Ktunaxa Evidentials are Evidently Modal[*]

Kate (Yangshuying) Zhou
University of British Columbia

Abstract: This project presents preliminary work on the Ktunaxa evidentials *paɬ* and *ɬin* and provides the diagnostics that account for their epistemic modality. Existing works on Ktunaxa evidentiality and modality are few, and despite identifying *paɬ* and *ɬin* as evidentials or modals, none have explored their semantics or provided analyses to support such classification. Using original data from elicited from three native speakers, the current project identifies *paɬ* and *ɬin* as indirect eivdentials, with *paɬ* being a hearsay evidential and *ɬin* an inferential evidential. I further argue that Ktunaxa *paɬ* and *ɬin* fall under the modal analysis, modeling my analysis after Matthewson et al. (2007) that supplied an epistemic modal analysis for the St'át'imcets evidentials. By applying eight diagnostic tests (adopted from Matthewson et al. 2007 and Faller 2002), I show that, like the St'át'imcets evidentials, *paɬ* and *ɬin* also pattern with modals, and cannot be analyzed as illocutionary operators.

Keywords: Ktunaxa, evidentiality, indirect evidentials, modality, epistemic

1 Introduction

1.1 Background and Objectives

The objective of this paper is to present preliminary work on the Ktunaxa evidentials, specifically *paɬ* and *ɬin*, and to provide evidence for their modal analysis. Ktunaxa (alternatively Kootenai, Kootenay, or Kutenai; ISO 639-3: kut) is a language isolate, spoken by the Ktunaxa people in British Columbia in Canada, and Montana and Idaho in the United States. There are seven bands of the Ktunaxa nation, two located in the United States and five located in British Columbia, among which are ʔaq̓am and ʔakisq̓nuk, where our Ktunaxa consultants are from.

Existing works on Ktunaxa evidentials and modals are few, yet they have provided crucial background for this paper. Morgan glosses *paɬ* as an evidential in his 1991 thesis, and Garvin (1948) classifies *ɬin* as a suppositional morpheme. Burge (2016) built upon the previous records of Ktunaxa functional words and proposed the semantic and syntactic distribution of Ktunaxa modals. In her proposal, both *paɬ* and *ɬin* are categorized as epistemic modals with variable necessity and possibility modal strengths. Despite the previous works identifying *paɬ* and *ɬin*, none have explored their semantics or provided evidence to support such classifications. The current paper intends to identify the specific types of evidentiality of *paɬ* and *ɬin* and to provide diagnostics that support a modal analysis for Ktunaxa evidentials.

The paper is structured as follows. In Section 2, I will examine the evidence that supports the evidentiality of *paɬ* and *ɬin*, and identify the different types of evidentiality they each encode. Then

---

in Section 3, I test *paɬ* and *ɬin* against Matthewson et al. (2007)'s modal analysis of St'át'imcets evidentials and provide evidence for the claim that Ktunaxa evidentials are also modals. Section 4 concludes. Lastly, I discuss the next steps to this ongoing project (Section 5).

1.2 Methodology

The data in this paper were collected through various methods, namely elicitations and text collections. Novel data were collected through individual elicitations with native speakers of Ktunaxa as well as class elicitations. The elicitation sessions were all conducted virtually over Zoom, a video-conferencing software. For these elicitations, a range of tasks were designed to best collect semantic information, including translation tasks, judgement tasks, and narrating storyboards (Bochnak 2020; Cover 2015). Since the consultants are all speakers of English, the translation tasks involved having consultants translate English sentences into Ktunaxa, and especially from Ktunaxa into English. Asking consultants to translate the Ktunaxa sentences they offered back into English was immensely helpful, considering the information that is "lost in translation" might be uncovered through this extra step. Judgement tasks involved creating a Ktunaxa sentence based on a specific context and asking the consultants about their judgement on the grammaticality and felicity of the sentence. The use of storyboards was another crucial method in elicitations. The storyboards used during elicitations were short stories with a clear narrative. I told the stories in English while showing each storyboard to the consultants, then asked them to tell the story back to me in Ktunaxa. The use of storyboards provided a setting for more naturalistic Ktunaxa narrative. Apart from the three types of tasks, my elicitations crucially included dialogue with the consultants. This means that the elicitations did not end at getting the "desired" sentences but extended further into discussing the context and sentences themselves. Due to the complex nature of modality and evidentiality, "engaging in dialogue", as Cover (2015) puts it, about the sentences and contexts allowed me to better dissect the meanings of each data point.

