactic class or different classes. If there are different classes, how many are there and how are they distinguished?

4. A Syntactic Analysis

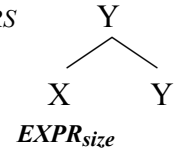
I propose that expressive suffixes (EXPR) in Russian vary syntactically along two dimensions: (i) how they merge: as a head or as a modifier, and (ii) where they merge: with category-free √Roots or with categories.

Attitude suffixes are syntactic heads (4a), while size suffixes are syntactic modifiers (4b).

(4) a. *HEADS*

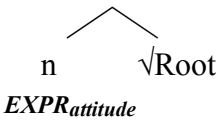


b. *MODIFIERS*

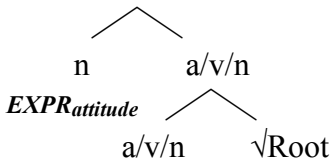


Attitude suffixes are noun heads that can merge either with √Roots (5a) or with various syntactic categories (a/v/n) (5b). Size suffixes are noun modifiers that can only merge with a noun category (6).

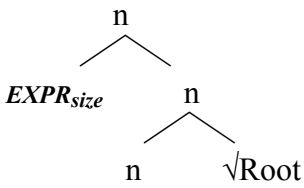
(5) *HEADS* a.



b.



(6) *MODIFIERS*



This results in the classification shown in Table 2.

Table 2: Classification of expressive suffixes in Russian

	EXPR$_{attitude}$ *HEADS*	*EXPR*$_{size}$ *MODIFIERS*
ATTACHMENT TO √ROOTS	*-án', -áš, -ón, -úl', -ún', -úr, -ús', -úš, -ág, -ák, -ál, -án, -ár, -áč', -áx, -íl, -in, -ób, -ot, -óx, -úg, -úk, -úx*	
ATTACHMENT TO NOUNS		*-k/-ek/-ok/-ik; -c/-ec/-ic; -išc'*

5. How Do Expressive Suffixes Merge: As Heads or As Modifiers?

I argue that attitude suffixes are syntactic heads, while size suffixes are syntactic modifiers. In §4.1, I deal with syntactic heads. In §4.2, I deal with syntactic modifiers. In §4.3, I discuss predictions that follow from the current analysis. In §4.4, I present a summary.

5.1 Expressive heads

Here I show that attitude suffixes are syntactic heads. The evidence comes from their distributional properties, as discussed above: (i) a change in syntactic category (§4.1.1); (ii) a change in grammatical gender (§4.1.2); and (iii) a change in inflectional class (§4.1.3).

5.1.1 Change in syntactic category

Expressive affixation of this type always results in a noun, regardless of the category of the base. For example, in (7), the attitude suffix *-uš* turns an adjective into a noun. In (8), the attitude suffix *-aš* turns a verb into a noun. And in (9), there is no change: a noun remains a noun.

(7) A → N

a. rod-n-ój
dear-ADJ-MASC.SG
'dear'

b. rod-n-**úš**-a
dear-ADJ-EXPR-MASC/FEM.SG
'dear person (affectionate)'

(8) V → N

a. ras-t'er'-á-t'
VERB.PREF-lose-TH[3]-INF
'to lose'

b. ras-t'er'-**áš**-a
VERB.PREF-lose-EXPR-MASC/FEM.SG
'absent minded person (affectionate)'

(9) N = N

a. mám-a
mother-FEM.SG
'mother'

b. mam-**úl'**-a
mother-EXPR-FEM.SG
'mother (affectionate)'

5.1.2 Change in grammatical gender

Expressive affixation of this type can change the grammatical gender of the base. Inanimate nouns of all grammatical genders (masculine, feminine, and neuter) become feminine nouns (10). Animate nouns unspecified for sex become common gender nouns that can trigger both masculine and feminine agreements (MASC/FEM) (11).

(10) inanimate (masc/fem/neut) → fem

a. bolót-o
swamp-NEUT.SG
'swamp'

b. bolót'-**in**-a
swamp-EXPR-FEM.SG
'swamp (vulgar)'

[3]I assume, following Halle and Matushansky 2006, that *-a* is a theme vowel (TH) in Russian

c. gólod
hunger.MASC.SG
'hunger'

d. golod-**úx**-a
hunger-EXPR-FEM.SG
'hunger (vulgar)'

(11) animate (unspecified for sex) → common

a. č'elov'ék
person.MASC.SG
'person'

b. č'elov'éč'-**in**-a
person-EXPR-MASC/FEM.SG
'person (vulgar)'

c. tvár'
animal.FEM.SG
'animal'

d. tvár'-**úk**-a
animal-EXPR-MASC/FEM.SG
'animal (vulgar)'

5.1.3 Change in inflectional class

Expressive affixation of this type can change the inflectional class of the base. The majority of expressive suffixes (except *-an*) form Class II nouns (12). The suffix *-an* forms Class I nouns (13).

(12) Class I → Class II (the majority of suffixes)

a. vór
thief.MASC.SG (CLASS I)
'thief'

b. vor'-**úg**-a
thief-EXPR-MASC/FEM.SG (CLASS II)
'thief (vulgar)'

(13) Class II → Class I (the suffix *-an*)

a. gub-á
lip-FEM.SG (CLASS II)
'lip'

b. gub-**án**
lip-EXPR.MASC.SG (CLASS I)
'person with distinct lips (vulgar)'

5.2 Expressive modifiers

I show that size suffixes are syntactic modifiers. The evidence comes from their distributional properties: (i) no change in syntactic category (§4.2.1); (ii) no change in grammatical gender (§4.2.2); and (iii) no change in inflectional class (§4.2.3).

5.2.1 No change in syntactic category

Expressive affixation of this type does not change the syntactic category of the base. For example, in (14), an adjective does not become a noun; in (15), a verb does not become a noun; and in (16), a noun remains a noun.

