Evidentiality and Illocutionary Mood in Cheyenne*

Sarah E. Murray

Cornell University

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Abstract In Cheyenne (Algonquian), evidentials and markers of illocutionary mood (e.g., imperative, interrogative) form a single morphological paradigm: the mode paradigm. Morphologically, these distinct grammatical categories form a natural class. This paper argues they also form a natural semantic class, contributing similar kinds of meanings. In addition, there is a rich interaction between the semantic contributions of these two grammatical categories, not only in Cheyenne, but crosslinguistically. The Cheyenne mode paradigm is discussed in depth, with a detailed description of the general use and interpretation of each of the illocutionary mood markers and evidentials. Specific semantic properties of the evidentials are also discussed, locating Cheyenne within an emerging semantic classification of evidentials.

Keywords: Cheyenne, Algonquian, semantics, evidentials, mode

Contents

1   Introduction

Evidentiality is a grammatical category indicating source of information, the type of evidence an individual has for some information. Evidentials can be divided into two general classes: direct, which indicate, e.g., visual or other sensory evidence, and indirect, which indicate, e.g., reportative or inferential evidence (Willet 1988, Aikhenvald 2004). Crosslinguistically, evidential systems can vary along several dimensions, including the number of evidential distinctions, grammatical category, whether or not evidentials are obligatory, and their semantic properties.

Illocutionary mood is a grammatical category indicating sentence type, including the three basic sentence types: declarative, interrogative, and imperative (e.g., Sadock and Zwicky 1985).[1] Crosslinguistically, illocutionary mood can be marked in various ways, including morphologically, by intonation, or by changes in word order. What distinctions are encoded can also vary from language to language, with some systems encoding different varieties of imperatives, hortatives, or optatives, among others.

In this paper, I discuss the properties of evidentials and illocutionary mood markers in Cheyenne (ISO code: chy), an Algonquian language spoken in Montana and Oklahoma.[2] Though evidentials are not a common feature in Algonquian languages (James et al. 2001), Cheyenne has four evidentials, one direct and three indirect. The illocutionary moods marked in Cheyenne main clauses are declarative, interrogative, two kinds of imperatives, and hortative. In Algonquian terminology, these are called "modes". Evidentials and illocutionary mood markers occur in the same verbal slot in Cheyenne, the mode slot, forming a morphological class. While evidentiality and illocutionary

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[1]The terms "sentential mood", "sentence mood", or just "mood" have also been used for this category (e.g., Portner 2011). The type of a sentence (or clause) does not determine the illocutionary force of an utterance: a declarative can be used to make a statement, ask a question, or request action, as influenced by a number of pragmatic factors. However, there is a default connection, a conventional association, between (morphosyntactic) sentence type and (pragmatic) illocutionary force (e.g., Sadock and Zwicky 1985, König and Siemund 2007). I use the term "illocutionary mood" to highlight this connection and to distinguish it from other kinds of mood (e.g., subjunctive).

[2]The data presented in this paper was collected by the author during fieldwork trips to Montana each summer since 2006, supplemented with a Cheyenne grammar (Leman 2011), collections of texts (Leman 1980a, 1987), and a dictionary (Fisher et al. 2006). Morphological analysis, glossing, and translation for all included data is the present author's.

mood are distinct categories, they are semantically related, and there are rich interactions between their semantic contributions. Cheyenne morphosyntax groups illocutionary mood and evidentiality together, into a system of "modes", revealing what I argue is a natural semantic class.

In this paper I do not attempt to give a semantic analysis of evidentiality or illocutionary mood (see, e.g., Murray 2014). Instead, I focus on describing the key properties of the Cheyenne system, which will constrain adequate semantic analyses. Section 2 gives a brief overview of the Cheyenne verb, in particular its templatic structure, which is relevant to the morphological status of the evidentials and illocutionary mood markers. The main clause mode paradigm is discussed in depth in Section 3, including morphological details and descriptions of the general use and interpretation of each mode. Section 4 provides some generalizations about the interpretation of evidentials in Cheyenne, including how the source of evidence can be interpreted and what contributions evidentials make to the discourse. Specific semantic properties of the evidentials are discussed in Section 5, where I classify Cheyenne evidentials based on a set of semantic diagnostics. Section 6 is the conclusion, which connects Cheyenne to other examples of interactions between evidentiality and illocutionary mood crosslinguistically.

2   An Overview of the Cheyenne Verb

Cheyenne is a polysynthetic, mainly agglutinative language that marks agreement with subject and object arguments on the verb. As in many polysynthetic languages, word order is grammatically unspecified ('free'), but sensitive to pragmatics (Leman 1999). The verb itself has a templatic structure – a fixed number of affix slots in a fixed order – which is diagramed in Table 1, adapted from Leman 2011.[3] Each slot in the verbal template is numbered, and the types of affixes that

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[3]Cheyenne morphological glosses: 1 first person, 2 second person, 3 third person, X:Y voice suffix indicating X acting on Y, AN animate, CIS cislocative, CNTR contrastive, CND conditional, CNJ conjunct (dependent clause), DEL.IMP delayed imperative mood, DIR direct voice (subject higher than object on person hierarchy), EP epenthetic segment, FUT future, HAB habitual, HRT hortative mood, HYP hypothetical conjunct mood, IMP immediate imperative mood, INAN inanimate, IND indicative conjunct mood, INF inferential evidential, INSTR instrumental, INT polar interrogative mood, INV inverse voice (object higher than subject on person hierarchy), IOAM inanimate object agreement (Rhodes 1976), NAR narrative evidential, NEG negation agreement suffix, OBV obviative, PL plural, PROS prospective, PST

4

appear in that slot are given below each number. Slots for optional affixes are marked by parentheses, slots that can contain more than one affix are indicated by a superscripted plus, and slots for affixes appearing only with transitive verbs are given in square brackets. Example morphemes that can occur in each verbal slot are given below each slot label. Though slots II, VII, and VIII are listed as required, they are often filled by unmarked forms: present or recent past (REC) for the temporal slot II and singular person agreement for slot VII. The mode slot is often filled with an unmarked declarative form indicating direct evidence, which is discussed in detail below in Section 3.

I	II	III	IV	V	VI	VII	VIII
person–temporal–(directional)–(preverb$^+$)–				stem	–[voice]–arguments$^+$–mode		
1	PST	TRL	not	see	DIR	3OBV	RPT
2	FUT	CIS	again	give.up	INV	2PL	IMP
3	REC		back	sing	1:2	PL.INAN	INT

Table 1: Template of the Cheyenne Verb with examples

As an illustration of this template, consider example (1)[4], a common Cheyenne farewell. In (1), all of the verbal slots distinguished above are filled, though slots II (*htse-*) and III (*ta-*) are fused.

(1)
I	II+III	IV	V	VI	VII	VIII	(adapted from Fisher et al. 2006)
Né-	*sta-*	*évá-hóse-*	*vóom*	*-atsé*	*-me*	*-∅.*	
2-	FUT+TRL-	back-again-	see$_{AN}$	-1:2	-2PL	-WTN	

'I will see you (pl) again soon.'

The template in Table 1 has been simplified with respect to the verb stem, which can be complex, so it does not include, e.g., initials and finals (see Leman 2011).[5]

An intransitive verb in Cheyenne minimally overtly includes a person prefix, which agrees with the subject, and a verb stem, as in (2). Verbs must also include temporal information, argument

past, PSV passive, Q interrogative proclitic, REC present and recent past, RPT reportative evidential, SG singular, TRL translocative, WTN direct/witness evidential.

[4]Orthography: V̇ voiceless vowel, V́ high pitch vowel, š voiceless alveolar fricative (IPA: ʃ), ' glottal stop (IPA: ʔ)

[5]In addition, though slots IV and VII can contain multiple affixes, some occur in a fixed order. For example, both *sáa-* 'not' and *hóse-* 'again' occur in slot IV, but *sáa-* must occur before *hóse-*: *násáahósemésėhéhe* 'I didn't eat again', **náhósesáamésėhéhe*. The suffixes in slot VII also occur in a fixed order: 1INCL *-ne* occurs before 3PL *-o'o*: *névóomóneo'o* 'We (incl) saw them'.

agreement suffixes, and mode. However, there is an unmarked form for each of these: present/recent past, singular, and the direct evidential. For simplicity, and given the focus of this paper, I include only the unmarked evidential (-∅) in the examples, as in (2).

(2) I   V   VIII   (Leman 2011:27)
     Ná- *néméne* -∅.
     1-   sing   -WTN
     'I am singing.'