Text collection and analysis was another method used in the data collection process, especially when *paɬ* is ubiquitous in documented Ktunaxa tales and storytelling (cf. Boas 1918). Compared to elicitations, text analysis posed greater difficulties, given that many of the old Ktunaxa texts utilize a different orthography. Moreover, information such as evidentiality is often not reflected by the English translation. To deal with such an issue, I engaged the consultants into the analysis process, and combined the pros of elicitations and text analysis. Having the consultants read parts of the texts and discuss the use of functional particles (e.g., *paɬ* and *ɬin*) in the texts offered significant insight into the texts.

2 Ktunaxa Evidentials

2.1 Evidentiality

Evidentiality marks the source of information a speaker has for their utterance (de Haan 2012). In general, evidentiality can be categorized into two broad types, namely direct and indirect evidentiality. Direct evidentiality denotes the speaker's first-hand access to the event in the utterance, such as visual or auditory perception, whereas indirect evidentiality refers to the speaker's lack of presence at the described event. Indirect evidentiality further branches into inferential evidentiality and hearsay, with inferential marking the speaker's utterance is based on reasoning and inference, while hearsay refers to the speaker reporting second-hand, third-hand, or general hearsay (de Haan 2012; Willett 1988). Though there is a clear taxonomy of evidentiality,

not all languages have a grammatical category that encodes evidentiality, nor do individual languages with such a structure distinguish evidentiality in these exact partitions. For example, Quechuan languages and St'át'imcets distinguish three types of evidentiality: direct access, reportative, and inference, while Turkish only distinguishes between direct and indirect source of information for past events (see Faller 2002 for Quechua, Matthewson et al. 2007 for St'át'imcets, and Aksu-Koç 1986 for Turkish).

In Ktunaxa, two types of evidentiality are identified, namely inferential evidentiality and hearsay, both belonging under the indirect umbrella. The two types of evidentiality are denoted by the particles *łin* and *pał*, respectively. Consider the following two examples:[1]

(1) *Context: It was snowing hard when Dorothy went to bed in her windowless bedroom. However, when she wakes up and checks the weather on her phone, it's 15 °C (60 °F) outside! She says:*

    Łin huq̓kuni ʔa·kłu.
    łin   huq̓ku-ni   ʔa·kłu
    EVID   to.melt.from.heat-IND   snow
    'The snow must've melted.'

(2) *Context: It was snowing hard when Dorothy went to bed in her windowless bedroom. When she wakes up and checks her phone, her friend has texted her: "The snow has melted!" When her sister walks into the bedroom, Dorothy says:*

    Pał huq̓kuni ʔa·kłu.
    pał   huq̓ku-ni   ʔa·kłu
    EVID   to.melt.from.heat-IND   snow
    'Apparently,[2] the snow has melted.'

The premises of the two contexts in (1) and (2) are similar: Dorothy waking up in her windowless bedroom, where she has no access to directly perceive the weather outside. In (1), the only piece of evidence Dorothy can base her utterance upon is the fact that the weather app says the temperature is significantly above freezing. *Łin* is used in this sentence to denote the inference that Dorothy makes based on the information she acquires from her phone's weather app, namely that the snow has melted.

In contrast, Dorothy does not have any evidence in (2) except for her friend's words. Thus, when her sister enters the room, Dorothy relays the information to her, using the particle *pał*. While (1) demonstrates evidentiality of inference and reason, (2) exhibits a reportative or hearsay evidential.

In the remainder of this section, I explore in detail the two types of evidentials in Ktunaxa.

---

[1] The examples in this paper are novel data from elicitations conducted by me unless indicated otherwise. Morpheme glosses are as follows: ADV = adverbial suffix; COMP = complementizer; COP = copular; EVID = evidential; IND = indicative suffix; OBV = obviation; PASS = passive; POSS = possessive; PRE = preverbal suffix; PROG = progressive, SBJ = subject.