(14) *A → N

a. rod-n-ój
dear-ADJ-MASC.SG
'dear'

b. *rod-n-(o/e/i)**k**/(e/i)**c**-(a)
dear-ADJ-EXPR-MASC.SG-(FEM.SG)
'dear person (diminutive)'

(15) *V → N

a. ras-t'er'-á-t'
VERB.PREF-lose-TH-INF
'to lose'

b. *ras-t'er'-(o/e/i)**k**/(e/i)**c**-(a)
VERB.PREF-lose-EXPR-MASC.SG-(FEM.SG)
'absent minded person (diminutive)'

(16) N = N

a. zv'ér'
animal.MASC.SG
'animal'

b. zv'er'-**ók**
animal-EXPR.MASC.SG
'animal (diminutive)'

5.2.2 No change in grammatical gender

Expressive affixation of this type does not change the grammatical gender of the base. For example, in (17), a masculine noun remains masculine; in (18), a feminine noun remains feminine; and in (19), a neuter noun remains neuter.[4]

(17) masc = masc

a. č'elov'ék
person.MASC.SG
'person'

b. č'elov'éč'-**ek**
person-EXPR.MASC.SG
'person (diminutive)'

(18) fem = fem

a. ovc-á
sheep-FEM.SG
'sheep'

b. ov'éč'-**k**-a
sheep-EXPR-FEM.SG
'sheep (diminutive)'

(19) neut = neut

a. bolót-o
swamp-NEUT.SG
'swamp'

b. bolót-**c**-e
swamp-EXPR-NEUT.SG
'swamp (diminutive)'

[4]The suffix *-ik* seems to only attach to masculine bases (e.g., *dóm* 'house' – *dóm'-**ik*** 'house (diminutive)'; *č'ás* 'hour' – *č'ás'-**ik*** 'hour (diminutive)').

5.2.3 No change in inflectional class

Expressive affixation of this type does not change the inflectional class of the base. For example, in (20), a Class I noun remains in Class I, and in (21), a Class II noun remains in Class II.[5]

(20) Class I = Class I

a.	b.
sɨn	sɨn-**ók**
son.MASC.SG (CLASS I)	son-EXPR.MASC.SG (CLASS I)
'son'	'son (diminutive)'

(21) Class II = Class II

a.	b.
s'estr-á	s'estr'-**íc**-a
sister-FEM.SG (CLASS II)	sister-EXPR-FEM.SG (CLASS II)
'sister'	'sister (diminutive)'

5.3 Predictions from the analysis

This analysis makes the following predictions. First, size suffixes, being syntactic modifiers, should allow repetition of the same morpheme (in the sense of Scalise 1988). Second, since attitude suffixes are noun heads and size suffixes are noun modifiers, size suffixes should be able to modify nouns formed by attitude suffixes. In other words, size suffixes should be able to merge outside of attitude suffixes. In §4.3.1 and §4.3.2, I show that these predictions are borne out.

5.3.1 Repetition of the same morpheme

Size suffixes allow repetition of the same morpheme, in accordance with this analysis. When a size morpheme is repeated, it indicates a strengthening of the emotions of the speaker (see Potts 2007 for this characteristic of expressives). For example, in (22b), the diminutive suffix *-ek* is used once in a word and the resulting word is *ovráž-**ek*** 'small ditch'. In (22c), this suffix is used twice and the resulting word is *ovráž-**eč'-ek***[6] 'very small ditch'.

(22)

a.	b.	c.
ovrág	ovráž-**ek**	ovráž-**eč'-ek**
ditch.MASC.SG	ditch-EXPR.MASC.SG	ditch-EXPR-EXPR.MASC.SG
'ditch'	'small ditch'	'very small ditch'

Since attitude suffixes are syntactic heads, we predict that they cannot allow repetition of the same morpheme. This is indeed the case in Russian. In (23b), the attitude suffix *-ul'* is used once, and the resulting word is grammatical: *s ɨn-**úl'**-a* 'nice son'. In (23c), it is used twice and the resulting word is ungrammatical: ***s ɨn-ul'-ul'**-a* 'very nice son'.

[5]Class III nouns demonstrate a different behavior, which is not discussed here due to the lack of space. A detailed analysis of the change in Class III nouns is proposed in Steriopolo 2008.

[6]In Russian, there are g ~ ž and k ~ č' alternations which take place in front of diminutive suffixes.

(23) a. sɨn
son.MASC.SG
'son'

b. sɨn-**úl'**-a
son-EXPR-MASC.SG
'nice son'

c. *sɨn-**ul'-ul'**-a
son-EXPR-EXPR-MASC.SG
'very nice son'

5.3.2 Size suffixes modify attitude suffixes

This analysis predicts that size suffixes should be able to merge outside of attitude suffixes in Russian. This prediction is borne out. In (24b), the attitude suffix *-ul'* turns an adjective *gr'áz-n-ɨj* 'dirty' into a noun *gr'az-n-**úl'**-a* 'nice dirty person'. In (24c), the size suffix *-k* merges outside the attitude suffix: *gr'az-n-**úl'-k**-a* 'nice and small dirty person'.

(24) a. gr'áz-n-ɨj
dirty-ADJ-MASC.SG
'dirty'

b. gr'az-n-**úl'**-a
dirty-ADJ-EXPR-MASC/FEM.SG
'nice dirty person'

c. gr'az-n-**úl'-k**-a
dirty-ADJ-EXPR-EXPR-SG
'nice and small dirty person'

5.4 Summary

Attitude suffixes are syntactic heads because they produce a change in syntactic category, grammatical gender, and inflectional class. Size suffixes are syntactic modifiers because they produce no such changes. These findings are summarized in Table 3.

Table 3: EXPR heads vs. EXPR modifiers

	$EXPR_{attitude}$ *HEADS*	$EXPR_{size}$ *MODIFIERS*
Change in category	✓	×
Change in gender	✓	×
Change in class	✓	×

6. Where Do Expressive Suffixes Merge: With √Roots or With Categories?

I argue that attitude suffixes can merge at two sites: with √Roots and with categories. In contrast, size suffixes can only merge at one site, namely, with a noun category. This analysis is cast in the theory of Distributed Morphology (Halle and Marantz 1993). In this theory, √Roots are category-free and have to be categorized by combining with a functional head, like a/v/n, to form adjectives, verbs, and nouns, respectively. In §5.1, I deal with attitude suffixes merging with √Roots. In §5.2, I deal with attitude suffixes merging with categories. In §5.3, I deal with size suffixes merging with nouns. In §5.4, I show that there are no size suffixes merging with √Roots. In §5.5, I present the summary.

