

**Evidentiality and Modality in St'át'mcets:
Matthewson, Davis & Rullmann (2008)**

1. Background

(1) Evidential

An *evidential* is a *closed class / functional item* that contributes information regarding the means by which the speaker came to believe/know the proposition being asserted.

Why Restrict 'Evidentials' to 'Closed Class' / 'Functional Items'?

Because we want to distinguish such items from fully compositional, open-class expressions like *according to my mother, based on what I've read in the NY Times, a little birdie told me that...*

Why do we want to make this distinction?

Because we hypothesize that the smaller set of items forms a *linguistically-interesting natural class*, while the broader set of items do not.

(2) Evidentials in Lillooet (St'át'imcets)

a. Reportative *Ku7*

wa7 *ku7* ku sts'éts'qwaz' l-ta stswáw'cw-a
be *REPORT* DET trout in-DET creek-DET
'[I heard] There are trout in the creek.'

b. Inferential *K'a*

plan *k'a* tu7 wa7 tsu7c na máq7-a
already *INFER* then IMPF melt(INCH) DET snow-DET
'The snow must have melted already.'

c. Perceived Evidence *-An'*

pel'p-s-ácw-*an'* nelh neklíh-sw-a
lost-CAUS-2SG.CONJ-*PERC.EVID* DET.PL key-2SG.POSS-DET
'It looks like you've lost your keys.'

(3) The Rullmann *et al.* (2007) Analysis of Lillooet Modals

$[[\text{MODAL}(f)(B)(w)(\varphi)]] = 1$ iff $\forall w' \in f(B(w))$: $[[\varphi(w')]] = 1$

(4) **Central Claim of the Matthewson *et al.* (2008)**

The Lillooet evidentials in (2) have a meaning that fits the schema in (3).
That is, the so-called ‘evidentials’ of Lillooet are modals.

(5) **Potential Consequences of the Central Claim**

a. On the Separability of Evidentiality from Modality

In the evidentiality literature, one often encounters the claims that ‘evidentials’ can be semantically distinguished from ‘modals’ in that they do not encode quantificational force (i.e., speaker ‘certainty’ regarding the claim in question).

However, the analysis of Lillooet modals in (3) strongly challenges the notion that modals across languages must encode quantificational force.

Thus, the viability of the claim in (4) challenges the notion that ‘evidentials’ as defined in (1) are always a separate category from ‘modals’.

b. On the Notion of ‘Evidentiality’ as a Natural Linguistic Class

Given other work which shows that ‘evidentials’ in some languages clearly are *not* modals, the result in (4) contributes to the growing literature that questions whether ‘evidentials’ as defined in (1) really *are* a linguistically interesting natural class...

(6) **Structure of the Argument**

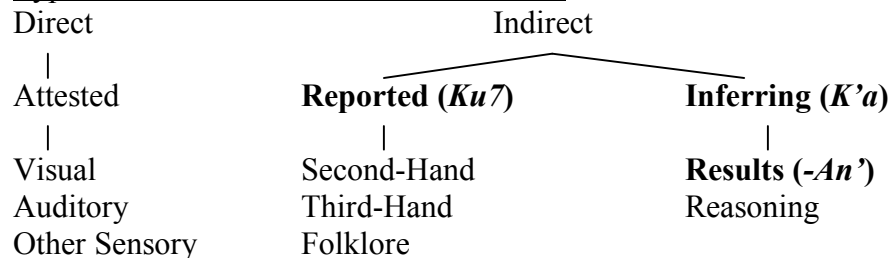
- a. The ‘evidentials’ in (2) really *are* evidentials (as defined in (1)).
- b. Lillooet evidentials are *modals* [the bulk of the paper]
 - (i) ‘Modal’ analysis vs. ‘Illocutionary Operator’ analysis
 - (ii) Differing predictions of the two analyses
 - (iii) Testing the predictions
- c. Lillooet evidentials *do not* encode quantificational force (certainty)
- d. Formal analysis
- e. Consequences of the analysis

2. The Existence of ‘Evidentials’ in Lillooet

(7) Motivation for Calling the Lillooet Morphemes in (2) ‘Evidentials’

- a. They are called this in the descriptive literature
- b. They are closed-class, functional items (uninflectable, second-position ‘particles’)
- c. They encode information regarding ‘speaker’s evidence’ for the claim
 - (i) Reportative *Ku7*
The speaker came to believe sentence by means of **a report** (whether that report is first-hand, second-hand, third-hand, or folklore)
 - (ii) Inferential *K’a*
The speaker came to believe sentence by means of **inference** (whether that inference is based on perceived evidence or general facts about the world)
 - (iii) Perceived Evidence *-An’*
The speaker came to believe sentence by means of **inference from visual evidence**.
- d. Given their specific content, they fit into certain theories regarding the possible meanings of evidentials (Willett 1988):

Types of Evidence that Evidentials Encode



Side-Notes:

All the Lillooet evidentials fall within the ‘indirect’ category. None are ‘direct’ evidentials.