[2] It is difficult to translate evidential sentences, especially to English, since the English translations could easily be interpreted in a way that suggests the evidential's lack of contribution to the propositional content. In this paper, I have opted to use *apparently* for all the *pał* sentences. However, it is worth noting that this is not an exact translation of the Ktunaxa evidential.

2.2 Łin

The Ktunaxa particle *łin* is used to mark information that the speaker acquired through inference, deduction, or reasoning. Take example (3): Ana does not know for a fact who ate the piece of cake that she saved for herself, yet when she sees ʔamlu walking around with cake crumbs on his shirt, she infers that ʔamlu is the person that is guilty of the crime.

(3)　*Context: Ana saved a delicious piece of cake in the fridge to eat for breakfast. Next morning, she opens the fridge and finds the cake gone! She then sees one of her roommates, ʔamlu, walk out of his bedroom with cake crumbs on his shirt. She would say:*

Łin ʔikni ka quqcił ʔikiłs ʔamlu.

łin	ʔik-ni	ka	quqci-ł	ʔik-ił-s	ʔamlu
EVID	to.eat-IND	1st.POSS	sweet-PRE	to.eat-PASS-OBV	ʔamlu

'It must be ʔamlu that ate my cake.'

Though the utterance in (3) is made based on visual evidence (i.e., Ana seeing the cake crumbs), the context for *łin*-sentences is not limited to physical evidence but includes the speaker reasoning or inferring with the information she already knows. Consider (4):

(4)　*Context: Ana saved a delicious piece of cake in the fridge to eat for breakfast. Next morning, she opens the fridge and finds the cake gone! Ana lives with Małi and ʔamlu, but she knows that Małi is allergic to cake. She says about the culprit:*

ʔamlu łin ʔikni ka quq¢ił ʔikił.

ʔamlu	łin	ʔik-ni	ka	quq¢i-ł	ʔik-ił
ʔamlu	EVID	to.eat-IND	1st.POSS	sweet-PRE	to.eat-PASS

'ʔamlu must have eaten my cake.'

In (4), as Ana finds her cake missing, the only ground for reasoning she has is her knowledge of the roommate Małi's allergy, and she makes a logical inference based on this information and reaches the conclusion that the most probable culprit is the other roommate, ʔamlu, who is not allergic to cake. Though Małi's allergy is not physical evidence or newly acquired information, an inference is made considering it, licensing the use of *łin* in this utterance.

2.3 Pał

Though Morgan (1991) first glossed *pał* as an evidential, he did not identify the specific type of information source *pał* denotes. The major difference between *pał* and *łin* is that there is no inference made in a *pał*-sentence. Consider the juxtaposition between the two evidentials using the same context as (3):

(5)   *Context: Ana saved a delicious piece of cake in the fridge to eat for breakfast. Next morning, she opens the fridge and finds the cake gone! She then sees one of her room-mates, Ɂamlu, walk out of his bedroom with cake crumbs on his shirt. She would say:*

    a. ✓ *Łin Ɂikni ka quqcił Ɂikiłs Ɂamlu.*

łin	Ɂik-ni	ka	quqci-ł	Ɂik-ił-s	Ɂamlu
EVID	to.eat-IND	1st.POSS	sweet-PRE	to.eat-PASS-OBV	Ɂamlu

      'It must be Ɂamlu that ate my cake.'

    b. # *Pał Ɂikni ka quqcił Ɂikiłs Ɂamlu.*

pał	Ɂik-ni	ka	quqci-ł	Ɂik-ił-s	Ɂamlu
EVID	to.eat-IND	1st.POSS	sweet-PRE	to.eat-PASS-OBV	Ɂamlu

      Intended: 'Apparently, Ɂamlu ate my cake.'

The use of *pał* is not licensed in (5b) as it yields an infelicitous sentence. The contrast between (5a) and (5b) sufficiently differentiates *pał* from *łin* as they are not the same type of evidential. *Pał* is used when the information in the utterance is obtained through second-hand, third-hand, or general hearsay.