6.1 Attitude suffixes merging with √Roots

That attitude suffixes attach to bases which are deprived of any categorial morphology is evidence that they merge with √Roots. For example, in (25a), the adjective *žád-**n**-ɨj* 'greedy' if formed by a productive adjectival affix in Russian, *-n-*. In (25b, c), the attitude

suffixes *-ob* and *-ug* merge with the √Root *žád-,* which is deprived of the categorial affix *-n-*.

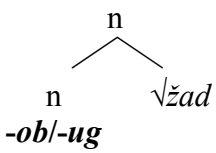
(25) a. žád-**n**-ɨj
greedy-ADJ-MASC.SG
'greedy'

b. žad-**ób**-a
greedy-EXPR-MASC/FEM.SG
'greedy person (vulgar)'

c. žad'-**úg**-a
greedy-EXPR-MASC/FEM.SG
'greedy person (vulgar)'

The proposed structure for (25b, c) is given in (26).

(26)



*žad'-**úg**-a* 'greedy person (vulgar)'

6.2 Attitude suffixes merging with categories

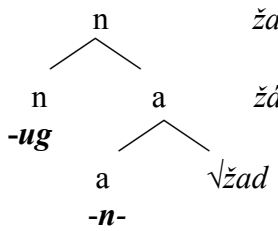
That expressive morphology appears outside of categorial morphology is evidence that attitude suffixes merge with categories. For example, in (27a), the adjective *žád-**n**-ɨj* 'greedy', discussed above, has the categorial affix *-n-*. In (27b), the attitude suffix *-ug* merges outside this suffix, which means that it attaches after an adjective has been formed.

(27) a. žád-**n**-ɨj
greedy-ADJ-MASC.SG
'greedy'

b. žad-**n'**-**úg**-a
greedy-ADJ-EXPR-MASC/FEM.SG
'greedy person (vulgar)'

The proposed structure for (27b) is shown in (28).

(28)



*žad-**n'**-**úg**-a* 'greedy person (vulgar)'

*žád-**n**-ɨj* 'greedy'

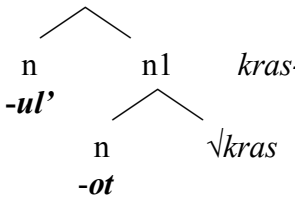
In (29a), the noun *kras-**ot**-á* 'beauty' is formed by the nominal suffix *-ot*. In (29b), the attitude suffix *-ul'* merges outside this suffix.

(29) a. kras-**ot**-á
pretty-NOM-FEM.SG
'beauty'

b. kras-**ot**-**úl'**-a
pretty-NOM-EXPR-MASC/FEM.SG
'pretty person (affectionate)'

The proposed structure for (29b) is given in (30).

(30)



*kras-**ot-úl'**-a* 'pretty person (affectionate)'

*kras-**ot**-á* 'beauty'

6.3 Size suffixes merging with a noun category

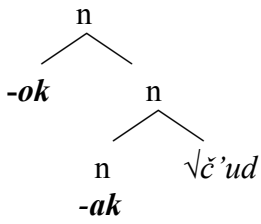
In contrast to attitude suffixes, size suffixes can only merge with a noun category. Evidence comes from the fact that expressive morphology appears outside of nominal morphology. For example, in (31a), the noun *čud-**ák*** 'an eccentric' is formed by the nominal suffix *-ak*. In (31b), the diminutive suffix *-ok* merges outside of this nominal suffix, which means that it adjoins after the noun has already been formed.

(31) a. č'ud-**ák**
wonder-NOM.MASC.SG
'an eccentric'

b. č'ud-**ač'-ók**
wonder-NOM-EXPR.MASC.SG
'an eccentric (diminutive)'

The proposed structure for (31b) is shown in (32).

(32)



*č'ud-**ač'-ók*** 'an eccentric (diminutive)'

*č'ud-**ák*** 'an eccentric'

Size suffixes cannot merge with adjectives and verbs. Evidence comes from the fact that when a size suffix is added outside of adjectival or verbal morphology, the resulting data are ungrammatical (33), (34).

(33) a. žád-**n**-ɨj
greedy-ADJ-MASC.SG
'greedy'

b. *žad-**n**-(o/e/i)**k**/(e/i)**c**-ɨj
greedy-ADJ-EXPR-MASC.SG
'greedy (diminutive)'

(34) a. ras-t'er'-á-t'
VERB.PREF-lose-TH-INF
'to lose'

b. *ras-t'er'-(o/e/i)**k**/(e/i)**c**-a-t'
VERB.PREF-lose-EXPR-TH-INF
'to lose (diminutive)'

6.4 No size suffixes merging with √Roots

Size suffixes also cannot merge with √Roots. Evidence comes from the fact that when a size suffix is added to a √Root which is deprived of categorial morphology, the resulting data are ungrammatical (35), (36).

(35) a. č'ud-**ák**
wonder-NOM.MASC.SG
'an eccentric'

b. *č'ud-(o/e/i)**k**/(e/i)**c**-(a)
wonder-EXPR.MASC.SG-(FEM.SG)
'an eccentric (diminutive)'

(36) a. žád-**n**-ɨj
greedy-ADJ-MASC.SG
'greedy'

b. *žad-(o/e/i)**k**/(e/i)**c**-ɨj
greedy-EXPR-MASC.SG
'greedy (diminutive)'

6.5 Summary

Attitude suffixes can merge both with √Roots and with categories (a/v/n). Size suffixes can only merge with a noun category. Thus, in Russian there is an asymmetry between expressive heads and expressive modifiers. These findings are summarized in Table 4.

Table 4: Attachment to √Roots vs. attachment to categories

	$EXPR_{attitude}$ *HEADS*	$EXPR_{size}$ *MODIFIERS*
EXPR + √*ROOT*	✓	×
EXPR + *a*	✓	×
EXPR + *v*	✓	×
EXPR + *n*	✓	✓

7. Cross-linguistic Variation

With respect to the findings above, we observe that in Russian there is a typological gap: no expressive modifiers merging with √Roots. The current analysis predicts that this type of expressive morphology should be attested across languages. Also, in Russian, the same set of expressive heads merges both with √Roots and with categories (see Table 2). This analysis predicts that across languages, we should find expressive heads that can only merge with √Roots and others that can only merge with categories. Here I show that these predictions are borne out. In §6.1, I show that modifiers that merge with √Roots are attested in Halkomelem (Salish). In §6.2, I show that heads that merge only with a noun category are found in German. In §6.3, I present a summary.