There is only one person prefix position in Cheyenne. When there are multiple arguments of the verb, they compete for this position based on the person hierarchy in (3).

(3)   2 > 1 > 3 > 3OBV > inanimate   (Leman 2011:22; see also Murray 2010)

Since only one argument can be represented by the person prefix, a voice suffix indicates which argument of a transitive verb is higher in the hierarchy. For example, in (4a) the direct voice (DIR) indicates the subject is higher, so the person prefix represents the subject, while in (4b) the inverse voice (INV) indicates that the person prefix represents the object. Certain person combinations require specific voice suffixes, such as combinations of first and second person, as in (1) above.

(4)   a. I   V   VI   VIII   (Leman 2011:55)
           Ná- *vóóm* -***o*** -∅.
           1-   see_AN -DIR   -WTN
           'I saw him.'

        b. I   V   VI   VIII   (Leman 2011:55)
           Ná- *vóom* -***a*** -∅.
           1-   see_AN -INV   -WTN
           'He saw me.'

The examples in (4) additionally show that verb stems can be lexically typed for the animacy of the object, or internal argument, as indicated by the subscript. Further examples are the verbs in (5b) and (5c). A component of negation also agrees in animacy, but always with the subject of the verb. The standard way of marking negation in Cheyenne is with the preverb *sáa-* (slot IV) and an agreement suffix (slot VII before person agreement): *-hé* for animate subjects, as in (5a,c), and *-hané* for inanimate subjects, as in (5b). I gloss this agreement suffix NEG, but it occurs in constructions other than negation, including the inferential evidential (see §3).

(5)   a. I   IV   V   VII   VIII   (Leman 2011:32)
          Ná-   sáa-   némené   *-he*   *-∅*.
          1-   not-   sing   -NEG_{AN}   -WTN
          'I did not sing.'

       b. *É-sáa-ma'ó-**háne**-∅.*   (Leman 2011:45)
          3-not-be.red_{INAN}-NEG_{INAN}-WTN
          'It is not red.'

       c. *Ná-sáa-vóóht-ó-**he**-∅.*   (Leman 2011:91)
          1-not-see_{INAN}-IOAM-NEG_{AN}-WTN
          'I did not see it.'

As mentioned above, the unmarked temporal information is present/recent past (slot II). So, for example, (5c) could also be translated as 'I do not see it'. There are overt temporal prefixes which indicate (distant) past (*h-* and its allomorphs) and future (*htse-* and its allomorphs).

Like in other Algonquian languages, there are different inflectional classes of verbs in Cheyenne, called "orders" (Bloomfield 1946). Cheyenne has three orders: independent (declaratives and interrogatives), imperative (immediate imperatives, delayed imperatives, and hortatives), and conjunct (dependent clauses) (Leman 2011). The template in Table 1 is for independent order verbs, but the other orders are based on this template, with a few significant differences. Verbs in the imperative order lack a person prefix (slot I). Conjunct verbs have specialized affixes that replace slots I and VIII. The conjunct prefixes indicate mood (e.g., indicative vs. hypothetical) and the suffixes indicate the argument(s) of the verb. For example, (6a) contains a relative clause, (6b) a when clause, and (6c) a before clause. (For other conjunct prefixes and suffixes, see Leman (2011).)

(6)   a.   I   V   VIII   I   V   VIII
          Hetane   **tsé-**   *néméné*   **-stse**   *é-*   *káhane-otse*   *-∅*.
          man   IND-   sing   -CNJ.3SG   3-   tired-become   -WTN
          'The man who is singing is tired.'

       b. *Éšeeva*   **tsé**-*h-néméné-**se***   *ná-vé'šě-péhéve-tanó-otse-∅.*
          yesterday   IND-PST-sing-CNJ.3SG   1-INSTR-good-feel-result-WTN
          'It made me happy when she sang yesterday.'

       c. ***Tsé***-*he'šě-sáa-hoo'kóhó-hane-**∅***   *ná-htá-hóó'-óhtse-∅.*
          IND-while-not-rain-NEG_{INAN}-CNJ.INAN   1-FUT+TRL-home-go-WTN
          'I'll go home before it rains.' (lit. 'I'll go home while it isn't raining')

The example in (6c) additionally illustrates that inanimate intransitive predicates (e.g., 'rain') do not require conjunct suffixes, or that the suffix is null (slot VIII). Support for the latter hypothesis comes from the fact that all conjunct verbs, identifiable by the prefix, are incompatible with the illocutionary moods and the evidentials, which also occupy slot VIII. For example, the forms in (7) are ungrammatical, even though the intended meanings are semantically plausible.

(7)   a. ****Tsé**-h-néméné-**sėstse**-se*   *ná-vé'šė-pėhéve-tanó-otse-**Ø***.
            IND-PST-sing-RPT.3SG-CNJ.3SG   1-INSTR-good-feel-result-WTN
            [Intended: 'It made me happy when he reportedly sang.']

        b. ****Tsé**-x-hoo'kȯhó-**nėse**-**Ø***   *ná-vé'šė-pėhéve-tanó-otse-**Ø***.
            IND-PST-rain-RPT.SG.INAN-CNJ.INAN 1-INSTR-good-feel-result-WTN
            [Intended: 'It made me happy when it reportedly rained.']

3   Evidentials and Illocutionary Mood Markers

Table 2 provides an overview of the mode suffix paradigm for verbs of the independent and imperative orders: the mode slot VII can be filled with an evidential (a) – (d), a polar interrogative marker (e), a hortative (f), an immediate imperative (g), or a delayed imperative (h). Other ways of forming interrogatives are discussed in Section 3.2. Conjunct verbs will not be discussed further, except in relation to content interrogatives (Section 3.2) and embedding of evidentials (Section 5).

a. Direct evidential
   É-néméne-Ø.
   3-sing-WTN
   'He sang, I witnessed.'

b. Inferential evidential
   Mó-**némené-**hé-he.
   Q+3-sing-NEG_{INAN}-INF
   'He sang, I gather.'

c. Reportative evidential
   *É-némene-**séstse.***
   3-sing-RPT.3SG
   'He sang, they say.'

d. Narrative evidential
   *É-némené-**hoo'o.***
   3-sing-NAR.3SG
   'He sang, it's told.'

e. Interrogative
   *Né-némene-**he?***
   2-sing-INT
   'Did you (sg.) sing?'

f. Hortative
   *Némene-**ha!***
   sing-HRT
   'Let him sing!'

g. Immediate imperative
   *Néméné-**stse!***
   sing-IMP.2SG
   '(You (sg.)) sing (now)!'

h. Delayed imperative
   *Némene-**o'o!***
   sing-DEL.IMP.2SG
   '(You (sg.)) sing (later)!'

Table 2: The Cheyenne Mode Paradigm, Independent and Imperative Orders (Leman 2011)

The mode suffixes in Table 2 are mutually exclusive. For example, the reportative cannot be combined with the interrogative suffix (*É-némene-**séstse-he**?, *É-némene-**he-séstse**?), with the hortative (*É-némene-**séstse-ha!**, *Némene-**séstse-ha!**), or with any of the other mode suffixes. However, evidentials can occur in interrogatives because of the other morphological strategies for forming interrogatives (see Section 5.3).

There are four declarative sentences in Table 2 , (a) – (d), the four sentences with evidentials. One possible analysis would be that the declarative mood is unmarked and co-occurs with the evidentials. However, under that analysis it would be surprising that the evidentials cannot occur with any of the other illocutionary mood suffixes. Instead, I propose that morphologically the Cheyenne evidentials are types of, or morphologically fused with, declarative mood. Just as there are two kinds of imperatives in Cheyenne, immediate (g) and delayed (h), there are four kinds of declaratives, (a) – (d). The imperatives differ in their temporal orientation and the declaratives differ in information source, in evidentiality. This accounts for the mutual exclusivity of the mode suffixes as well as the ambiguity with evidentials in questions (see Section 5).

Semantically, illocutionary mood and evidentiality are distinct categories, but morphologically

9

the Cheyenne mode paradigm combines them. In the next two sub-sections, I discuss the evidentials (Section 3.1) and the illocutionary mood markers (Section 3.2). Later, in Sections 4 and 5, I discuss the semantic properties of Cheyenne evidentials, which support the claim that evidentials and illocutionary mood can be seen as a natural semantic class – they contribute similar kinds of meanings and show complex interactions.