- Thus, at even first glance, they seem rather similar to epistemic modals
- (A point that we’ll return to:) There are potentially some difficult problems applying their modal analysis to *direct* evidentials

While the Lillooet evidentials are certainly ‘closed class items’, they are also all *optional*.

- In the literature on evidentials, the truly paradigmatic cases are ones where evidential morphology is *obligatory*
- (A point that we’ll return to:) It may be that the truly linguistically interesting class of ‘evidentials’ are those where the morphology is obligatory...

3. Lillooet Evidentials: Modals or Illocutionary Operators?

Background:

- In work on the semantics of evidentials, there have been two principal approaches to their meaning:

Modal Approach: (Kratzer 1991, Izvorski 1997, Garrett 2000, Faller 2006)

Evidentials are a sub-specie of modal

Illocutionary Operator (IO) Approach: (Faller 2002, 2006)

Evidentials are illocutionary operators

- Each of these approaches makes different predictions regarding the meaning and grammatical ‘behavior’ of evidentials.
- **The consensus in the literature is that for some evidentials, the modal approach is best suited, while for other evidentials, the IO approach is best suited.**

Faller (2006)

For German *sollen*, the modal approach is best

For Quchua evidentials, the IO approach is best

The Plan: Determine which of these two types of analysis is best for Lillooet Evidentials

3.1 The Modal Analysis

Under the ‘modal analysis’, an evidential is a specific sub-specie of epistemic modal.

(8) General Form of a Necessity Modal

[[NECESSARILY (q)]] =

$\forall w . (p_1(w) \& \dots \& p_n(w)) \rightarrow q(w)$

└──────────────────┘
Modal Base

‘In all the worlds where *the propositions defining the modal base are true*, q holds.’

(9) General Form of an Epistemic Necessity Modal

[[EPIS-NECESSARILY (q)]] =

$\forall w . (p_1(w) \& \dots \& p_n(w)) \rightarrow q(w)$

└──────────────────┘
Our Knowledge of the Real World

‘In all the worlds where *the propositions we know to be true of the real world are true*, q holds’

(10) **Modal Analysis of a Reportative Evidential**

a. Main Idea:

Modal base is a more *restricted* version of the epistemic modal base.
Epistemic modal is restricted to propositions of the form 'X told me p'.

[[REPORT-EPIS-NECESSARILY (q)]] =

$\forall w . ([Dave\ told\ me\ that\ Mary\ dances](w) \ \& \\ [Frank\ told\ me\ that\ it's\ cold\ outside](w) \ \& \\ \dots \ \& \\ [Tom\ told\ me\ that\ smoking\ kills](w)) \quad \rightarrow \ q(w)$

'In all the worlds where *the propositions we know to be true of the real world and which are of the form 'X told me p'* are true, q holds'

('If I consider all the reports that I've heard, I must conclude that q.')

b. Example:

(i) Let's assume the following: *Frank tells you 'it's snowing'.
Frank is 'reliable'*

(ii) 'Being reliable' = *whenever Frank says something, it's true.*
= *in all worlds where Frank says p, p holds*

(iii) Thus, the following proposition is true in the imagined situation:

$\forall w . [Frank\ told\ me\ it\ is\ snowing](w) \rightarrow it\ is\ snowing(w)$

(iv) **Thus, in the imagined situation, the following is true:**

'In all the worlds where *the propositions we know to be true of the real world and which are of the form 'X told me p'* are true, it is snowing'

And so, one predicts that use of the 'reportative evidential' is permitted.

(11) **An Important Note**

Under this ‘modal semantics’, the modal force of a reportative evidential equates to how reliable the source of the report is.

- As we see above, if we assume that a ‘reportative evidential’ necessarily has *universal* force, then we predict that it can only be used in cases where the report comes from a reliable source.
- Thus, a ‘reportative evidential’ with *existential* force would be used in cases where the report *does not* come from a perfectly reliable source (since it would only be true in *some* of the worlds where the report is made)

(12) **Modal Analysis of a (Weak) Reportative Evidential**

*‘In some of the worlds where *the propositions we know to be true of the real world and which are of the form ‘X told me p’* are true, q holds’*

(‘If I consider all the reports that I’ve heard, it’s possible that q.’)

(13) **Example**

a. Imagined Situation:

Dave tells you it’s snowing.

Dave is sometimes wrong (though sometimes right).

b. ‘Dave is sometimes wrong’ =

In some worlds where Dave says p, p holds, but in others, p does not hold.

c. Thus, in the imagined situation the following is true:

$\exists w . [\text{Dave tells me it’s snowing}](w) \ \& \ [\text{it is snowing}](w)$

d. Thus, in the imagined situation the following is true:

*‘In some of the worlds where *the propositions we know to be true of the real world and which are of the form ‘X told me p’* are true, q holds’*

(14) **Crucial, General Property of the ‘Modal Analysis’**

Under such a ‘modal analysis’, the evidential contributes to the truth-conditional content of the utterance (i.e., presence of the evidential affects the sentence *truth-conditions*).