7.1 Modifiers that merge with √Roots in Halkomelem (Salish)

According to Wiltschko (2008), Halkomelem diminutive prefixes (formed by means of reduplication) are syntactic modifiers that merge with √Roots. The evidence comes from their distributional properties. First, diminutive prefixes produce no change in the syntactic category of the base. Thus, in (37), an adjective remains an adjective when the

diminutive prefix merges; in (38), a verb remains a verb; and in (39) and (40), a noun remains a noun. Second, Halkomelem diminutive prefixes never function as classifiers, which gives additional evidence that they do not change categorial properties of the base. Thus, in (39), a count noun remains a count noun and, in (40), a mass noun remains a mass noun.

(37) A = A

a. p'eq'
white
'white'

b. **p'í**-p'eq
EXPR-white
'a little bit white'

(38) V = V

a.lhí:m
pick
'to pick'

b. **lhi**-lhi:m
EXPR-pick
'to pick a little bit'

(39) N = N

a. **s**-path
NOM-bear
'bear (count noun)'

b. **s-pi**-páth
NOM-EXPR-bear
'small bear (count noun)'

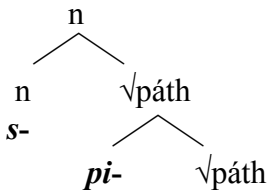
(40) N = N

a. **s**-pehál̓s
NOM-wind
'wind (mass noun)'

b. **s-pi**-pehál̓s
NOM-EXPR-wind
'little bit of wind (mass noun)'

Evidence that diminutive prefixes in Halkomelem merge with √Roots comes from the fact that expressive morphology appears inside of categorial morphology. For example, in (39a) and (40a), the nouns ***s-****páth* 'bear' and ***s-****pehál̓s* 'wind' are formed by the nominal prefix *s-*. In (39b) and (40b), the diminutive prefixes appear inside this nominal prefix: ***s-pi-****páth* 'small bear' and ***s-pi-****pehál̓s* 'little bit of wind'. The structure for (39b) is given in (41).

(41) ***s-pi-****páth* 'small bear'



7.2 Heads that merge with a noun category in German

According to Wiltschko (2006), German diminutive suffixes are syntactic heads that merge with a noun category. The evidence comes from the fact that they produce a change in the grammatical gender of the base. They always form neuter nouns, regardless of the grammatical gender of the base. Thus, in (42), a masculine noun becomes neuter when the diminutive *-chen* attaches. In addition, they function as classifiers and always

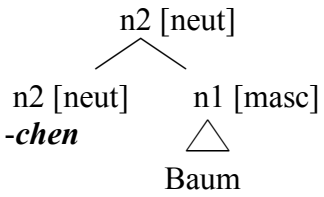
turn a mass noun into a count noun. Thus, in (43), a mass noun becomes a count noun when *-chen* attaches. German diminutive suffixes can only attach to nouns and can never attach to adjective or verbs.

(42) a. der Baum b. das Bäum-**chen**
DET.MASC tree DET.NEUT tree-EXPR
'tree' 'small tree'

(43) a. viel Brot b. viele Bröt-**chen**
much bread many.PL bread-EXPR
'much bread (mass noun)' 'many bread rolls (count noun)'

A structure for (42) is given in (44).

(44)



7.3. Summary

The types of expressive morphology missing in Russian are found cross-linguistically, as it is predicted by the current analysis. The expressive typology across languages is shown in Table 5.

Table 5: Expressive morphology across languages

	EXPR HEADS	*EXPR MODIFIERS*
EXPR + √*ROOT*	Russian	Halkomelem
EXPR + *CATEGORY*	German, Russian	Russian

8. Conclusions

Expressive suffixes in Russian do not have a uniform syntax. They display syntactic differences along two dimensions: (i) how they merge (as a head or as a modifier), and (ii) where they merge (with √Roots or with categories). This analysis makes empirical predictions that are borne out both in Russian, and across languages.

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Which *-miş* is MIŞ?: Turkish indirectivity and negative scope

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1. Introduction

The aim of this paper is to test the claim that the Turkish indirective *miş* is a surface representation of two distinct forms, MIŞ and IMIŞ, through application of de Haan's negative scope restriction.

The paper is organized as follows: §2 provides a theoretical framework to facilitate the understanding of the data. First, it presents previous studies on the Turkish miş-forms and establishes the distinction between the MIŞ and IMIŞ. Next, it explains de Haan's negative scope restriction and outlines how negation works in Turkish. Finally, it establishes a hypothesis for the research at hand. §3 provides a brief but thorough description of the methodology used to attain our data. §4 is composed of our results. Finally, §5 contains the discussion of the data and methodological difficulties we encountered. Furthermore, it offers a conclusion, including possible future research directions.

2. Theoretical Framework

2.1 Previous Studies on Turkish -miş Forms

Evidentiality in Turkish has been the subject of much controversy – in particular, predicates with the suffix *-miş* are widely variable in their evidential force (Aikhenvald 2004; Johanson 2000; Csató 2000). The *miş*-form, known throughout the literature as a non-firsthand or indirective evidential, has a wide range of meanings (Aikhenvald, 2004; Johanson 2000; Aksu-Koç and Slobin 1986; Slobin and Aksu 1982; see also Peterson, this volume). Depending on the context in which it is used, the information source could be a report, as in (1); an inference, as in (2); or a non-visual perception, as in (3).