The utterance in (6) is the beginning sentence of a consultant's telling of the storyboard "Animal Party" (Littell 2010).

(6)   *Kyakxuȼ nupquȼ Ɂa·knułaṁ qakiɁni pał ȼxał su·knikits.*

kyakxu-ȼ	nupqu-ȼ	Ɂa·knułaṁ	qakiɁ-ni	pał	ȼxał	su·knikit-s
fish-and	bear-and	snake	to.say-IND	EVID	FUT	party-OBV

    'The fish, the bear, and the snake said that apparently there is going to be a party.'

As I revisited the consultant's narrative of "Animal Party" in elicitation, the consultant commented that the particular use of *pał* indicates that there were rumors of a party going around; should the speaker use *łin* instead, it would mean that the animals saw decorations that indicated there might be a party starting soon. The consultant's notes confirm that *pał* denotes information that is obtained through rumors, in other words, hearsay.

2.4   Two Approaches to Analyzing Evidentials

There are generally two main approaches linguists employ to analyze evidentiality, one being the speech act approach and the other the modality approach. The speech act approach analyzes evidentials as illocutionary operators that do not contribute to the propositional content of the utterance. For example, Faller (2002) argues that two of the three evidentials in Quechua, namely the reportative and direct evidentials, do not contribute to the propositional content, but instead affect the sincerity conditions of a speech act.

    The modal analysis differs from the illocutionary one in that modals do contribute to the propositional content of an utterance. Under this analysis, evidentials quantify over possible worlds that are compatible with the evidence in the actual world (Matthewson 2007).

    The two approaches are not mutually exclusive: Faller (2002) argues that, though direct and reportative evidentials in Quechua are illocutionary operators, the inferential evidentials should be analyzed as epistemic modals. Though Faller has shown that Quechua reportative evidentials

should not be considered epistemic modals, I argue that Ktunaxa *paɬ* should be analyzed as such. Much like what Matthewson et al. (2007) have shown for St'át'imcets, both of the so-far-identified Ktunaxa evidentials behave like epistemic modals. In the next section, I will elaborate on the modal analysis of Ktunaxa evidentials.

3   Modal Diagnostics

In this section, I model my analysis after the diagnostics in Matthewson et al. (2007) that provided grounds for an epistemic modal analysis of the St'át'imcets evidentials. Matthewson et al. employed eight tests (some adopted from Faller 2002) to explore the modality of evidentials. The tests are listed in (7):

(7)   a.   (In)felicity if embedded proposition is known to be false
       b.   (In)felicity if embedded proposition is known to be true
       c.   Indirect evidence requirement uncancellable
       d.   Indirect evidence requirement not blocked by negation
       e.   Embedding
       f.   Assent/dissent
       g.   Readings in Interrogatives
       h.   (In)ability to raise assertive strength

The results of these eight tests distinguish between a speech act analysis and an epistemic modal analysis of evidentials. In the following subsections, I test *ɬin* and *paɬ* against four of the eight tests, namely tests (7a), (7b), (7e), and (7f), and analyze the significance of the test results. The first two diagnostics hinge on the semantics of an epistemic modal such that it means a proposition is necessarily or possibly true in a set of worlds compatible with the speaker's knowledge, while the latter two center around a modal's contribution to propositional content.

3.1   Embedded Proposition Known to Be False

I begin by testing the felicity of an utterance when the embedded proposition is known by the speaker to be false. An illocutionary operator analysis of evidentials allows a sentence to be felicitous even when the speaker knows that the proposition of the utterance is untrue. However, a modal would yield an infelicitous reading if the speaker knows that the proposition is false.

(8)   *Context: Dorothy heard rumors that Maɬi might be pregnant and tells you the rumors, but you know Maɬi's pregnancy test came back negative. When you see me later in the day, you want to tell me about the gossip:*

   #Paɬ ʔupswumni Maɬi.
   paɬ   ʔupswum-ni   Maɬi.
   EVID to.be.pregnant-IND Maɬi.
   Intended: 'Apparently, Mary might be pregnant.'

(9) *Context: You work by a window, so you know for a fact that it didn't rain. You walk outside and see that the ground is wet and comment:*

  #Łin wałuq̓ukukutni.
  Łin   wałuq̓ukukut-ni
  EVID to.rain-IND
  Intended: 'It must've rained.'