3.2 The Illocutionary Operator (IO) Analysis

Under the ‘illocutionary operator (IO) analysis’, an evidential does *not* contribute to the truth-conditional meaning of the utterance.

Rather, it affects the ‘sincerity conditions’ of the utterance.

3.2.1 Background: Speech Act Theory (Searle & Vanderveken 1985)

(15) Logical Structure of Illocutionary Act

- a. An utterance (illocutionary act) consists of an illocutionary force F and a proposition P
- b. Illocutionary Act = $F(P)$

(16) Logical Structure of Illocutionary Force

The illocutionary force F of an utterance has six components:

- a. illocutionary point
- b. mode of achievement
- c. propositional content
- d. preparatory conditions
- e. degree of strength
- f. **sincerity conditions**

(17) Core Observation

Linguistic material can contribute *either* to the propositional content of an utterance, or to its *illocutionary force*.

(18) Example: The Interjection *Crap*

The interjection *crap* doesn’t contribute to the propositional content of the utterance.

Rather, it affects the sincerity conditions of the utterance.

[[*Crap*, P]] = Sincerity Condition: *The speaker is upset that P .*
(i.e., you can’t *sincerely* say ‘*Crap*, P ’ unless you are upset that P)

(19) Example: The ‘Utterance-Level’ Adverb *Frankly*

The ‘utterance-level’ adverb *frankly* doesn’t contribute to the propositional content

Rather, it affects the sincerity conditions of the utterance.

[[*Frankly* P]] = Sincerity Condition: *The speaker is being frank*
(i.e., you can’t *sincerely* say ‘*Frankly*, P ’ unless you are being frank)

Question: How does one independently test whether a given phrase's contribution is to the *illocutionary force* of the utterance or to its *propositional content*?

(20) **The 'Embed-ability' Test**

a. Generalization:

If an item X contributes only to the *illocutionary force* of an utterance, then if you put X in an *indirect speech* context, X cannot be understood as part of the content of the indirectly described speech act.

b. Examples:

(i) *Crap* Dave said that, crap, he lost his wallet.
≠ Dave said "Crap, I've lost my wallet!"

(i) *Frankly* Dave said that, frankly, he is tired of this.
≠ Dave said: "Frankly, I'm tired of this"

(21) **The 'Challenge-ability' Test**

a. Generalization:

If an item X contributes only to the *illocutionary force* of an utterance, then one cannot 'challenge' or 'disagree with' the content contributed by X

b. Examples:

(i) *Crap* Person 1: Crap! I've lost my wallet.
Person 2: No! That's not true. (≠ you are not upset)

(ii) *Frankly* Person 1: Frankly, I've had enough of this.
Person 2: No! Not true! (≠ you are not being frank)

3.2.2 Sketch of an IO Analysis

(22) **IO Analysis of Cuzco Quechua Direct Evidential**

[[S -mi]] = Sincerity Condition: *The speaker directly witnessed the truth of S*

(i.e., you can't *sincerely* assert a sentence with the 'direct evidential suffix' -mi unless you yourself directly witnessed the truth of S)

(23) **IO Analysis of Cuzco Quechua Reportative Evidential**

[[S -si]] = Sincerity Condition: *The speaker heard from someone that S*
Illocutionary Force: *'Presenting'*

Note: The notion that the 'illocutionary force' of a sentence with -si goes from 'assertion' to 'presenting' plays an important role in Faller's analysis (and we'll come back to it soon)

3.3.2 (In)felicity if Embedded Proposition is Known to be True

Recall the following IO analysis of the Cuzco Quechua Direct Evidential.

(28) IO Analysis of Cuzco Quechua Direct Evidential

[[S –mi]] = Sincerity Condition: *The speaker directly witnessed the truth of S*

(i.e., you can't *sincerely* assert a sentence with the 'direct evidential suffix' –mi unless you yourself directly witnessed the truth of S)

Crucial Prediction 1:

Under the IO analysis, the proposition asserted by a sentence containing an evidential *just is* the embedded proposition. Thus, (trivially) one predicts that *it should be possible to use an evidential when the embedded proposition is known to be true.*

Side-Note:

...this reflects the claim one sometimes encounters in the literature, that 'evidentials (unlike modals) present the embedded proposition as being 'certain' and 'known to be true'.

Crucial Prediction 2:

Due to general Gricean Maxims (*i.e.*, Quantity), a modal claim is infelicitous if it is known that the embedded proposition is true (*cf.* (29)). Thus, a modal analysis predicts that *it should not be possible to use an evidential when the embedded proposition is known to be true.*

(29) Modal Claims 'Infelicitous' with Known Truth of Embedded Proposition

- a. (??) Barack Obama might be the next president.
- b. (??) Barack Obama must be the next president.