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(1) Report

bakan *hasta-**ymış***
minister sick-NONFIRSTH.COP
"The minister is reportedly sick" (spoken by someone told about the sickness)

(2) Inference

*uyu-**muş**-um*
sleep-NONFIRSTH.PAST-1sg
"I have obviously slept" (spoken by someone who has just woken up)

(3) Perception

iyi *çal-ıyor-**muş***
good play-INTRATERM.ASP-NONFIRSTH.COP
'She is, as I hear, playing well' (spoken by someone listening to her play)

Csató claims that the surface MIŞ comes from two semantically and syntactically distinct items: a verbal suffix (MIŞ) with primarily temporal and aspectual force, which can occasionally carry evidential force; and a copula particle (IMIŞ) with obligatory evidential force and no temporal or aspectual meaning. IMIŞ cliticizes onto the preceding predicate and, thus, looks very similar to the MIŞ. Furthermore, there is a major distributional difference between the two forms: as MIŞ are verbal affixes and IMIŞ are copula particles, the former can only be added to primary verbal stems, while the latter is restricted to nominal predicates (i.e. descriptive or locative statements with no overt verb,) and inflected verbal stems (Csató 2000). Therefore, according to Csató, (1) and (3) contain the IMIŞ, while (2) contains the MIŞ. A list of the differing properties of MIŞ- and IMIŞ is shown in the following table:

Properties	**Finite forms of verbs based on MIŞ**	**The copula particle IMIŞ**
Attachable to primary verb stems	Yes	No
Accentable (able to carry high pitch	Yes	No
Viewpoint meaning	posterminality	no viewpoint meaning
Temporal meaning	anteriority	no temporal meaning
Indirective meaning	Can express indirectivity	Grammaticalized marker of indirectivity

Table 0.1: The properties of MIŞ and IMIŞ (Csató 2000)

2.2 de Haan's Negative Scope Restriction

de Haan makes the generalization that it is "crosslinguistically valid that grammaticalised evidentials cannot be within the scope of negation" (1999). This generalization was conceived as a tool to tease apart epistemic modality and evidentiality; however, it has proven to be a good diagnostic tool to determine whether a given morpheme is a grammaticalized evidential. The crosslinguistic nature of this diagnostic tool is illustrated in (4) and (5). In Maricopa, the morpheme *-ʔyuu* is a fully grammaticalized evidential, as shown in (4). In order to negate the sentence, the negation morpheme *-ma* is attached to the verbal root, placing the evidential after the negation and, therefore, outside the scope of negation. To force the opposite scope interpretation in Maricopa, a biclausal structure must be used, as shown in (5). Now, the morpheme *-yuu* is no longer a grammaticalized evidential, but rather a main verbal root meaning 'to see' which can, but need not, carry evidential force. The negative morpheme *-ma* is now attached after *-yuu*, which is not evidential in nature, placing the evidential force within the scope of negation:

(4) Maricopa (Gordon 1986: 85)

*waly-marsh-ma-**ʔyuu***
NEG-win.DUAL-NEG-VIS
"(I saw) They didn't win."

(5) *Marsh-m* *waly-ʔ-**yuu**-ma-k.*
win.DUAL-DS NEG-1SG-see-NEG-ASP
"I didn't see them win."

2.3 Turkish Negation

In Turkish, there are two ways of expressing negation: a verbal predicate can be negated with the suffix *-mA*, whereas any other constituent is negated with a following copula, *değil*, as shown in (6) and (7) respectively. This copula is understood to have scope over the entire CP when it occurs sentence-finally (Kornfilt 1997; Csató 2000).

(6) *Hatice Hanım akşam namazını kıl**mı**yor*
Hatice Mrs evening prayer-3POSS-ACC do-**NEG**-IYOR.PRS
"Mrs Hatice is not performing the evening prayer." (Csató 2000)

(7) *Hatice Hanım akşam namazını kılıyor **değil***
Hatice Mrs evening prayer-3POSS-ACC do-IYOR.PRS **NEG.COP**
"It is not the case that Mrs Hatice is performing the evening prayer." (Csató 2000)

2.4 Hypothesis

In order to test Csato's claim that there are in fact two distinct morphemes surfacing as *miş* in Turkish, only one of which is a fully grammaticalized evidential, we adopted de Haan's negative scope restriction and tested the permissibility of each MIŞ-form (as defined by the distributional restrictions) within the scope of both sentence final *değil* negation and verbal suffix *-mA* negation. In accordance with de Haan's negative scope restriction, we hypothesize that IMIŞ, the fully grammaticalized evidential, will not occur with sentence-final *değil* negation but will occur with verbal suffix *-mA* negation, as the former has scope over the full sentence whereas the scope of the later excludes IMIŞ. Conversely, we hypothesize that MIŞ will occur with both the negative copula *değil* and the verbal suffix *-mA*, as, according to Csató, it is not a fully grammaticalized evidential and thus should be permissible within the scope of negation.

3. Methodology

In the first phase of testing we constructed a variety of test sentences – including both MIŞ and IMIŞ, as well as both *değil* and *-mA* negation – and presented them to a native Turkish speakers as a grammaticality judgment task. This speaker was a 62-year-old male from Istanbul who speaks the standard Turkish dialect natively. We used eight different syntactic constructions and tested them with five different predicates.

(i.) Verbal predicate inflected with MIŞ

(ii.) Verbal predicate inflected with MIŞ; *-mA* negation

(iii.) Verbal predicate inflected with MIŞ; sentence-final *değil* negation

(iv.) Inflected verbal predicate with IMIŞ

(v.) Inflected verbal predicate with IMIŞ; *-mA* negation

(vi.) Inflected verbal predicate with IMIŞ; sentence-final *değil* negation

(vii.) Nominal predicate with IMIŞ

(viii.) Nominal predicate with IMIŞ; sentence-final *değil* negation

During this first phase of testing, we encountered a few complications which will be discussed below. This led us to create an additional four structures to test the intuitions of our speakers.

(ix.) Verbal predicate inflected with MIŞ; sentence final değil negation; a contrasting positive clause.

(x.) Inflected verbal predicate with IMIŞ; sentence final değil negation; contrasting positive clause.

(xi.) Inflected verbal predicate; sentence final değil negation with IMIŞ outside the scope of negation.

(xii.) Inflected verbal predicate; sentence final değil negation with IMIŞ outside the scope of negation; contrasting positive clause.

Following the second phase of testing, we took three verb paradigms used for the grammaticality judgment task offered to our first speaker to another speaker. Our second speaker was a 42-year-old female who also spoke the standard Turkish dialect as a first language. Note that for this phase of testing we included the sentences from our phase two for our first speaker.