In both (8) and (9), the use of Ktunaxa evidentials is infelicitous when the context supposes that the speaker already possesses the knowledge that the embedded proposition is false. The consultant commented after offering (8) that "I would just say she is not pregnant" and also supplemented (9) by adding "I can't use this if I know for sure it didn't rain". The infelicity of these two sentences illustrates that Ktunaxa evidentials pattern with modals under this test.

3.2 Embedded Proposition Known to Be True

The second test is like the first one, with the exception that the embedded proposition is known by the speaker to be true. If Ktunaxa evidentials are epistemic modals, they should not be felicitous when the speaker already knows the truth condition of the proposition in the utterance. Such a claim is possible because modal sentences are weaker than assertions. Making a weaker statement when the assertion is known to be true does not agree with principles such as Grice's Quantity Maxim, and thus should be infelicitous. This is verified by (10) and (11).

(10) *Context: Dorothy heard rumors that Małi might be pregnant and tells you the rumors, but you know Małi's pregnancy test came back positive. Later when you see me, you want to tell me about the gossip:*

  #Pał ʔupswumni Małi.
  pał   ʔupswum-ni   Małi
  EVID   to.be.pregnant-IND   Małi
  Intended: 'Apparently, Mary might be pregnant.'

(11) *Context: I saved a piece of cake for breakfast, but when I opened the fridge, it was gone. All my siblings, Małi, Ȼa·n, and ʔamlu, had breakfast together before I woke up. I ask my sister Małi who ate my cake since she was there when someone ate it. She says:*

  #Ȼa·n łin ʔikni ninkunismił quqȼił ʔikiłs.
  ȼa·n   łin   ʔik-ni   ninku-nis-mił   quqȼi-ł   ʔik-ił-s
  Ȼa·n   EVID   to.eat-IND   2-POSS-OBV   to.be.sweet-ADV   to.eat-PASS-OBV
  Intended: 'It must be John who ate your cake.'

Both above examples yield infelicitous readings, confirming the result of the first test that Ktunaxa evidentials should be analyzed as epistemic modals. For each of the examples, the consultant

judged the sentences infelicitous, and immediately offered the respective assertion counterparts, and commented "I would just say this".

3.3 Embeddability

The embeddability test states that an element contributes to the propositional content if it can be embedded under a factive attitude verb, verbs of saying, or an antecedent of a conditional (Matthewson et al. 2007). This means that if *ɬin* and *paɬ* can be embedded under any of these environments, they cannot be considered illocutionary operators. Examples (12) and (13) confirm that Ktunaxa evidentials are embeddable under at least some of these environments.

(12) *Context: Vi heard some rumors that Maɬi is pregnant, and she tells you the gossip. Neither of you has seen Maɬi. You pass along the gossip to me:*

    Huɬpaɬnititni Vi paɬ k̓upswums Maɬis.

Huɬpaɬnitit-ni	Vi	paɬ	k̓-ʔupswum-s	Maɬi-s
to.hear-IND	Vi	EVID	COMP-to.be.pregnant-OBV	Maɬi-OBV

    'I heard from Vi that Mary might be pregnant.'

(13) *Context: I'm looking for my dog ʔamlu in the yard, and I see his footprints leading into the house. I say:*

    Hu qaɬwiyni ɬin tinaxamni ʔamlu.

Hu	qaɬwiy-ni	ɬin	tinaxam-ni	ʔamlu
1.SBJ	to.think-IND	EVID	to.return-IND	ʔamlu

    'I think that ʔamlu must've gone inside.'

The embeddability of *ɬin* and *paɬ* shown above acts as another test that confirms the modal analysis of Ktunaxa evidentials.

3.4 Assent/Dissent Test

The assent/dissent test hinges on the property that illocutionary operators do not contribute to the propositional content and therefore cannot be agreed or disagreed with in a conversation. Epistemic modals, however, should pass the assent/dissent test since they are part of the propositional content. This property is illustrated in a conversation between A and B in (14) and (15).