Side-Note:

The infelicity of the sentences in (29) centers on an implicature *that can be cancelled.*

(30) Cancellation of the Quantity Implicature in (29)

- a. Yes, Barack Obama might be the next president – in fact, we *know* he is!
- b. Yes, Barack Obama must be the next president – in fact, we *know* he is!

...curiously, as we'll see, the Lillooet correlates of the sentences in (30) are still considered to be 'infelicitous'...

3.3.3 Challenge-ability

Recall the following ‘test’ for determining if some content is part of the illocutionary force of the utterance:

(31) The ‘Challenge-ability’ Test

If an item X contributes only to the *illocutionary force* (sincerity conditions) of an utterance, then one cannot ‘challenge’ or ‘disagree with’ the content contributed by X

Crucial Prediction 1

Under an IO analysis, *one cannot challenge the ‘evidential claim’ contributed by the evidential.*

Crucial Prediction 2

Although one needs to look at particularly rich contexts to see this, it *is* in principle possible to challenge the ‘modal claim’ contributed by an epistemic modal (*cf.* (33)). Thus, a modal analysis predicts that *one can challenge the ‘evidential claim’ contributed by the evidential.*

(33) Example: The Board Game ‘Mastermind’

Context: Person 1 and Person 2 are playing a game. There is an array of colored pegs which only Person 1 can see. Person 2 must, by asking only yes or no questions, *deduce* the color and the order of the pegs.

Person 2: Hmm...There might be some reds.

Person 1: That’s right! There might be.
(*Assents to modal claim that P2’s evidence allows that there are reds.*)

That’s wrong! There *couldn’t* be!
(*Denies modal claim that P2’s evidence allows that there are reds.*)

3.3.4 Embed-ability

Recall the following ‘test’ for determining if some content is part of the illocutionary force:

(34) The ‘Embed-ability’ Test

If an item X contributes only to the *illocutionary force* of an utterance, then if you put X in an *indirect speech* context, X cannot be understood as part of the content of the indirectly described speech act.

Crucial Prediction 1

Under an IO analysis, *the ‘evidential claim’ contributed by the evidential cannot be understood as part of the content of an indirectly described speech act.*

Crucial Prediction 2

The ‘modal claim’ of an epistemic modal is easily understood as part of the content of an ‘indirectly described’ speech act (*cf.* (35)). Thus, a modal analysis predicts that *the ‘evidential claim’ contributed by the evidential can be understood as part of the indirectly described speech act.*

(35) Embedding the ‘Modal Claim’ of a Modal

Dave said that he may have won. = Dave said: “I may have won!”

3.4 Testing the Predictions of the Two Models

3.4.1 (In)felicity if Embedded Proposition is Known to be False

As predicted by a modal analysis, Lillooet evidentials *are not* felicitous if the embedded proposition is known to be false.

(36) Inferential *K’a*

* wa7 *k’a* kwis, t’u7 aoz t’u7 k-wa-s kwis
IMPF *INFER* rain but NEG just DET-IMPF-3POSS rain
‘It may/must be raining, but it’s not raining.’

(37) Perceived Evidence –*An*’

* wá7-as-*an*’ kwis, t’u7 aoz t’u7 k-wa-s kwis
IMPF-3CONJ-*PERC.EVID* rain but NEG just DET-IMPF-3POSS rain
‘It’s apparently raining, but it’s not raining.’

(38) Reportative *Ku7*

* um’-en-tsal-itás *ku7* i án’was-a xetspqíqen’kst táola,
give-DIR-1SG.OBJ-3PL.ERG *REPORT* DET.PL two-DET hundred dollar
t’u7 aoz kw s-7um’-en-tsál-itas ku stam’
but NEG DET NOM-give-DIR-1S.OBJ-3P.ERG DET what
‘They gave me \$200 [I was told], but they didn’t give me anything.’

Side-Note:

Recall that Faller’s (2002) analysis only made the opposite prediction *for the Cuzco Quechua reportative*, and that this was because the evidential was assumed to change the ‘illocutionary force’ from an assertion to a ‘presentation’...

Thus, these data are still *consistent* with an IO analysis...

3.4.2 (In)felicity if Embedded Proposition is Known to be True

As predicted by a modal analysis, Lillooet evidentials *are not* felicitous if the embedded proposition is known to be true.

(39) Inferential *K'a*

* ts'um'-qs-án'-as *k'a* kw s-Lémya7 kw s-Roger;
lick-nose-DIR-3ERG *INFER* DET NOM-Lémya7 DET NOM-Roger

ats'x-en-lhkán wi7 zam'
see-DIR-1SG.SUBJ EMPH after.all
'Lémya7 must have kissed Roger; actually I saw it.'