3.1   Evidentials

There is a four-way evidential distinction in Cheyenne between the unmarked direct evidential and three overtly marked indirect evidentials: the reportative (8b), the narrative (8c), and the inferential (8d), which is morphologically complex.[6]

(8)   a. *É-hoo'koho-∅.*   (Leman 2011:43)
          3-rain-WTN
          'It's raining, I witnessed.'

    b. *É-hoo'kóhó-**nėse.***   (Leman 2011:51)
          3-rain-RPT.SG.INAN
          'It's raining, they say.' or 'It's raining, I hear.'

    c. *É-hoo'kóhó-**neho.***   (Leman 2011:53)
          3-rain-NAR.SG.INAN
          'It rained, it's told.'

    d. ***Mó**-hoo'kóhó-**hané-he.***   (Leman 2011:50)
          Q+3-rain-NEG_INAN-INF
          'It's raining, I gather.' or 'It must be raining'

Evidentials can be difficult to translate into English. Throughout, I will usually translate them as a parenthetical (e.g., *Annie won, I gather*), though I may also use a verb or adverb, depending on what is most appropriate given the evidential and the context. Evidentials in Cheyenne are anchored to the speaker in declaratives – it is the speaker's source of evidence. This can be approximated in English with the first person pronoun in the parenthetical. The interpretations of

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[6]Other terms for these evidentials include: (8b) attributive, (8c) mediate or preterit, and (8d) dubitative (Leman 2011, Fisher et al. 2006).

Cheyenne evidentials will be discussed further in Section 4.

The direct (or witness) evidential in Cheyenne is morphologically unmarked, written as -∅ in the examples. Often grammatical paradigms will have an unmarked member, and an unmarked evidential is common in languages with grammaticized evidentials (Aikhenvald 2004). In such systems, unmarked sentences carry a commitment to having a specific kind of evidence (e.g., direct) and are thus treated as containing an unmarked evidential. In Cheyenne, when no overt evidential is used, it indicates direct evidence, such as visual, auditory, or other sensory evidence, for the described event. For example, (9) indicates the speaker witnessed Annie win, perhaps by seeing the competition in person or hearing it on the radio; (9) is unacceptable if the speaker does not have direct evidence (see also (35) below). This is not true of all languages: in English, for example, unmarked sentences such as (10) are evidentially unspecified: no specific type of evidence required.

(9) *É-hó'tȧhéva-∅* *Annie.*   (10) *Annie won.*
    3-win-WTN   Annie
    'Annie won, I witnessed.'

English (10) does not carry any evidential commitment – the speaker could have any kind of evidence that Annie won. In contrast, Cheyenne (9) indicates the speaker has direct evidence that Annie won. Thus, Cheyenne (9) contributes more information than English (10): they both indicate that Annie won, but only the Cheyenne indicates the speaker has direct evidence that Annie won. That is, sentences with evidentials contribute two propositions: the main proposition, that Annie won for (9) and (10), and an evidential proposition, that the speaker has a specific kind of evidence that Annie won.

The direct evidential commitment is difficult to express succinctly in English (cf. *I have direct evidence that Annie won* or *I witnessed that Annie won*) and does not specify the type of direct evidence (cf. *I saw Annie win* or *I heard the doorbell*). I try to approximate the direct evidential in English with the parenthetical *I witnessed*, as in *It's raining, I witnessed*, even though this construction is somewhat awkward. Parentheticals such as *It's raining, I'm sure* or *He sang, I'm certain* are misleading: though they imply the speaker has direct evidence, they also encode a

degree of certainty. The Cheyenne direct evidential does not encode speaker certainty, though this may be implied by direct evidence. Perhaps the best English translation of the Cheyenne direct evidential is the parenthetical *I find*, as in *The Holland Tunnel is the quickest way into Manhattan, I find*. This indicates that the speaker has some direct evidence, probably personal experience, for the tunnel being the fastest way into the city. However, this parenthetical is incompatible with episodic sentences: **It's raining, I find* and **Annie won, I find*.

The reportative evidential, also called the attributive, indicates information reported to or heard by the speaker. For example, (8b) above indicates that the speaker has reportative evidence that it is raining, such as having been told that it is raining, hearing it on the news, or reading it online or in the newspaper. As mentioned above, Cheyenne evidentials do not indicate a degree of certainty: someone using the reportative (or another indirect evidential) can be completely sure that the main proposition is true. However, if they have only reportative evidence, they cannot use the direct evidential. This further supports the claim above that unmarked forms indicate direct evidence (see also §4).

There are several different forms for the reportative, glossed with different person, number, and animacy combinations. Examples above include -*séstse* RPT.3SG in (c) from Table 2 and -*nése* RPT.SG.INAN in (8b). The examples in (11) – (13) illustrate three additional forms (from Leman 2011:38).

(11) *Né-némené-**máse**.*
     2-sing-RPT.2SG
     'You sang, I hear.'

(12) *Né-némené-mé-**se**.*
     2-sing–2PL-RPT
     'You (pl) sang, I hear.'

(13) *É-némené-**sesto**.*
     3-sing-RPT.3PL
     'They sang, I hear.'

The complex reportative forms can be further morphologically analyzed. Compare (11) – (13) to their unmarked direct evidential counterparts given in (14) – (16) (from Leman 2011:27).

(14) *Né-néméne-**Ø***.*
     2-sing-WTN
     'You sang, I witnessed.'

(15) *Né-némené-me-**Ø***.*
     2-sing-2PL-WTN
     'You (pl) sang, I witnessed.'

(16) *É-némene-o'o-**Ø***.*
     3-sing-PL-WTN
     'They sang, I witnessed.'

The reportative suffix can be analyzed simply as *-s* (Fisher et al. 2006), with the form in (12) derived from epenthesis (phonological rule 9 in Leman 2011:215). The other forms can be analyzed as combinations of the reportative *-s* with various finals and agreement marking suffixes. However, Cheyenne agreement is a complex system, especially when transitive verbs are involved. In addition, it seems like the number agreement suffix appears before the reportative *-s* in (12) but after the reportative *-s* in (13). I suspect there is an interesting interaction of morphology and phonology to be studied here, but as that is not the focus of this paper, the complex forms will be left unanalyzed, for the reportative as well as the other mode suffixes below.

The Cheyenne narrative evidential, also called the mediate or preterit, is typically used in legends and folktales, where it co-occurs with the remote past tense, as in (17a) (Leman 2011).[7] It also has a mirative or surprisal use, typically in the present tense, as in (17b) and (17c). Example (17b) could be used, for example, if the speaker has just gone outside and sees that it's raining. Example (17c) is from a text where the speaker has just seen the addressee's children for the first time.

(17) a. *É-x-hoo'kóhó-**neho**.*
    3-PST-rain-NAR.SG.INAN
    'Long ago, it rained, it's told.'

   b. *É-hoo'kóhó-**neho**!*
    3-rain-NAR.SG.INAN
    'It's raining!'

   c. *É-xae-néxoóhtáhé-**hoono**!*   (Leman 1987:395)
    3-simply-cute-NAR.3PL
    'They are cute!'

There are four forms for the Cheyenne narrative evidential given in Leman (2011): *-hoo'o* and *-hoono*, for animate 3rd person singular and plural (or obviative) respectively, and *-neho* and *-néhoonótse* for inanimate 3rd person singular and plural respectively. Like the reportative, these narrative forms are morphologically complex and can be analyzed further into an evidential morpheme plus person, number, and animacy agreement. Narrative forms for 1st and 2nd person seem

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[7]The reportative and the inferential are also sometimes used in legends and folktales (Leman 1980a, 1987, 2011).

pragmatically excluded, but they are possible in mirative contexts, as in (18a), from the text The Brothers-in-Law, and (18b).

(18)   a. *Né-ta-éšė-hevéxahé'tov-atsé-**moho**!*   (Leman 1987:174)
                2-let-already-have.as.child-in-law-1:2-NAR.2SG
                'You *are* already now my son-in-law!'

          b. *Né-néxoóhtȧhé-**moho**!*
                2-cute-NAR.2SG
                'You're cute!'

The inferential evidential indicates that some available evidence supports the main proposition. The main proposition need not logically follow from the evidence, though – the inferential can include inference, supposition, and conjecture. For example, (19) could be used if the speaker sees a drenched person come in from outside: the speaker has witnessed that a person who is wet just came inside and this supports the supposition that it's raining.

(19) **Mó**-*hoo'kȯhó*-**hané**-*he.*   (Leman 2011:50)
      Q+3-rain-NEG$_{INAN}$-INF
      'It's raining, I gather.'