(14) A. *Context: I'm playing with my dog ʔamlu in the yard but suddenly can't find him, so I ask my brother if he has seen ʔamlu. My brother hasn't but sees some pawprints leading into the house. So, he thinks ʔamlu is inside. He points to the pawprints and says:*

    Łin taxamni ʔamlu.
    łin   taxam-ni   ʔamlu
    EVID   to.return-IND   ʔamlu
    'ʔamlu must've returned home.'

    B. *Context: My father came out of the house, and he saw ʔamlu inside. He also knows that those pawprints were from when he walked ʔamlu in the morning and not from just now, so he says:*

    Waha, ʔinsi nis wiłnams. ʔaqła ʔs sawsaqa ʔni ʔamlu.
    waha   ʔin-s-i   ni-s   wiłnam-s   ʔaqła-s   sawsaqa-ni
    no   to.be-OBV-IND   DET-OBV   morning-OBV   indoors-OBV   still.be.there-IND
        ʔamlu
        ʔamlu
    'No, it is (those are) from this morning. ʔamlu is inside.'

(15) A. *Context: Dorothy heard rumors that Mały might be pregnant and tells you the rumors:*

    Pał ʔupswumni Mały.
    pał   ʔupswum-ni   Mały
    EVID   to.be.pregnant-IND   Mały
    'Apparently, Mary is pregnant.'

    B. *Context: But you know for a fact that Mały's test came up positive.*

    Hiyi, sił ʔupswumni Mały.
    hiyi   s-ił   ʔupswum-ni   Mały
    yes   PROG-ADV   to.be.pregnant-IND   Mały
    'Yes, Mary is pregnant.'

In (14B), my father explicit says *waha* 'no' to my brother's utterance in (14A). By saying *no*, he does not mean that ʔamlu is not home, but rather objects to the inference my brother makes. What's more, (14B) explicitly states that ʔamlu is home, agreeing with the proposition of (14A). Similarly, the speaker of (15B) comments on the source of information in (15A) and affirms the validity of the rumor. Thus, both *pał* and *łin* pass the assent/dissent test.

3.5 Diagnostic Results

To conclude this section, I revisit the eight diagnostic tests and summarize the test results in the table below.

Table 1: Diagnostic test results

	Illoc.op. Analysis	Modal Analysis	Ktunaxa Evidentials
(In)felicity if embedded proposition is known to be false	✓	✗	✗
(In)felicity if embedded proposition is known to be true	✓	✗	✗
Indirect evidence requirement not cancellable	✗	✗	Not tested
Indirect evidence requirement not blocked by negation	✗	✗	Not tested
Embedding	✗	✓	✓
Assent/dissent	✗	✓	✓
Readings in Interrogatives	✓	✗	Not tested
(In)ability to raise assertive strength	Unknown	Unknown	Not tested

As shown above, illocutionary operators and modals differ in at least five out of eight behaviors, with one of the properties, namely the ability or inability to raise assertive strength, being unknown. Out of the five differing categories, readings in interrogatives were not tested, as it has been rare to encounter *łin* and *pał* in interrogatives. In elicitations, interrogatives with *łin* and *pał* have also been rejected by the consultants, though it is yet unknown whether the interrogatives are infelicitous or ungrammatical. In terms of the remaining four tests that yield differing results for illocutionary operators and epistemic modals, Ktunaxa evidentials pattern with the epistemic modals.

4   Results

This paper surveyed the evidentials in Ktunaxa and identified the types of evidentiality each Ktunaxa evidential possesses for the first time. Furthermore, it laid out evidence that suggests that, like St'át'imcets, Ktunaxa evidentials also pattern like epistemic modals, instead of illocutionary operators.

5   Future Directions

The rudimentary understanding of Ktunaxa evidentials *pał* and *łin* summarized in this paper lays the foundation for further explorations in the matter.

The four tests detailed in Section 3 allowed for preliminary comparisons between the illocutionary operator analysis and the modal analysis of Ktunaxa evidentials and provided convincing evidence to support the epistemic modal reading for *pał* and *łin*. To further bolster such a claim, testing the remaining four diagnostics would be a natural extension to the work done so far. Although three of the remaining four tests would not help us distinguish between the two analyses, applying them would aid in our understanding of the behavior of *pał* and *łin*. Furthermore, during elicitations and text collections, interrogative readings of *pał* and *łin* are extremely rare to

come by. Thus, exploring their compatibility with or behavior in interrogatives is essential to better grasp the semantics of Ktunaxa evidentials.