(40) Perceived Evidence –*An'*

* ts'um'-qs-án'-as-*an'* kw s-Lémya7 kw s-Roger;
lick-nose-DIR-3ERG-*PERC.EVID* DET NOM-Lémya7 DET NOM-Roger

ats'x-en-lhkán wi7 zam'
see-DIR-1SG.SUBJ EMPH after.all
'Lémya7 apparently kissed Roger; actually I saw it.'

(41) Reportative *Ku7*

* ts'um'-qs-án'-as *ku7* kw s-Lémya7 kw s-Roger;
lick-nose-DIR-3ERG *REPORT* DET NOM-Lémya7 DET NOM-Roger

ats'x-en-lhkán wi7 zam'
see-DIR-1SG.SUBJ EMPH after.all
'[I was told] Lémya7 kissed Roger; actually I saw it.'

Side-Note:

Recall that in English, it is possible to cancel the 'Quantity Implicature' associated with modal statements.

(42) Cancellation of the Quantity Implicature Associated with Modals

- a. Yes, Barack Obama might be the next president – in fact, we *know* he is!
- b. Yes, Barack Obama must be the next president – in fact, we *know* he is!

If Lillooet evidentials had the semantics of modals, why is the quantity implicature also not cancelable in (39) – (41)?

3.4.3 Challenge-ability

As predicted by the modal analysis, *one can challenge the ‘evidential claim’ contributed by a Lillooet evidential.*

(43) Inferential *K’a*: Mastermind Example

Context: The original ‘Mastermind’ game scenario in (33)

Person 2: wá7 *k’a* i tseqwtsíqw-a
be *INFER* DET.PL red-DET
‘There might be some reds.’

Person 1: wenácw; wá7 *k’a*
true be *INFER*
‘That’s right. There might be.’ (= your inferential evidence allows it)

aoz kw-a-s wenácw; aoz *k’a* kw s-wá7
NEG DET-IMPF-3POSS true NEG *INFER* DET NOM-be
‘That’s wrong. There can’t be.’ (= your inferential evidence doesn’t allow it)

(44) Perceived Evidence –*An*’: Mastermind Example

Context: (Same as above)

Person 2: wá7-as-*an*’ i tseqwtsíqw-a
be-3CONJ-*PERC.EVID* DET.PL red-DET
‘There might be some reds.’

Person 1: wenácw; wá7-as-*an*’
true be-3CONJ-*PERC.EVID*
‘That’s right. There might be.’ (= your perceived evidence allows it)

aoz kw s-wenácw; áoz-as-*an*’ kw s-wá7
NEG DET NOM-true NEG-3CONJ-*PERC.EVID* DET NOM-be
‘That’s wrong. There can’t be.’ (= your perceived evidence doesn’t allow it)

(45) Reportative *Ku7*

Context: *Josie is a liar. The other day, P2 heard her tell P1 that Roger was elected*

Person 1: aw-an-ém *ku7* k Roger ku cuz’ kúkwpi7
choose-DIR-1PL.ERG *REPORT* DET Roger DET going.to chief
‘[I was told] We chose Roger to be the chief.’

Person 2: kánem s-tsút.-su áti7? kakez7-úlh k Josie
why NOM-say-2SG.POSS DEIC lie-always DET Josie
‘Why do you say that? Josie is a liar.’

3.4.4 Embed-ability

As predicted by the modal analysis, the ‘evidential claim’ contributed by a Lillooet evidential **can** be understood as part of an indirectly described speech act.

(46) Inferential *K’a*

Context: Lemya7 sees that Maria’s younger brother has a red mark on his face, and that Maria has a guilty-looking expression.
She concludes from this Maria hit her younger brother.
Later, she tells you all about this.

tsut s-Lémya7 kw s-tup-un’-ás *k’a* s-Maria ta
say NOM-Lémya7 DET NOM-punch-DIR-3ERG *INFER* NOM-Maria DET

sésq’wez’-s-a
younger.sibling-3POSS-DET

‘Lémya7 said that Maria must have hit her younger brother.’
(NOTE: only Lemya in this context is making a ‘deduction from evidence’)

(47) Perceived Evidence –*An*’

Context: (same as above)

tsut k-Lémya7 kw s-tup-un’-ás-*an*’ s-Maria ti
say DET-Lémya7 DET NOM-punch-DIR-3ERG-*PERC.EVID* NOM-Maria DET

sésq’wez’-s-a
younger.sibling-3POSS-DET

‘Lémya7 said that Maria must have hit her younger brother.’
(NOTE: only Lemya in this context is making a ‘deduction from perceived evidence’)

(48) Reportative *Ku7*

tsut s-Lémya7 kw sqwemémn’ek *ku7* s-Mary, t’u7 plán-lhkan ti7
say NOM-L. DET pregnant *REPORT* NOM-M. but already-1SG.SUBJ DEM

zwát-en – áts’x-en-lhkan s-Mary áta7 tecwp-álhew-a inátawas
know-DIR see-DIR-1SG.SUBJ NOM-M. DEIC buy-place-DET yesterday

‘Lémya7 said that [she was told that] Mary is pregnant, but I already knew that; I had seen Mary at the store.’