4. Results

4.1 Phase One Results

The following subsections summarize the results: the paradigm of test sentences used in phase one for our first speaker as well as part of the paradigm used for speaker two. Discrepancies between the two speakers are marked in parentheses with a comment made under the translation of that sentence. Sentences marked as ungrammatical are otherwise ungrammatical for both. IYOR.CONT marks the continuous aspect marker.

Verbal Predicates with MIŞ

(8) *Ali hüzünlenmiş*
Ali become.sad-MIŞ.PST
"Ali has (apparently) become sad."

(9) *Hasan çalışmış*
Hasan work-MIŞ.PST
"Hasan (apparently) worked."

(10) *Ali hastalanmış*
Ali become.ill-MIŞ.PST
"Ali has (apparently) become ill."

(11) *Rüstem odasını temizlemiş*
Rüstem room become.clean-MIŞ.PST
"Rüstem (apparently) cleaned his room."

(12) *Mustafa uyanmiş*
Mustafa wake.up-MIŞ.PST
"Mustafa (apparently) woke up."

Verbal Predicates with MIŞ and Suffix Negation

(13) *Ali hüzünlenmemiş*
Ali become.sad-NEG-MIŞ.PST
"Ali has (apparently) not become sad."

(14) *Hasan çalımamış*
Hasan work-NEG-MIŞ.PST
"Hasan (apparently) didn't work."

(15) *Ali hastalanmamış*
Ali become.ill-NEG-MIŞ.PST
"Ali has (apparently) not become ill."

(16) *Rüstem odasını temizlememiş*
Rüstem room become.clean-NEG-MIŞ.PST
"Rüstem (apparently) hasn't cleaned his room."

(17) *Mustafa uyanmamuş*
Mustafa wake.up-NEG-MIŞ.PST
"Mustafa (apparently) hasn't woken up."

Verbal Predicates with MIŞ and Copular Negation

(18) *(*) Ali hüzünlenmiş değil*
Ali become.sad-MIŞ.PST NEG.COP
"Ali has (apparently) not become sad."
Well-formed for speaker 1; ill-formed for speaker 2.

(19) *(?,*) Hasan çalışmış değil*
Hasan work-MIŞ.PST NEG.COP
Problematic for speaker 1, who had the intuition that it was an incomplete sentence; ill-formed for speaker 2.

(20) *(?,*) Ali hastalanmış değil*
Ali become.ill-MIŞ.PST NEG.COP
Problematic for speaker 1, who had the intuition that it was an incomplete sentence; ill-formed for speaker 2.

(21) *Rüstem odasını temizlemiş değil*
Rüstem room become.clean-MIŞ.PST NEG.COP
"Rüstem (apparently) hasn't cleaned his room."

(22) *Mustafa (henüz) uyanmuş değil*
Mustafa wake.up-MIŞ.PST NEG.COP
"Mustafa (apparently) hasn't woken up (yet)."

Inflected Verbal Predicates with IMIŞ

(23) *Ali hüzünleniyormuş*
Ali become.sad-IYOR.CONT-IMIŞ
"Ali is (apparently) becoming sad."

(24) *Hasan çalışıyormuş*
Hasan work-IYOR.CONT-IMIŞ
"Hasan is (apparently) working."

(25) *Ali iyileşiyormuş*
Ali become.well-IYOR.CONT-IMIŞ
"Ali is (apparently) getting better."

(26) *Rüstem odasını temizliyormuş*
Rüstem room become.clean-IYOR.CONT-IMIŞ
"Rüstem is (apparently) cleaning his room."

(27) *#Mustafa uyanıyormuş*
Mustafa wake.up-IYOR.CONT-IMIŞ
"Mustafa is (apparently) waking up."[1]

Inflected Verbal Predicates with IMIŞ and Suffix Negation

(28) *Ali hüzünlenmiyormuş*
Ali become.sad-NEG-IYOR.CONT-IMIŞ
"Ali (apparently) isn't becoming sad."

(29) *Hasan çalışmıyormuş*
Hasan work-NEG-IYOR.CONT-IMIŞ
"Hasan is (apparently) not working."

(30) *Ali iyileşmiyormuş*
Ali become.well-NEG-IYOR.CONT-IMIŞ
"Ali is (apparently) not getting better."

(31) *Rüstem odasını temizlemiyormuş*
Rüstem room become.clean-NEG-IYOR.CONT-IMIŞ
"Rüstem (apparently) isn't cleaning his room."

(32) *#Mustafa uyanmıyormuş*
Mustafa wake.up-NEG-IYOR.CONT-IMIŞ
"Mustafa (apparently) isn't waking up."[2]

[1] We speculate that the infelicity of this sentence is probably an effect of the continuous aspect with the 'waking up' predicate.

[2] See footnote for (27) above.

Inflected Verbal Predicates with IMIŞ and Copular Negation

For many of these test sentences, our first speaker had the intuition that they were incomplete sentences.

(33) **Ali hüzünleniyormuş değil*
Ali become.sad-IYOR.CONT-IMIŞ NEG.COP
"It is not the case that Ali is (apparently) becoming sad."

(34) **Hasan çalışıyormuş değil*
Hasan work-IYOR.CONT-IMIŞ NEG.COP
"It is not the case that Hasan is (apparently) working."

(35) **Ali iyileşiyormuş değil*
Ali become.well-IYOR.CONT-IMIŞ NEG.COP
"It is not the case that Ali is (apparently) becoming well."

(36) **Rüstem odasını temizliyormuş değil*
Rüstem room become.clean-IYOR.CONT-IMIŞ NEG.COP
"It is not the case that Rüstem is (apparently) cleaning his room."

(37) **Mustafa uyanıyormuş değil*
Mustafa wake.up-IYOR.CONT-IMIŞ NEG.COP
"It is not the case that Mustafa is (apparently) waking up."

Nominal predicates with IMIŞ

(38) *Ali hüzünlüymuş*
Ali sad-IMIŞ
"Ali is (apparently) sad."

(39) *Hasan işteymiş*
Hasan work-LOC-IMIŞ
"Hasan is (apparently) at work."