The inferential may also be used to repeat information received from someone else. For example, if someone tells the speaker (20), she can repeat the main proposition with the inferential (19). (See also (35) below.) Uses with reportative evidence could be analyzed as conjecture based on a report.

(20) *É-hoo'kȯhó-**nėse**.*   =(8b)
      3-rain-RPT.SG.INAN
      'It's raining, they say.'

The inferential evidential is morphologically complex, composed of three affixes. There are two forms of the inferential, differing in the second affix, which agrees in animacy, as in (19) and (21).

(21) **Mó**-*né-némenė*-**he**-*mé*-**he.**   (Leman 2011:37)
      Q-2-sing-NEG$_{AN}$-2PL-INF
      'You (pl) sang, I gather.'

The inferential prefix attaches to the beginning of the verb, before the person prefix, as in (21). When combined with third person, it fuses with the prefix *é-*, as in (19). I gloss this marker Q- as it seems to be a form of the particle *móhe*, which by itself can be loosely translated as 'really?', at some stage of grammaticization. However, this is somewhat of a puzzle, as there is no morphological slot before the person prefix and no other morphemes that I know of can occupy this position.[8] A less grammaticized form of the same morpheme is used in one type of polar interrogative (see Section 3.2). However, the use in the interrogative is distinguished at least by its phonological properties: it does not fuse with the third person prefix (see (25b) below).

The second affix of the inferential occurs in slot VII as a type of modal agreement, before person agreement, as shown in (21). It has two forms, *-hé* for animate subjects and *-hané* for inanimate subjects. Given its identical allomorphy and placement, it is analyzed here as the same suffix which appears in negation together with the negative prefix *sáa-* (as in (5)).

The final suffix of the inferential is *-hé*, which appears in the mode slot VIII. It is similar to the polar interrogative suffix *-he*, but it has a high pitch underlyingly. This high pitch is not visible in, e.g., (21) because all final syllables in Cheyenne are devoiced. However, their underlying pitch influences the pitch of preceding vowels, even when devoiced (Leman 2011): compare the penultimate vowels in the inferential (21) and the interrogative (22).

(22) *Né-némene-me-**he**?*   (Leman 2011:35)
      2-sing-2PL-INT
      'Did you (pl) sing?'

The inferential suffix is homophonous with the animate negative agreement suffix *-hé*, which is also high pitched (*Né-sáa-némené-hé-me* 'You (pl) did not sing' (Leman 2011:32)). However, they occur in different slots and, unlike the negation suffix, the final suffix of the inferential does not agree in animacy (compare the allomorphs *-hané* in (19) and *-hé* in (21)). Therefore, I take this suffix to be unique to the inferential evidential and gloss it simply as -INF.

Lastly, though evidentials occur as verbal suffixes in the mode slot, some can also appear on certain nouns and pronouns, as in (23), from the text The Rolling Head, where the reportative

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[8]An alternate way of forming the inferential involves using *héva* 'maybe' in place of *mó-* in this position.

occurs on an interrogative pronoun.

(23) *Hénáá'é-**nėse***   *é-némotóht-a-**Ø***   (Leman 1980a:55)
      what-RPT.SG.INAN   3-hold.by.mouth-IOAM-WTN
      'It [a crow] has something in its mouth.'

In (23), the speaker sees a crow flying with something in its mouth, but cannot tell what it is.

3.2   Illocutionary Mood Markers

There are two ways to form polar interrogatives in Cheyenne. The first is with the polar interrog-
ative mode suffix -*he*, as in in (24).

(24)   a. *É-hoo'kóho-**he**?*   (Leman 2011:47)
           3-rain-INT
           'Is it raining?'

        b. *Né-vóom-e-me-**he**?*   (Leman 2011:74)
           2-see_AN-2:1-2PL-INT
           'Did you (pl) see me?'

The other way to form polar interrogatives does not use an illocutionary mood suffix, but the
interrogative proclitic *mó=*, as in (25).

(25)   a. ***Mó**=né-háéána-Ø?*
           Q=2-hungry-WTN
           'Are you hungry?'

        b. ***Mó**='-é-hoo'koho-Ø?*   (Leman 2011:182)
           Q=EP-3-rain-WTN
           'Is it raining?'

This proclitic is analyzed as a cliticized form of the particle *móhe*, which by itself can be a question,
loosely translated as 'really?'. A less grammaticized form occurs as the prefix in inferential con-
structions. The difference can be seen with third person forms, as in (25b): in the interrogatives,
Mó= does not fuse with the prefix *é-* as it does in the inferential (19). The interrogative proclitic
can also attach to demonstratives and nouns, in addition to verbs, as in (26).

(26) **Mó**=hé'tóhe?
       Q=this
       'Do you mean this one?'

There is a subtle meaning difference between the two types of interrogatives illustrated in (24) and (25). For example, (25a) would not be a felicitous question to ask someone who just entered your home, but it would be felicitous if the addressee were eating extremely quickly. This difference in meaning may in part be due to the fact that interrogatives formed with the proclitic can contain an evidential (see Section 5.3, below).

The interrogative mode suffix and the interrogative proclitic are only used for polar interrogatives. Content ("WH") interrogatives are formed differently, with an interrogative pronoun, as in (27a) and (27b), or an interrogative verb stem, as in (27c).

(27) a. **Névááhe** tsé-néméne-stse?   (Fisher et al. 2006)
          who   IND-sing-CNJ.3SG
          'Who's singing?'

      b. **Tósa'e** é-tȧ-ho'ohtse-∅?
          where   3-TRL-go(visit)-WTN
          'Where is he going?'

      c. É-**tónėšéve**-∅?
          3-what.do-WTN
          'What is he doing?'

Certain interrogative pronouns occur with a conjunct clause ('who', 'which', 'what', and 'why', as in (27a)) and others occur with an independent clause ('when' and 'where', as in (27b)). Interrogatives formed with independent verbs or interrogative verb stems can take all standard verbal inflection, including evidentials and illocutionary mood markers (see Section 5.3 and Murray 2012).

The hortative mood is marked by the suffix -ha, as in the examples in (28). No person prefix occurs with the hortative, as they are part of the imperative order, but third person plural hortatives do contain the plural suffix -vo, as in (28b).

(28) a. Némene-**ha!**   (Leman 2011:42)
          sing-HRT
          'Let him sing!'

b. *Némené-vo-**ha**!* (Leman 2011:42)
   sing-3PL-HRT
   'Let them sing!'

The hortative conveys a wish or preference on the part of the speaker about a third person, but it also involves a request to the addressee in some respect. For example, (28a) could be used if the addressee was in control of who was allowed to sing, and the speaker wanted a third person to be allowed to sing. There is a first person version of the hortative ('let me' or 'let us'), but it is not formed with a mode suffix. Instead, first person hortatives are formed with a special hortative prefix *ta-* (slot IV) and regular declarative verbal inflection.

There are two kinds of imperatives in Cheyenne, immediate and delayed (Murray to appear). Like hortatives, both are part of the imperative order and do not occur with a person prefix. Imperatives are restricted to having second person subjects and are not compatible with the standard plural markers. Instead, each type of imperative has different forms for singular and plural, as in (29) for the immediate and (30) for the delayed.

(29) a. *Néméné-**stse**!* (Leman 2011:41)
         sing-IMP.2SG
         '(You (sg)) sing (now)!'

      b. *Néméne-**Ø**!* (Leman 2011:41)
         sing-IMP.2PL
         '(You (pl)) sing (now)!'

(30) a. *Némene-**o'o**!* (Leman 2011:41)
         sing-DEL.IMP.2SG
         '(You (sg)) sing (later)!'

      b. *Némené-**héne**!* (Leman 2011:41)
         sing-DEL.IMP.2PL
         '(You (pl)) sing (later)!'

The immediate imperative indicates that the commanded action should be done immediately. The delayed imperative indicates that the commanded action should be done at a later time, which could

be relatively soon after the speech time or significantly later, depending on the verb and the context.

The Cheyenne evidentials and illocutionary mood markers form a single morphological paradigm, the mode paradigm. But are they a natural semantic class, contributing similar kinds of meanings? In the next two sections, I discuss the semantic properties of Cheyenne evidentials. These properties support the conclusion that the Cheyenne evidentials can be seen as types of, or fused with, declarative mood. Both evidentials and illocutionary moods interact with, constrain, the force of an utterance, and when combined, as in content questions, they interact in complex ways.