(NOTE: Only Lemya in this context has heard a *report* that Mary is pregnant)

SUMMARY:

In all cases, the predictions of the ‘modal analysis’ are correct, while the predictions of the ‘illocutionary operator analysis’ are not.

Thus, *of the two options*, Lillooet evidentials are best suited for the modal analysis.

4. Lillooet Evidentials Do Not Encode ‘Speaker Certainty’ (Quantificational Force)

In the literature on evidentials, one often encounters the following claim:

(49) Important Semantic Distinction between Evidentials and (Epistemic) Modals

Evidentials can be distinguished from (epistemic) modals in that *evidentials do not encode the degree of ‘certainty’ that the speaker has in the embedded proposition.*

Question: Given that Lillooet ‘evidentials’ seem most amenable to the ‘modal analysis’, do they pattern as predicted by (49), and encode ‘degree of certainty’?

Answer: No.
Despite the evidence that Lillooet ‘evidentials’ are modals, they can be seen not to directly encode ‘degree of certainty’.

This fact (combined with the explicit semantics in Section 5) is taken to falsify the generalization in (49).

(50) Inferential *K’a*: Existential / Weak-Certainty

qwatsáts *k’a* tu7 k John, t’u7 sxek cw7aoz *k’a* kw s-qwatsáts
leave *INFER* then DET John but maybe NEG *INFER* DET NOM-leave
‘John may have left, but he may not have left.’

(51) Inferential *K’a*: Universal / Strong-Certainty

Context: *Speaker is certain that her and her friends were loud.*

na s-pála7-s-a, wá7-lhkalh *k’a* wenácw-ts-am’
DET NOM-one-3POSS-DET IMPF-1PL.SUBJ *INFER* true-mouth-MID
‘One time, we must have been loud.’

Other data substantiating the generalization come from Rullmann et al. (2007)

(52) **Perceived Evidence –An’**: Existential / Weak-Certainty

Context: Speaker is unsure whether Dave stole their ts’wán.

nílh-as-an’ kw s-Dave ta naq’w-ens-táli-ha i
FOC-3CONJ-PERC.EVID DET NOM-Dave DET steal-DIR-TOP-DET DET.PL

n-ts’wán-a
1SG.POSS-ts’wán-DET
‘It looks like it was Dave who stole my ts’wan.’

Side Note:

It’s actually rather unclear whether ‘perceived evidence –an’ does allow an existential reading.

- Regarding the sentence in (52), *a priori*, a speaker can *on the whole* be unsure whether Dave is the thief, while still having visual evidence that necessitates it (e.g., if there is conflicting evidence from some other domain)
- Speakers reject sentences like the following, which would provide clear, straight-forward evidence of an existential interpretation (*cf.* (50))

(53) **Perceived Evidence –An’**: Universal / Strong-Certainty

* qwatsats-as-án’ tu7 kw s-John, t’u7 wa7 k’a sxek
leave-3CONJ-PERC.EVID then DET NOM-J. but IMPF INFER maybe

k-wa-s cw7aoz t’u7 k-wa-s qwatsáts
DET-IMPF-3POSS NEG just DET-IMPF-3POSS leave
‘John apparently left, but maybe he hasn’t left.’

(54) **Reportative Ku7**: Existential / Weak-Certainty

Context: You hear an unreliable rumor that Roger was elected chief.

(?) aw-an-ém **ku7** kw s-Roger ku cuz’ kúkwpí7
choose-DIR-PASS REPORT DET NOM-Roger DET going.to chief
‘[I was told] Roger was elected to be chief.’

Side-Note:

Given the unstable status of (54), it’s also debatable whether ‘reportative *ku7*’ allows an existential reading.

(55) **Reportative Ku7**: Universal / Strong-Certainty

Context: Speaker is certain that their father drove a taxicab.

wa7 **ku7** aylh múta7 tq-álk’-en-as ta taxicab-a knáti7 táown-a
IMPF REPORT then and touch-string-DIR-3ERG DET taxicab-DET DEIC town-DET
‘[I was told] He [my father] also drove a taxicab around town.’

SUMMARY:

If we accept the arguments above, we find that Lillooet evidentials don't necessarily encode information about speaker certainty (quantificational force of the modal).

On the other hand...

For Inferential *K'a*:

- The evidence most clearly shows that it allows for a 'weak-certainty' (existential) reading.
- It's still disputable whether it allows for a 'strong-certainty' (universal) reading.

For Perceived Evidence *-An'* and Reportative *Ku7*:

- The evidence most clearly shows that they allow for 'strong-certainty' (universal) readings.
- It's still disputable whether they allow for 'weak-certainty' (existential) readings.

...thus, it may be that such particles do encode features of speaker certainty.