(40) *Ali hastaymiş*
Ali ill-IMIŞ
"Ali is (apparently) ill."

(41) *Rüstemin odası temizimiş*
Rüstem-GEN room clean-IMIŞ
"Rüstem's room is (apparently) clean."

(42) *Mustafa uyanıkmış*
Mustafa awake-IMIŞ
"Mustafa is (apparently) awake."

Nominal Predicates with IMIŞ and Copular Negation

Our speaker offered corrections for these sentences; we have here included these corrected forms.

(43) a. **Ali hüzünlüymuş değil*
Ali sad-IMIŞ NEG.COP

b. *Ali hüzünlü değilmiş*
Ali sad NEG.COP-IMIŞ
"Ali is (apparently) not sad."

(44) a. **Hasan işteymiş değil*
Hasan work-LOC-IMIŞ NEG.COP

b. *Hasan işte değilmiş*
Hasan work-LOC NEG.COP-IMIŞ
"Hasan is (apparently) not at work."

(45) a. **Ali hastaymiş değil*
Ali ill-IMIŞ NEG.COP

b. *Ali hasta değilmiş*
Ali ill NEG.COP-IMIŞ
"Ali is (apparently) not ill."

(46) a. **Rüstemin odası temizmiş değil*
Rüstem-GEN room clean-IMIŞ NEG.COP

b. *Rüstemin odası temiz değilmiş*
Rüstem-GEN room clean NEG.COP-IMIŞ
"Rüstem's room is (apparently) not clean."

(47) a. **Mustafa uyanıkmış değil*
Mustafa awake-IMIŞ NEG.COP

b. *Mustafa uyanık değilmiş*
Mustafa awake NEG.COP-IMIŞ
"Mustafa is (apparently) not awake."

4.2 Phase Two Results

The following is the paradigm of test sentences used in phase two for our first speaker as well as the remaining part of the paradigm used for speaker two. As above, discrepancies between the two speakers are marked in parentheses, with a comment under the translation of that sentence. Otherwise, sentences marked as ungrammatical are ungrammatical for both speakers.

Verbal Predicates with MIŞ, Copular Negations and Contrasting Positive Clauses

(48) **Ali hüzünlenmiş değil, sadece numara*
Ali become.sad-MIŞ.PST NEG.COP only trick
yapiyormuş
to.make-IYOR.CONT-IMIŞ
"Ali (apparently) didn't become sad; he was only pretending."

(49) **Hasan çalışmış değil, televizyon seyretmiş*
Hasan work-MIŞ.PST NEG.COP television watch-MIŞ.PST
"Hasan (apparently) didn't work; he was watching TV."

(50) **Ali hastalanmış değil, sadece numara*
Ali become.ill-MIŞ.PST NEG.COP only trick
yapiyormuş
to.make-IYOR.CONT-IMIŞ
"Ali (apparently) hasn't become sick; he is only pretending."

(51) **Rüstem odasını temizlemiş değil, futbol*
Rüstem room become.clean-MIŞ.PST NEG.COP soccer
oynuyormuş
play-IYOR.CONT-IMIŞ
"Rüstem (apparently) hasn't cleaned his room; he is playing soccer."

Inflected Verbal Predicates with IMIŞ, Copular Negation, and Contrasting Positive Clauses

(52) **Ali hüzüleniyormuş değil, sadece numara*
Ali become.sad-IYOR.CONT-IMIŞ NEG.COP only trick
yapiyormuş
to.make-IYOR.CONT-IMIŞ
(Attempted) "Ali isn't (apparently) becoming sad; he is only pretending."

(53) **Hasan çalışıyormuş değil, televizyon*
Hasan work-IYOR.CONT-IMIŞ NEG.COP television
seyrediyormuş
watch-IYOR.CONT-IMIŞ
(Attempted) "Hasan (apparently) isn't working; he is watching TV."

(54) **Ali iyileşiyormuş değil, sadece numara*
Ali become.well-IYOR.CONT-IMIŞ NEG.COP only trick
yapiyormuş
to.make-IYOR.CONT-IMIŞ
(Attempted) "Ali (apparently) isn't getting better; he's only pretending."

(55) **Rüstem odasını temizliyormuş değil, futbol*
Rüstem room become.clean-IYOR.CONT-IMIŞ NEG.COP soccer
oynuyormuş
play-IYOR.CONT-IMIŞ
(Attempted) "Rüstem (apparently) isn't cleaning his room; he is playing soccer."

Inflected Verbal Predicates with IMIŞ Outside the Scope of Copular Negation

(56) *(*) Ali hüzüleniyor değilmiş*
Ali become.sad-IYOR.CONT NEG.COP-IMIŞ
"Ali is (apparently) not becoming sad."
Well-formed for speaker 1; ill-formed for speaker 2.

(57) *(*) Hasan çalışıyor değilmiş*
Hasan work-IYOR.CONT NEG.COP-IMIŞ
"Hasan is (apparently) not working."
Well-formed for speaker 1; ill-formed for speaker 2.

(58) *(*) Ali iyileşiyor değilmiş*
Ali become.well-PROG NEG.COP-IMIŞ
"Ali is (apparently) not getting better."
Well-formed for speaker 1; ill-formed for speaker 2.

(59) *Rüstem odasını temizliyormuş değilmiş*
Rüstem room become.clean-IYOR.CONT NEG.COP-IMIŞ
"Rüstem (apparently) isn't cleaning his room."

Inflected verbal predicates with IMIŞ outside the scope of copular negation and contrasting positive clauses

(60) *(*) Ali hüzünleniyor değilmiş, sadece numara*
Ali become.sad-IYOR.CONT NEG.COP-IMIŞ only trick
yapiyormuş
to.make-IYOR.CONT-IMIŞ
"Ali is (apparently) not becoming sad; he is only pretending."
Well-formed for speaker 1, ill-formed for speaker 2.

(61) *(*) Hasan çalışıyor değilmiş, televizyon*
Hasan work-IYOR.CONT NEG.COP-IMIŞ television
seyrediyormuş
watch-IYOR.CONT-IMIŞ
"Hasan (apparently) isn't working; he is watching TV."
Well-formed for speaker 1, ill-formed for speaker 2.