4 Interpretations of Cheyenne Evidentials

This section presents several generalizations about the interpretation of Cheyenne evidentials, focusing on the direct, reportative, and inferential. In discussing these semantic properties, a distinction is made between the evidential proposition and the propositional argument of the evidential, which I call the scope proposition. For example, in (31) the scope proposition is that Sandy sang, call it p. The evidential proposition in (31) is that the speaker has reportative evidence that Sandy sang, call this proposition $\text{RPT}(i, p)$, where i represents the evidence holder, the speaker in (31).

(31) *É-némene-**sėstse** Sandy.*
       3-sing-RPT.3SG
       'Sandy sang, they say.'

Semantically, an evidential indicates a relation between an individual, the evidence holder (typically the speaker in declaratives), and a proposition (following, e.g., Faller 2002 and Aikhenvald 2004). This is parallel to sentence embedding verbs like *hear* in English, e.g., *I heard that Sandy sang*, though the evidential and scope propositions have different statuses in the constructions (see, e.g, Simons 2007, Murray 2014).

The scope proposition is typically information that is new to the discourse. The evidential proposition itself is also typically, if not always, discourse-new. This is exemplified in (32), a simplified excerpt from the text Turtle Moccasin (Leman 1980a:56). The speaker is telling her son, who has just returned home, about an upcoming visit to their village by a man named Turtle

Moccasin. Sentence (32ii) appears with an unmarked direct evidential, indicating that the speaker has direct evidence that Turtle Moccasin is being waited for (specifically, the speaker herself is waiting for him).

(32) i. *É-to'se-amė-sóhpe-ohtse-**sėstse** Ma'enóhkevo'eha.*
         3-PROS-by-through-go-RPT.3SG   Turtle.Moccasin
         'Turtle Moccasin, I hear, is going to pass by.'

     ii. *É-tonóom-e-**∅**.*
         3-wait.for-PSV-WTN
         'He's being waited for.'

     iii. *É-mo'on-átamaahe-**sėstse**.*
         3-handsome-appear-RPT.3SG
         'He's handsome, I hear.'

In this example, the information about Turtle Moccasin's visit, his being waited for, and his being handsome is new to the son. Each evidential proposition is also new information, e.g., it is new information that the speaker has reportative evidence that Turtle Moccasin is handsome. Even if it was previously established in the discourse that the speaker had heard something, exactly what she has reportative evidence for would be new.

In addition to the evidence holder, who is typically the speaker in declarative sentences with evidentials, there is another individual (or body or information) involved, which I call the evidence base. The evidence base is the particular individual (or body or information) that the evidence holder received the information from; for reportative evidentials, this is the person or people they heard the information from; for inferentials, this is the evidence or the kernel of information the inference draws on. Typically, the particular evidence base is is not specified. This is also illustrated by (32): who the speaker heard the information from is not specified. She may have been told by a neighbor that Turtle Moccasin will pass by and that he is handsome. Alternatively, she may have been told this by several people, heard each piece of information from different sources, or simply overheard the information. All of these interpretations of the reportative are possible because the source of the report – the reporter – is not specified: the reportative only indicates that the speaker

has heard the scope proposition. The reporter could be anyone, or even multiple people.[9]

In (32), it is possible that the information in (32a) and (32c) came from different sources. However, if different sources report contradictory information, this cannot be conveyed without an overt verb of saying. That is, two contradictory sentences marked with the same evidential cannot occur consecutively without an intervening overt embedding verb. For example, (33), adapted from a Cuzco Quechua example in Faller 2002, cannot be understood as reporting different winners of the same race (contradictory information), only as reporting winners of different races.

(33) *É-hó'táheva-**séstse** Shelly. (Naa #oha) É-hó'táheva-**séstse** Annie.*
      3-win-RPT.3SG   Shelly. (and   CNTR)   3-win-RPT.3SG   Annie
      'Shelly won, they say. (And /#But) Annie won, they say.'

One potential explanation is consecutive evidentials are often interpreted as having the same source, or at least that interpretation is possible. For the reportative, this would mean that two contradictory reports came from the same reporter, which would be odd. The way to express conflicting reported information, e.g., different reported winners of the same race, is with an overt embedding verb, e.g., an overt verb of saying. Similarly, conflicting information cannot be summed into one report. For example, consider (34), adapted from a Cuzco Quechua example in Faller (2002).

(34) *É-hó'táhevá-**sesto** Annie naa Shelly.*
      3-win-RPT.3PL   Annie and Shelly
      'Annie and Shelly won, they say.'

Like (33), (34) cannot be used to report the contradictory information that Annie and Shelly won the same race. It can of course mean that both Annie and Shelly won different races, or perhaps that they tied, or were on the same team. As always, (34) can be true if the speaker heard from a single person the proposition that Annie and Shelly won. However, it could also be true if the speaker heard from one person that Annie won and heard from another person that Shelly also won (a different competition). This summed use of the reportative shows that the speaker need not have ever heard the exact scope proposition from a single person. This property of evidence summing holds for the other Cheyenne evidentials and, to my knowledge, for evidentials crosslinguistically.

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[9]Typically, though, there is a requirement with reportative evidentials that the source of the report is neither the speaker nor the hearer(s) (a 'third person' requirement (Faller 2002)).

The last property of Cheyenne evidentials discussed in this section is which evidentials can be used with which kind of evidence. Consider the sequence of examples in (35). If Lucy hears information conveyed with the direct evidential, as in (35i), she can repeat it later to Dale with the reportative (35ii) or the inferential (35iii), but not the direct (35i), as indicated in (35ii). Since Lucy has only reportative evidence that Andy was sick, using the unmarked form (35i) in the context of (35ii) is infelicitous (#) – the direct evidential proposition would be false in this context, as Lucy does not have direct evidence that Andy was sick all night. The availability of the inferential in (35ii) suggests either this is inference based on a report or the inferential is taking on a more general indirect evidential meaning. Future work on Cheyenne evidentials should explore such uses.

(35) i. Doctor to Lucy: *Andy é-vóon-omóhtahe-Ø.*
                          Andy 3-all.night-be.sick-WTN
                          'Andy was sick all night, I witnessed.'

      ii. Lucy to Dale: *Andy é-vóon-omóhtȧhe-**sėstse**.*   #WTN, ✓INF, ✓RPT
                          Andy 3-all.night-be.sick-RPT.3SG
                          'Andy was sick all night, I hear.'

      iii. Dale to Harry: *Andy **mó**-vóon-omóhtȧhe-**hé-he**.*   #WTN, ✓RPT, ✓INF
                           Andy Q+3-all.night-be.sick-NEG$_{AN}$-INF
                           'Andy was sick all night, I gather.'

The context illustrated in (35ii) is Lucy conveying information to Dale with the reportative evidential. Dale can then use either the reportative (35ii) or the inferential (35iii) to repeat that information, as indicated in (35iii). However, some of my consultants have expressed a preference for the inferential in the context of (35iii) – repeating what was conveyed with the reportative in (35ii), which may be relevant for determining the precise meaning of both the inferential and the reportative.

Though the inferential can be used in some reportative contexts, as illustrated in (35), the reportative may not be used in inferential contexts. Consider (36), adapted from the text The Snakebite (Leman 1980a:69). In the story, a firsthand account, the narrator returns to the location where a boy he was with was bitten by a snake.

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(36) i. *É-s-sáa-hoé-he-∅*   *néhe* *šéˈšenovȯtse.*
3-PST-not-be.at-NEG_{AN}-WTN that snake
'That snake was not there (I witnessed).'

ii. ***Mó-ˈ-éše-ase-von-ėhnė-hé-he.***   #WTN, #RPT, ✓INF
Q+3-PST-already-disappear-motion-crawl-NEG_{AN}-INF
'It must have already slithered away.'

In (36i), the speaker sees that the snake is gone and so uses the direct witness evidential. In (36ii), the speaker concludes from this fact, plus background knowledge about snake behavior, that it slithered away (not, say, flew away). I have translated the inferential in (36ii) with the English epistemic modal *must* since in similar contexts it means something akin to *therefore*, a marker of inference (Stone 1994). The speaker of (36) has only inferential evidence that the snake slithered away. He did not see it slither away, so it would be infelicitous to use the witness evidential in (36ii); he also did not hear that the snake slithered away, so it would be infelicitous to use the reportative evidential in (36ii).