*...and there may be an interesting divide between 'inferential *k'a*' (which Rullmann et al. (2007) hold up as pure epistemic modal) and the more clearly 'evidential' morphemes '*ku7*' and '*-an*'*

5. Semantic Analysis of Lillooet Evidentials

Interim Summary:

- Lillooet evidentials pass the tests for being 'modals' (rather than illocutionary operators)
- Lillooet evidentials do not encode speaker certainty (quantificational force)

How do we provide a semantics to Lillooet modals that captures these properties?

(56) **The Rullmann et al. (2007) Analysis of Lillooet Modals**

$[[\text{MODAL}(f)(B)(w)(\varphi)]] = 1$ iff $\forall w' \in f(B(w)): [[\varphi(w')]] = 1$

Crucial Property: Whether the modal is understood to quantify over the entire base (weak modal) or a sub-part of the base (weak modal) depends on the choice of *f*.

(57) **Modal Analysis of Inferential $K'a$**

$$[[k'a(f)(B)(w)(p)]] = 1 \quad \text{iff} \quad \forall w' \in f(B(w)): [[\phi(w')]] = 1$$

Defined only if:

B = those propositions known about the actual world *and which are of the form 'I deduce that Y is true'*

Side-Note:

Matthewson *et al.* (2008) actually state that the 'defined-ness condition' is that "B is the worlds where the '*inferential evidence*' in w holds".

(This is my own understanding of what they mean by 'inferential evidence')

(58) **Modal Analysis of Perceived Evidence $-An'$**

$$[-an'(f)(B)(w)(p)] = 1 \quad \text{iff} \quad \forall w' \in f(B(w)): [[\phi(w')]] = 1$$

Defined only if:

B = those propositions known about the actual world *and which are of the form 'I deduce that Y is true from some perceived fact.'*

Side-Note:

Matthewson *et al.* (2008) actually state that the 'defined-ness condition' is that "B is the worlds where the '*perceived evidence*' in w holds".

(This is my own understanding of what they mean by 'perceived evidence')

(59) **Modal Analysis of Reportative $Ku7$**

$$[[ku7(f)(B)(w)(p)]] = 1 \quad \text{iff} \quad \forall w' \in f(B(w)): [[\phi(w')]] = 1$$

Defined only if:

B = those propositions known about the actual world *and which are of the form 'X told me that Y is true'*

Side-Note:

Matthewson *et al.* (2008) actually state that the 'defined-ness condition' is that "B is the worlds where the '*reported evidence*' in w holds".

(This is my own understanding of what they mean by 'reported evidence')

Something to Think About...

As noted before, all the evidentials in Lillooet are *indirect* evidentials.

There is no evidential in the language that has the meaning ‘Speaker directly perceived that *p*’

Suppose there were one, however... Could such an evidential ever be given a modal analysis?

(60) Putative Modal Analysis of a Direct Evidential

$$[[DIRECT(f)(B)(w)(p)]] = 1 \text{ iff } \forall w' \in f(B(w)): [[\phi(w')]] = 1$$

Defined only if:

B = those propositions known about the actual world *and which are of the form ‘I directly witnessed the truth of Y’*

Problem:

Context:

Suppose that you directly witness your friend Dave returning a shirt to *H&M* (i.e., you accompany him on the trip). However, suppose also that you never directly witnessed Dave’s original purchase of the shirt.

In such a case, the putative modal base for the direct evidential will contain the proposition ‘I directly witnessed Dave returning a shirt to *H&M*’.

BUT:

In every world *w* where one directly witnesses Dave *returning* a shirt to *H&M*, Dave (of course) purchases a shirt at *H&M* in *w* (at some earlier time).

THUS:

According to the modal analysis in (60), the following would be true in the imagined situation:

DIRECT-EVIDENTIAL(Dave purchased a shirt at *H&M*)

despite the fact that you needn’t have ever directly witnessed the original ‘purchasing event’.

General Issue:

Since indirect (inferential/reportative) knowledge is (arguably) closed under logical entailment, the modal semantics proposed above for *indirect* evidentials works particularly well...

Since direct knowledge is (arguably) *not* closed under logical entailment, the modal semantics proposed in (60) would face this challenge...

6. Consequences of the Analysis

In light of the observed behavior of Lillooet evidentials, there are two cross-linguistic claims regarding evidentials that need to be re-evaluated.

(61) Claim 1: Aikenvald's (2004) Two-Way Split

Aikenvald's (2004) claim that there is a two-way split amongst the languages of the world:

a. Evidential Languages

The concept of 'evidentiality' is expressed through grammatical means:
Closed-class, paradigmatically-organized, obligatory (functional) morphology

b. Non-Evidential Languages (e.g. English)

The concept of 'evidentiality' is expressed through optional and morphosyntactically heterogeneous means:
Adverbs, higher predicates (e.g. 'according to the NY Times...')