(62) *(*) Ali iyileşiyor değilmiş, sadece numara*
Ali become.well-PROG NEG.COP-IMIŞ only trick
yapiyormuş.
to.make-IYOR.CONT-IMIŞ
"Ali (apparently) isn't getting better, he's only pretending."
Well-formed for speaker 1, ill-formed for speaker 2.

(63) *Rüstem odasını temizliyormuş değilmiş, futbol*
Rüstem room become.clean-IYOR.CONT NEG.COP-IMIŞ soccer
oynuyormuş
play-IYOR.CONT-IMIŞ
"Rüstem (apparently) isn't cleaning his room, he is playing soccer."

5. Results and Discussion

5.1 Nominal Predicates

Sentences in which the *miş*-form appears with a nominal predicate (i.e. the *miş*-form comes from the IMIŞ) are the least complicated case: both speakers uniformly ejected forms with the IMIŞ inside the scope of the negative copula. These forms were corrected by moving the IMIŞ outside of the scope of *değil*.

(64) a. **Ali hüzünlüymuş değil*
Ali sad-IMIŞ NEG.COP

b. *Ali hüzünlü değilmiş*
Ali sad NEG.COP-IMIŞ
"Ali is (apparently) not sad." (cf. (43))

The IMIŞ is not permitted within the scope of negation and must be moved, exactly as expected for a grammaticialized evidential.

5.2 Verbal Predicates

Understanding sentences with verbal predicates is somewhat more complicated due to the availability of *-mA* negation. Unlike nominal predicates, the unmarked form of negation for Turkish verbal predicates is a verbal affix, which would not take scope over an evidential cliticised onto the verb, but outside the verb proper. Thus, we would expect *-mA* negation to co-occur with both the MIŞ and the IMIŞ. This is exactly what we find:

(65) *Ali hüzünlenme**miş***
Ali become.sad-NEG**-MIŞ.PST**
Ali has (apparently) not become sad. (cf. (13))

(66) *Ali hüzünlenmiyor**muş***
Ali become.sad-NEG-IYOR.CONT-**IMIŞ**
"Ali (apparently) isn't becoming sad." (cf. (28))

Although these data are consistent with the MIŞ- and IMIŞ being separate entities, *-mA*'s narrow scope prevents it from distinguishing between them. Copular negation, however, takes scope over the entire CP, and should allow the verbal affix MIŞ, but not the evidential clitic IMIŞ, within its scope. However, copular negation with verbal predicates is strongly marked: Speaker 2 rejected every instance of değil negation with a verbal predicate, including those in which the *miş*-form appeared outside of the scope of negation (cf. §4.2.).

Both speakers offered two kinds of corrections for sentences in which the IMIŞ appears inside the scope of copular negation: the use of *-mA* negation, rather than *değil*, or the conversion of the verbal predicate into a nominal predicate, with the miş-form appearing on the copula. Speaker 1 is, apparently, less adverse to this marked negation than is Speaker 2; he allowed it with the MIŞ in 3 out of 5 paradigms, and rejected it with IMIŞ in all cases.

Well formed	**Ill-formed/Infelicitous**
'become sad'	'work'
'clean room'	'become ill'
'wake up'	

Table 0.2: MIŞ: Judgements of verbal predicates with copula negation for Speaker 1

Well formed	**Ill-formed/Infelicitous**
—	'become sad'
—	'clean room'
—	'wake up'
—	'work'
—	'become ill'

Table 0.3: IMIŞ: Judgements of verbal predicates with copula negation for Speaker 1

Speaker 1 also allowed copula negation of verbal predicates with a contrastive positive clause:

(67) *(*) Ali hüzüleniyor değilmiş*
Ali become.sad-IYOR.CONT NEG.COP-IMIŞ
"Ali is (apparently) not becoming sad."
Well-formed for speaker 1; ill-formed for speaker 2. (cf. (56))

Given these factors, the ungrammaticality of sentences in which the MIŞ falls within the scope of copula negation is almost certainly a function of the markedness of copula negation with verbal predicates, and *not* the negative scope restriction. Thus the only cases that are informative with respect to the distinction between MIŞ- and IMIŞ are those where Speaker 1 accepted the use of *değil* with MIŞ. As outlined above, we expect the IMIŞ to be grammatical only outside of the scope of copula negation. This holds for both speakers, even in cases where the speaker accepts copula negation with a verbal predicate. Here, again, IMIŞ *uniformly* respects the negative scope restriction, as expected of a grammaticalized evidential.

Our results clearly show that the IMIŞ is never permitted within the scope of negation, supporting the claim that the IMIŞ is a grammaticalised evidential. Furthermore, we show that the MIŞ and IMIŞ behave differently with respect to the scope of negation, supporting the syntactic distinction between them. In this way, these data supports Csató's account of the semantic propertes of *miş*-forms.

5.3 Implications for Further Research

These data support Csató's assertion that surface miş-forms derive from two distinct entities, a verbal affix and a clitic, and the classification of the clitic IMIŞ as a grammaticalized evidential. As noted above, this information is important to typological work on evidentiality, and the existence of an evidential clitic in Turkish should be taken into account in subsequent work on Turkish syntax.

These data also raise questions that, although tangental to our investigation, merit further investigation. Speaker 1 commented that, although sentences like those where the MIŞ occurred inside the scope of *değil*, were well-formed, they could convey first hand information – i.e., MIŞ lost its indirect evidential force inside the scope of negation. This suggests that the negative scope restriction could potentially be stronger than de Haan's assertion, blocking not only fully grammaticalized evidentials, but evidentiality in general. Investigation into this phenomenon, in Turkish and other languages, could further refine this diagnostic and would therefore be a great contribution to evidential syntax.

The influence of copula negation's markedness varies between speakers and paradigms. As we worked with only two speakers, we do not have sufficient data to do more than speculate as to the cause of this variation. However, with regards to the variation between predicates, we believe there might be a connection with the above-mentioned loss of indirectivity. The use of a *miş*-form with a marked form of negation that blocks an indirective reading could produce a blocking effect, forcing a direct reading. The sentences for which that direct reading is illogical – like "Hasan is becoming sick", which the speaker could not possibly know from direct evidence or inference, no matter how well they knew Hasan – then become infelicitous.

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