This section focused on interpretations of the Cheyenne evidentials in declarative sentences, such as how the source of the evidence is interpreted. Importantly, evidentials contribute new information to the discourse – both the scope proposition and evidential proposition are typically new. The different evidentials can be seen as different modes of presenting the same primary information, as in (35). Each sentence in (35) is a declarative sentence. Each presents the same scope proposition, but based on a different evidentiary source. Each asserts something, at least the evidential proposition (Murray 2010). This supports the analysis that each sentence in (35) marks both declarative mood and evidentiality, and morphologically these seem to be fused.[10] The semantic contributions of the evidentials and illocutionary moods can interact, constraining the

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[10]The categories of evidentiality and illocutionary mood are separate grammatical categories and each makes its own semantic contribution, though they seem to be morphologically fused in Cheyenne. (As an analogy, number and person could be fused into one morpheme, but each category could still make its own semantic contribution.) The semantic contribution of evidentials is about information source, and the semantic contribution of declarative mood is about commitment to the scope proposition. As will be discussed in the next section, different evidentials can affect, or interact with, the semantic contributions of the illocutionary mood.

force of an utterance, and so contribute similar kinds of meanings. In the next section I turn to a discussion of specific semantic behaviors that further support this view.

5 Cheyenne Evidentials as Illocutionary Evidentials

Various diagnostics are used to determine the semantic properties of evidentials crosslinguistically (e.g., Izvorski 1997, Faller 2002, 2006, Matthewson et al. 2007). These diagnostics test, for example, whether evidentials can be embedded, how sentences with evidentials can be challenged, and how evidentials interact with questions. All languages pattern the same on many diagnostics. However, certain diagnostics distinguish two classes of evidentials, which will be called "illocutionary" and "epistemic" (or "propositional") evidentials (see, e.g., Faller 2006, Murray 2010). In general, illocutionary evidentials resist embedding and have a wider range of interactions with illocutionary moods. It is important to emphasize that this classification of evidentials is an *empirical* classification, based on their behavior on these diagnostics, and does not entail a particular kind of analysis. Though ultimately I believe a unified semantic theory of all evidentials is needed, this empirical semantic classification is still useful, as there are real differences in the behavior on some diagnostics and patterns that emerge crosslinguistically.

In this section, I discuss the Cheyenne evidential system with respect to challengeability and deniability (Section 5.1), embedding (Section 5.2), and the interaction of evidentials and questions (Section 5.3). The examples primarily involve the reportative evidential, but the results hold for all the Cheyenne evidentials. Some of the diagnostics discussed distinguish between illocutionary and epistemic evidentials, but all evidentials behave the same on many of the diagnostics. For the few diagnostics that do differ crosslinguistically, Cheyenne patterns with illocutionary evidentials.

5.1 Challengeability and Deniability

To distinguish the at-issue content of a sentence – roughly the main point of the sentence or the proffered content – from content that is not-at-issue, one diagnostic tests which components of a sentence are directly challengeable, and which are not. This diagnostic, called the direct challengeability test or the assent/dissent test (Papafragou 2006, Faller 2006), has been applied to

sentences with evidentials in various languages (e.g., Faller 2006, Matthewson et al. 2007, Murray 2010). The consensus is that there is a distinction in status between the evidential proposition and the scope proposition. The direct challengeability test shows that the scope proposition is directly challengeable but the evidential proposition is not. This holds for Cheyenne, as shown in (37), as well as crosslinguistically.[11]

(37) a. *Méave'ho'eno   é-héstáhe-**sėstse**   Sandy.*
           Lame.Deer   3-be.from-RPT.3SG Sandy
           'Sandy is from Lame Deer, they say.'

      b. *Hová'áháne. / É-sáa-hetómėstové-hane-Ø. É-sáa-héstáhé-he-Ø   Méave'ho'eno.*
           no   3-not-be.true-NEG_{INAN}-WTN   3-not-be.from-NEG_{AN}-WTN Lame.Deer
           'No. / That's not true. She's not from Lame Deer.'

      b′. # *Hová'áháne. / É-sáa-hetómėstové-hane-Ø. Hovánee'e é-sáa-né-hé-he-Ø.*
            no   3-not-be.true-NEG_{INAN}-WTN   nobody   3-not-that-say-NEG_{AN}-WTN
            # 'No. / That's not true. Nobody said that.'

One can directly challenge (37a) with (37b), but not with (37b′). That is, the scope proposition – that Sandy is from Lame Deer – can be directly challenged with 'no' or 'that's not true'. However, the evidential proposition – that the speaker has reportative evidence that Sandy is from Lame Deer – cannot be directly challenged. In other words, the propositional anaphors 'no' and 'that' in 'that's not true' are not able to pick up on the evidential proposition. While the evidential proposition cannot be directly challenged, it can be indirectly challenged, or questioned, as in (38).

(38) a. *Nomá'heo'hé'e   é-héstáhe-**sėstse**   Sandy.*
           Kingfisher   3-be.from-RPT.3SG Sandy
           Sandy is from Kingfisher, I hear.'

      b. *Névááhe   tsé-né-hee-stse?*
           who   IND-that-say-CNJ.3SG
           'Who said that?'

In (38b), the speaker is questioning who the source of the report in (38a) is. The propositional anaphor in (38b) picks up the scope proposition – not the evidential proposition.

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[11]Some constructions that convey evidentiality, like certain embedding constructions in English, may have variable at-issue status (see Simons 2007 and Murray 2014).

Another diagnostic is used to determine the extent to which a sentence indicates commitment to a proposition. Must the speaker believe it? Think that it is at least possible? Is it asserted? Compare English (39) – (41).

(39) *Dale left yesterday.*

(40) *Dale left yesterday, they say.*

(41) *They say Dale left yesterday.*

In an utterance of (40) and (41), the speaker is not fully asserting the scope proposition, that Dale left yesterday. The speaker makes less of a commitment to the scope proposition in (40) than in (39), perhaps no commitment at all in (41). Declarative mood typically indicates commitment to the scope proposition, but phenomena like parentheticals, adverbs, and evidentials, can interact with this contribution of mood. This level of commitment can be tested by determining whether the proposition can be denied by the same speaker, as in (42)

(42) $\#_{\perp}$ *Dale left yesterday, but he didn't leave yet. (I saw him earlier today.)*

(43) *? Dale left yesterday, they say, but he didn't leave yet. (I saw him earlier today.)*

(44) *They say Dale left yesterday, but he didn't leave yet. (I saw him earlier today.)*

While (42) is a contradiction ($\#_{\perp}$), (44) is not – there is no commitment to the proposition that Dale left yesterday in (44). While (43) may be infelicitous, it does not have the same status as the contradiction (42).[12]

In Cheyenne, sentences with the direct evidential indicate commitment to the scope proposition. For example, consider (45): the speaker indicates that she has direct evidence to the contrary of the first conjunct, which is a contradiction.

(45) $\#_{\perp}$ *É-hó'táhéva-Ø   Annie   naa   oha   é-sáa-hó'táhévá-he-Ø.*
　　　　　　3-win-WTN   Annie   and   CNTR   3-not-win-NEG$_{AN}$-WTN
　　　$\#_{\perp}$ 'Annie won, I witnessed, but she didn't, I witnessed.'

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[12]My judgement is that this sentence is acceptable, especially with a certain intonation, but judgements vary.

Parallel examples with the Cheyenne inferential and similar evidentials in other languages are infelicitous, for both illocutionary and epistemic evidentials (Faller 2002, Matthewson et al. 2007). However, in some languages, sentences with a reportative do not indicate commitment to the scope proposition (see, e.g., Faller 2002, McCready and Ogata 2007). This is true for Cheyenne sentences with the reportative, as in (46). A context would have to be established where the speaker has direct evidence to the contrary of something that has been reported. For example, if the winner of a race was (mistakenly) reported to be Annie and the speaker heard these reports, but was at the finish line and saw Shelly cross first, the speaker could felicitously say (46).

(46) *É-hó'táheva-**sėstse** Annie naa oha é-sáa-hó'táhévá-he-Ø.*
     3-win-RPT.3SG   Annie and CNTR 3-not-win-NEG_{AN}-WTN
     'Annie won, they say, but I saw that she didn't win.'

Though this use of the reportative is possible, Cheyenne speakers usually believe the scope proposition, with all evidentials. This is because Cheyenne evidentials primarily encode source of information, type of evidence, and not speaker certainty. If a speaker has only reportative evidence, she must use the reportative evidential, no matter how sure she is.[13] However, the use in (46) is possible, which shows that semantically no commitment to the scope proposition is encoded.[14]

While the level of commitment to the scope proposition can vary, there is invariably commitment to the evidential proposition, to the type of evidence specified by the evidential. For example, consider (47).