The next step after solidifying the epistemic modal analysis of Ktunaxa evidentials is to understand their modal strength. Burge (2016) claims that *paɬ* and *ɬin* have variable strengths, meaning that they can have both universal and existential quantificational forces. Modals quantify over possible worlds with existential (i.e., possibility) or universal (i.e., necessity) strengths. However, salient distinctions in modality are identified cross-linguistically.For example, English modals have a fixed modal strength with variable modal bases, while many Salish languages such as St'át'imcets (Matthewson et al. 2006) and Comox-Sliammon (Reisinger 2018) have a fixed modal base with varying strengths. If Burge's proposal is confirmed, Ktunaxa modals possibly pattern like Salish modals, with a fixed modal base but variable quantificational forces. Surveying the modal strengths of *paɬ* and *ɬin* will not only further uncover the meaning of Ktunaxa evidentials, but it will also allow us to draw crucial cross-linguistic connections with languages in the Salish family.

Lastly, to understand more about the syntactic properties of Ktunaxa evidentials is tantamount to exploring its semantic properties. As modals, Ktunaxa evidentials scope high in the syntax, yet their exact position is to be confirmed. Moreover, uncovering the syntax of Ktunaxa evidentials can potentially start untangling the unsolved puzzles of their behaviors in interrogatives as well as their interactions with complementizers.

References

Aksu-Koç, Ayhan A., and Dan I. Slobin. 1986. A psychological account of the development and use of evidentials in turkish. In Wallace Chafe and Johanna Nichols (eds.), *Evidentiality: the linguistic coding of epistemology*. Norwood, NJ: Ablex, 159–167.

Boas, Franz. 1918. *Kutenai tales by Franz Boas, together with texts collected by Alexander Francis Chamberlain.* Washington, DC: Government Printing Office.

Bochnak, M. Ryan, and Lisa Matthewson. 2020. Techniques in complex semantic fieldwork. *Annual Review of Linguistics* 6: 261–283.

Burge, Heather. 2016. Modality in Ktunaxa. In *Proceedings of the Ninth Conference on the Semantics of Under-represented Languages in the Americas*.

Cover, Rebecca T. 2015. Semantic fieldwork on TAM. In M. Ryan Bochnak and Lisa Matthewson (eds.), *Methodologies in Semantic Fieldwork*. New York, NY: Oxford University Press, 233–268.

Faller, Martina. 2002. *Semantics and Pragmatics of Evidentials in Cuzco Quechua*. Doctoral dissertation, Stanford.

Garvin, Paul L. 1948. Kutenai iii: Morpheme distributions (prefix, theme, suffix). *International Journal of American Linguistics* 14(3):171–187.

de Haan, Ferdinand. 2012. Evidentiality and Mirativity. In Robert I. Binnick (ed.), *The Oxford Handbook of Tense and Aspect.* Oxford, UK: Oxford University Press, 1020–1045.

Littell, Patrick. 2010. Animal party. <http://www.totemfieldstoryboards.org>

Matthewson, Lisa, Henry Davis, and Hotze Rullmann. 2007. Evidentials as epistemic modals: Evidence from St'át'imcets. *Linguistic Variation Yearbook* 7:201–254.

Matthewson, Lisa, Hotze Rullmann, and Henry Davis. 2006. Modality in St'át'imcets. In *Papers for ICSNL 40*, 93–112.

Morgan, Lawrence. 1991. *A Description of the Kutenai language*. Doctoral dissertation, University of California, Berkeley.

Reisinger, D. K. E. 2018. Modality in Comox-Sliammon. In *Papers for ICSNL 53*, 197–227.

Willett, Thomas. 1988. A Cross-linguistic survey of the Grammaticization of Evidentiality. *Studies in Language. International Journal sponsored by the Foundation "Foundations of Language"* 12(3):51–97.