ISSUE:

In some respects, Lillooet seems to be grouped within the English-like *Non-Evidential* languages (evidentials are optional, not paradigmatically organized)

In other respects, Lillooet seems to be grouped within the *Evidential-Languages* (evidentials are a small set of closed-class morphemes)

(62) Claim 2: The Notion that There is an 'Evidential Projection'

Cinque (1999) and others have claimed that, across languages, evidentials occupy a uniform, fixed position within the clause (*cf.* Tense, Aspect, Force, Focus, *etc.*)

ISSUE:

In Lillooet, evidentials exhibit a morpho-syntactic diversity that is at odds with their sharing some underlying syntactic identity

6.1 Aikenvald's (2004) Two-Way Split Between 'Evidential Languages' and the Rest

Claim: Evidentials in Lillooet do not form a 'coherent grammatical system'

6.1.1 Argument 1: Lillooet Evidentials are Morphosyntactically Rather Diverse

(63) Morphosyntax of Lillooet Evidentials

K'a: Second position clitic that occupies 'slot 6' in the clitic string

Ku7: Second position clitic that occupies 'slot 5' in the clitic string

-An': Verbal suffix, triggering various idiosyncratic morphological changes on the verb

6.2.2 Argument 2: Lillooet Does Not Possess a (Null) Direct Evidential

Aikenvald (2004):

In all languages where evidentials form a 'coherent grammatical system', there is a direct evidential (though sometimes this is null).

Matthewson (1998):

Lillooet possesses a null direct evidential.

Sentences lacking an overt evidential necessarily contain the null direct evidential.

(64) Null Direct Evidential in Lillooet?

zac-al'qwem' k John
long-appear DET John
'John is tall.' (Speaker has seen John, and knows first-hand that John is tall.)

Contrary to the claim of Matthewson (1998), there is not a 'null direct evidential' in Lillooet. The 'evidential content' of (64) is just an implicature, and can be cancelled...

(65) No Null Direct Evidential in Lillooet

wa7 tu7 wá7 l-ta tsítcw-a láti7 kw Shakespeare
IMPF then be in-DET house-DET DEIC DET Shakespeare
'Shakespeare lived in that house.'

6.2.3 Argument 3: Evidentials in Lillooet are Optional

(see sentence (65))

6.2.4 Evidentials in Lillooet Can Co-Occur

In a true, ‘paradigmatically-organized’ grammatical system, one cannot have elements of the same category co-occur (*cf.* tense and modality in English)

However, it’s perfectly possible for evidentials in Lillooet to co-occur.

(66) Lillooet Evidentials Can Co-Occur

qwatsats *ku7* *k’á* tu7 i wa7 es-tsmál’t
leave **REPORT INFER** then DET.PL IMPF STAT-children
“The parents had left apparently, as I am told.”

SUMMARY:

By the criteria employed by Aikenvald (2004), ‘evidentiality’ in Lillooet *does not* form a ‘coherent grammatical system’...

Thus, they would be grouped together with English in her two-way system...

But, there are clearly very important ways in which the ‘encoding’ of evidentiality in Lillooet differs from that in English...

ANOTHER POINT:

A superficial typological survey, based upon the standard descriptive grammar of the language (van Eijk 1997) would probably come to the opposite conclusion: *that evidentials in Lillooet do form a coherent grammatical system...*

- Informal reports of a null direct evidential
- The evidentials appear in a ‘second-position’ clitic string

(Bear this in mind when reading typological surveys about ‘the nature of evidentials’...)_

6.2 The Notion that There is an ‘Evidential Projection’

Claim: Evidentials in Lillooet do not seem to originate from a single functional projection

6.2.1 Argument 1: Lillooet Evidentials are Morphosyntactically Rather Diverse

(67) Morphosyntax of Lillooet Evidentials

K'a: Second position clitic that occupies ‘slot 6’ in the clitic string

Ku7: Second position clitic that occupies ‘slot 5’ in the clitic string

-An': Verbal suffix, triggering various idiosyncractic morphological changes on the verb

6.2.2 Argument 2: Lillooet Evidentials Can Co-Occur

(68) Lillooet Evidentials Can Co-Occur

qwatsats *ku7* *k'á* tu7 i wa7 es-tsmál't
leave **REPORT INFER** then DET.PL IMPF STAT-children
“The parents had left apparently, as I am told.”

7. Some Final Thoughts

General Conclusion:

‘Evidentials’, as defined in (1), do not form a linguistically natural class.

- Across languages (*and within a single language*), morphology satisfying the definition in (1) can diverge greatly in their morpho-syntax and their semantics.
- In some languages, morphology satisfying the definition in (1) nevertheless *does not form a ‘coherent’ grammatical system*.

A Possibility to Consider:

There may, however, be a sense to the term ‘evidential’ that *does* pick out a homogeneous, linguistically natural class...

- Suppose we restrict ourselves to those systems where ‘evidentials’ *are* ‘paradigmatically organized, obligatory, inflectional morphology’
- **Are there interesting syntactic/semantic generalizations to be made about those languages (or are they equally as heterogeneous)?**