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[13]An anecdotal example is the translation of the Bible into Cheyenne, which is in the inferential mode (Cheyenne Bible Translation Committee 2006).

[14]It may be possible to analyze all sentences with evidentials as encoding no commitment to the scope proposition, only indicating commitment to the evidential proposition. However, the contradictory nature of (45) and its inferential counterpart would have to be explained, perhaps by saying the evidential propositions conflict. This is straightforward for the direct evidential, but not necessarily for the inferential. I instead explore the idea that, semantically, declarative mood indicates commitment to the scope proposition and the different evidentials minimally affect this. The primary contribution of the Cheyenne evidentials is still source of information, and all of the evidentials can still be used when the speaker fully believes the scope proposition. Under either analysis, evidentials interact with the semantic contributions of illocutionary mood.

(47) $\#_\perp$ *É-hó'táheva-**sėstse*** *Annie* *naa* *oha* *hovánee'e* *é-sáa-nė-hé-he-∅.*
     3-win-RPT.3SG   Annie and CNTR nobody   3-not-that-say-NEG$_{AN}$-WTN
     $\#_\perp$ 'Annie won, they say, but nobody said that.'

In (47), it is infelicitous for the speaker to deny that she heard that Annie won: the use of the reportative evidential in the first conjunct commits the speaker to exactly that. Related sentences, such as the counterpart of 'Annie won, they say, but it wasn't Dale who told me that', can be felicitous. However, in such examples the reportative evidence is not being denied, only the particular source of the report. That the evidential proposition is not deniable, exemplified by (47), shows that sentences with evidentials make a commitment to the evidential proposition. This holds crosslinguistically for all kinds of evidentials (direct and indirect) in languages with both illocutionary and epistemic evidentials. The evidential proposition is new information, committed to in the sentence, but it is not-at-issue.

The direct challengeability and deniability tests show that with all evidential declarative sentences, something is asserted. What, and to what extent, varies from evidential to evidential and language to language. All evidentials crosslinguistically assert the evidential proposition, that the speaker has the type of evidence specified by the evidential, though this content is backgrounded, not-at-issue. Evidentials do vary on whether, and to what extent, they indicate commitment to the scope proposition. In Cheyenne, the reportative evidential does not indicate any commitment to the scope proposition. In this section, this is only this diagnostic on which evidentials vary, and on this diagnostic, Cheyenne patterns with illocutionary evidentials.

These facts about declaratives with evidentials show how intertwined evidentiality and illocutionary mood are in Cheyenne. However, similar facts hold for evidentials in other languages as well as related phenomena, including parentheticals in English. In general, data such as this shows there is a rich semantic interaction between the semantic contributions of illocutionary mood and evidentiality, how they interact to constrain illocutionary force. This is a statement about the data, about the semantics of the phenomena discussed, and not about different possible implementations of analyses of evidentials. As mentioned above, I ultimately believe a unified analysis of evidentials is needed, especially given that evidentials crosslinguistically agree on most diagnostics.

5.2 Embedding and Scope

Another family of semantic diagnostics has been used to determine whether or not one element can take scope under, or be interpreted within, another (Karttunen 1973, Lyons 1977). This section covers the interaction of Cheyenne evidentials with negation, tense, modals, conditionals, and embedding verbs. As in the previous section, all evidentials behave the same on some of these diagnostics. On the diagnostics which show variation crosslinguistically, Cheyenne evidentials behave like illocutionary evidentials. Questions will be discussed in Section 5.3.

A widely attested, crosslinguistic pattern is that evidentials take wide scope with respect to negation, i.e., the evidential proposition cannot be interpreted under negation – the scope proposition is negated, but the evidential proposition is not. This holds for epistemic as well as illocutionary evidentials (e.g., Faller 2002, 2006, Aikhenvald 2004, Matthewson et al. 2007).[15] Cheyenne also follows this pattern, as shown in (48b) for the reportative (# for unavailable interpretations).

(48) *É-sáa-némené-he-**sėstse**   Andy.*
      3-not-sing-NEG$_{AN}$-RPT.3SG   Andy
      'Andy didn't sing, they say.'
      # 'I didn't hear that Andy sang.' /# 'Andy sang, they didn't say.'

Again, the results of this diagnostic with negation do not vary crosslinguistically.

The relative scope of evidentials with tenses and modals, and whether evidentials embed in subordinate clauses, does vary crosslinguistically. As with negation, illocutionary evidentials tend to be interpreted outside the scope of tenses and modals. For tense, this means the temporal orientation of the evidential is indeterminate and cannot take its time reference from tense (Faller 2002, 2006). This is true for Cheyenne for tense, as in (49), as well as modals. In (49), the past tense locates the singing at a (distant) past time, but the report could have taken place at any time between the described event and the speech event.

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[15]de Haan (1999) claims that evidentials take wide scope over negation crosslinguistically. However, evidentials in Ahka and Warlpiri are claimed to be able to be interpreted within the scope of negation (Aikhenvald 2004:96-7). Crucially, this does not seem to distinguish illocutionary and epistemic evidentials.

(49) *É-h-némene-**sėstse*** *Andy.*
    3-PST-sing-RPT.3SG   Andy
    'Andy sang long ago, they say.'
    # 'They long ago said that Andy sang' /# 'Andy sang, they said long ago'

Epistemic evidentials in, for example, German can more freely interact with tense and modals, and can be interpreted in the scope of tense (Faller 2006). Thus, examples such as (49) further support the classification of Cheyenne as having illocutionary evidentials.

    In the examples discussed above, evidentials occur in the same clause as negation, tense, and modals. Other diagnostics look at examples where evidentials are syntactically embedded, e.g., under attitude verbs or in the antecedents of conditionals. Illocutionary evidentials are typically not embeddable, either syntactically or semantically, while epistemic evidentials are, though there is variation in the kinds of embedding environments and interpretations across languages (see, e.g., Faller 2006, Matthewson et al. 2007, McCready and Ogata 2007). As discussed in Section 2, for morphosyntactic reasons Cheyenne evidentials cannot occur in conjunct (dependent) clauses, including the antecedent of a conditional. Evidentials can occur in the consequent of conditionals, as in (50), because the consequent is the main clause and all main verbs are marked for mode.

(50) *Andy*   *màh-vé'-háa'éše-néménė-stse*   *é-ohkė-kàhane-otse-**sėstse**.*
    Andy   HYP-CND-long.time-sing-CNJ.3SG   3-HAB-tired-become-RPT.3SG
    'If Andy sings for a long time, he gets tired, they say.'

In (50), the evidential has scope over the entire conditional: the speaker heard that Andy gets tired if he sings for a long time. Unlike illocutionary evidentials in general, epistemic evidentials in some languages can occur in the antecedents of conditionals (Faller 2006, McCready and Ogata 2007). In such examples, the evidential can be semantically embedded (interpreted within the conditional) and may be interpreted as anchored to someone other than the speaker, as with shifted indexicals (e.g., Rice 1986, Schlenker 2003).

    This difference in semantic embeddability between illocutionary and epistemic evidentials shows up with embedding verbs as well, at least for Tibetan, St'át'imcets, and German (Garrett 2001, Matthewson et al. 2007, Schenner 2008). Though Cheyenne evidentials do not occur in subordinate clauses, one independent sentence may be interpreted as semantically subordinate to another even

though it is morphosyntactically independent. For example, verbs like 'say' and 'know' can occur with other independent verbs. Consider (51), from the text The Hunter and the Badger (Leman 2011), with the direct evidential on the first verb and the inferential evidential on the second verb. As a bit of context for (51), it is said that badgers help Cheyennes hunt. One day, the storyteller went out hunting and came upon a deer. He took his finding the deer as evidence that the badger was helping him hunt.

(51) *Ná-tá-héne'ena-**∅***   *ma'háhko'e*   ***mó**-ná-vé'óhtsém-ae-**hé-he**.*
       1-TRL-know.st-WTN   badger   Q-1-accompany-INV-NEG$_{AN}$-INF
       'I knew that the badger must be with me.'

Example (51) might also be translated as 'I knew it. The badger must have been with me', with propositional anaphora (here: 'it') connecting the sentences. The inferential is not in the scope of the verb 'know' and 'know' is not in the scope of the inferential: what the speaker knew is that the badger was with him and he had inferential evidence that the badger was with him. Cheyenne (51) cannot be interpreted with the inferential evidential semantically embedded under the verb 'know', i.e., it can not be interpreted as the speaker knew that he conjectured that the badger was with him.

In summary, across languages both illocutionary and epistemic evidentials take scope over negation. However, epistemic evidentials, but not illocutionary evidentials, can be interpreted within the scope of tense, modality, conditionals, and certain embedding verbs. On these diagnostics, Cheyenne evidentials behave like illocutionary evidentials. The embedding diagnostics also show how evidentials can interact with mood, even in languages with epistemic evidentials: who can the evidential be anchored to, always the speaker, or can it be shifted to subjects of matrix or embedded clauses? In some languages, though not Cheyenne, shifted interpretations are possible, but restricted in interesting ways that are likely related to other issues in the semantics of illocutionary mood and speech acts. In all languages, shifting of the evidence holder is possible in interrogatives, as discussed in the next section.

5.3 Interaction with Questions

The interaction of interrogatives and evidentials crosslinguistically is quite rich and varies widely from language to language. There appears to be only one interpretation that interrogatives containing evidentials share crosslinguistically: the evidential indicates the expected source of information for the requested answer. For example, Cheyenne (52) is felicitous in a context where it is clear the addressee will have reportative evidence for her answer, e.g., if the speaker overhears the addressee ask the question on the phone, but doesn't hear the answer.

(52)   *Mó='-é-némene-**séstse**   Annie?*
       Q=EP-3-sing-RPT.3SG   Annie
       'Given what you heard, did Annie sing?'

In this interpretation, the evidential is no longer anchored to the speaker, but to the addressee (the 'interrogative flip' of Speas and Tenny (2003)).

In Cheyenne, evidentials can occur both in polar interrogatives formed with the proclitic *mó=*, as in (52), and in certain content interrogatives. For polar interrogatives with evidentials, the only interpretation available is the one where the evidential is anchored to the addressee as in (52). Content interrogatives with evidentials, such as (53), can also be interpreted this way (53i), but they have an additional interpretation as well (53ii).

(53)   *Tóne'še   é-ho'eohtse-**séstse***
       when   3-arrive-RPT.3SG
       i. 'Given what you heard, when did he arrive?'
       ii. 'He arrived sometime, I wonder when.'

The interpretation in (53i) is a direct question with a presupposition about the addressee's evidence, as in (52). The interpretation in (53ii) is not a direct question – it does not request an answer or indicate that the speaker expects an answer – but a statement of uncertainty. I call the phenomenon illustrated in (53) "illocutionary variability": multiple possible interpretations associated with different illocutionary moods. Though all sentences may be used in multiple ways – e.g., English declaratives can be used to make an assertion or give a command – the combination of the evidential and the interrogative in (53) seems to increase the number of possible interpretations

of either an interrogative alone or an evidential declarative. An interpretation parallel to (53ii) is available for all interrogatives with evidentials in Cheyenne, but different evidentials contribute different types of uncertainty (see Murray 2010, 2012). For example, (54) illustrates the statement of uncertainty interpretation for a content interrogative with the inferential evidential.

(54) *Tóne'še mó-ho'eohtsé-hé-he*   (Fisher et al. 2006)
       when   Q+3-arrive-NEG$_{INAN}$-INF
       'He must have arrived sometime, I don't know when.'

Though Cheyenne patterns with illocutionary evidentials on other diagnostics discussed above, another language with illocutionary evidentials, Cuzco Quechua, does not appear to have the statement of uncertainty interpretation illustrated in Cheyenne (53ii) and (54) . In addition, there is an interpretation available in Cuzco Quechua that is not available in Cheyenne: a reported question. For example, consider the two interpretations of Cuzco Quechua (55).

(55) *Pi-ta-s   Inés-qa   watuku-sqa?*   (Faller 2002:230)
       who-ACC-RPT   Inés-TOP   visit-PST2
       'Who did Inéz visit?'
       EV = (i) speaker indicates that somebody else is asking
            (ii) speaker expects hearer to have reportative evidence for his or her answer

The interrogative in (55) has the crosslinguistically robust interrogative flip interpretation (55ii), i.e., 'Who did Inéz reportedly visit?'. It can also be interpreted as a reported question, as in (55i), where the speaker indicates that somebody else is asking the question: the speaker is merely relaying or repeating the question.

Though there is no 'reported question' interpretation of Cheyenne (53), the interpretation in (53ii) is similar: neither is a direct question and arguably the reportative takes something like wide scope in both cases (see Murray 2010). So Cheyenne can still be considered to be a language with illocutionary evidentials, but perhaps a sub-type, distinguished by the interaction with questions. Another possibility is Cheyenne evidentials can be classified somewhere between illocutionary evidentials and epistemic evidentials on a semantic spectrum. There is evidence that the statement of uncertainty interpretation, as in (53ii), is available in some languages with epistemic evidentials

(e.g., St'át'imcets (Littell et al. 2010)). Either way, Cheyenne evidentials pattern semantically in many respects with illocutionary evidentials, on embedding and on the deniability of the scope proposition for the reportative, the only two kinds of diagnostics that clearly distinguish between illocutionary and epistemic evidentials.

The diagnostics discussed above are useful for a semantic classification of the behavior of evidentials across languages, but it is important to again highlight that many of the diagnostics discussed do not distinguish between types of evidentials – all evidentials crosslinguistically behave the same on many diagnostics. Furthermore, the results of the diagnostics do not necessarily determine the type of semantic analysis for the evidentials. Though I have argued that Cheyenne evidentials pattern with illocutionary evidentials, I do not believe they need to be analyzed as illocutionary or speech act modifiers, on a separate level of interpretation. In fact, elsewhere I have argued that Cheyenne evidentials are truth-conditional, that they contribute to the propositional content – just the not-at-issue content (Murray 2010, 2014).

Whatever analysis of evidentials one adopts, it should account for the crosslinguistic variation, but also for the many semantic properties that evidentials across languages share. For the purposes of this paper, it is enough that the semantic contributions of evidentials can interact with the semantic contributions of mood, e.g., affecting levels of commitment in declaratives and allowing multiple interpretations of interrogatives. Even so-called epistemic, or propositional, evidentials interact with the semantic contributions of illocutionary mood in these ways.

6   Conclusions

Semantically, illocutionary mood and evidentiality are distinct categories, but morphologically the Cheyenne mode paradigm combines them. Data from Cheyenne shows that illocutionary mood and evidentiality can also be seen as a natural semantic class, contributing similar kinds of meanings and showing complex interactions. Support for this conclusion comes from other languages as well. As discussed in depth by Faller (2002), Cuzco Quechua evidentials contribute meaning in part at the level of speech acts. Furthermore, in Kalaallisut (West Greenlandic), there are extensive interactions between evidentiality and illocutionary mood. The reportative evidential enclitic can

co-occur with all of the illocutionary moods, allowing a wide range of interpretations (Bittner 2008).

Consider the Kalaallisut examples in (56) from Bittner (2008:11).

(56)   a. *Kinaguuq   ajugaava?*
           kina=guuq ajugaa-pi-a
           who=RPT   win-QUE-3SG

           i. '[He]s asking, who has won?'
           ii. 'According to [him], who has won?'
           iii. 'Ask who has won?'

    b. *Olegooq   anivoq.*
           Ole=guuq ani-pu-q
           Ole=RPT   go.out-DEC.IV-3SG

           i. 'Ole is out, [I] hear.'
           ii. 'Say that Ole is out.'

    c. *Olegooq   isirli.*
           Ole=guuq isir-li
           Ole=RPT   come.in-OPT.3SG

           i. 'Let Ole come in, [they] say.'
           ii. 'Tell Ole to come in. '

The examples in (56) each have multiple interpretations, some similar to examples discussed above for Cheyenne and Cuzco Quechua, some new, including (56a.iii), which is a command to ask a question.

Data such as this highlights the need for a more integrated analysis of evidentiality and illocutionary mood, one that can allow their semantic contributions to affect each other. Ultimately, I believe that we need a unified analysis of evidentials crosslinguistically that works for all types of evidentials. But such an analysis must be situated in a theory of the semantic contributions to speech acts, how the semantics of a sentence constrains the illocutionary force of an utterance. Such a theory must be able to account for interactions between the semantic contributions of evidentials, related phenomena, and illocutionary moods. Data from multiple languages shows that there are rich interactions between these phenomena. This holds not only for Cheyenne, where the evidentials are morphologically part of the mode paradigm, but in other languages as well, where evidential marking is morphologically separate from the marking of illocutionary mood.

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