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The structure of content questions in Cheyenne

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This article has as its main goal to investigate interrogative sentences in Cheyenne and therefore adds to the diversity of such analyses found in other Algonquian languages. This paper attempts to provide evidence that content questions in this language differ in structure depending on the status of the questioned element as an argument or adjunct and that content questions involving an interrogative pronoun are bi-clausal, as they exhibit a cleft-like structure such that the fronted 'wh'-word functions as the stative predicate of a copular clause that is generated sentence-initially encoding the focus of the construction. By contrast, content questions requiring an interrogative adverb are mono-clausal and exhibit 'wh'-movement in the traditional sense, that is through 'wh'-fronting. Thus, this paper intends to contribute to the long-standing discussion on whether Algonquian 'wh'-questions have a mono-clausal structure, involving traditional 'wh'-movement or a bi-clausal structure, exhibiting 'wh'-clefting.

Keywords: Algonquian language family; Cheyenne; content questions; 'wh'-movement; 'wh'-clefting

1. Introduction

In this paper 'wh'-constructions in Cheyenne are discussed, with the aim of characterizing the data¹ in this language in order to explain their syntactic, semantic and information structure. It is organized as follows: section 1 provides a short overview of Cheyenne by describing its basic morphosyntactic features. Section 2 offers an account of questions and interrogative words in Cheyenne. Section 3 follows with a detailed analysis of content interrogative sentences in Cheyenne, reflecting the existence of two major types that display two different grammatical constructions. Section 4 explains the formation of nominal clause structures in this language. Section 5 examines the issue of movement or in-situ-ness in the formation of questions in Cheyenne and discusses issues of concern such as the presence of an interrogative particle, the position of interrogative words, the degree of freedom showed by them in terms of word order and their behavior in relation to clause-boundedness, with the intention of determining their structure. Section 6 discusses the possibility of finding multiple 'wh'-questions and examines the behavior of 'wh'-questions including an interrogative pronoun with respect to the presence or absence of weak crossover effects in an attempt to identify the type of movement (e.g. A-movement, A'-movement or clefting) involved in the formation of content questions. Finally, Section 7 concludes the paper by offering a summary of this

paper's main findings, which provide arguments in favor of the assumption that one of these two types of content question shows a similar structure to that of a cleft-like construction where the fronted 'wh'-word is actually a cleft copula clause encoding the focus of the question, whereas the other is formed via garden-variety 'wh'-movement whereby the interrogative adverb moves to the front of the clause.

2. Background to Cheyenne

Cheyenne is an Algonquian language spoken predominantly in Montana and Oklahoma, in the United States, with about 2300 speakers. Cheyenne is a polysynthetic, head-marking language with complex verb morphology and fairly free word order (Petter 1952; Meeussen 1962; Leman 1986; Russell 1987). As regards the order of sentence constituents, this language is a discourse-configurational language (Hale 1983; Jelinek 1984; Kiss 1995) since word order is more concerned with the encoding of the discourse functions topic and focus than with that of the syntactic functions such as subject and object:

(1a)	SVO	Na-e'ha my-son 'My son gave me a book.'	ná-mét-aa'e (1)-give.DITR-3:1:I	móxe'estoo'o book
(1b)	VSO	Ná-mét-aa'e (1)-give.DITR-3:1:I 'My son gave me a book.'	Na-e'ha my-son	móxe'estoo'o book
(1c)	VOS	Ná-mét-aa'e (1)-give.DITR-3:1:I 'My son gave me a book.'	móxe'estoo'o book	Na-e'ha my-son
(1d)	OVS	móxe'estoo'o book 'My son gave me a book.'	ná-mét-aa'e (1)-give.DITR-3:1:I	Na-e'ha my-son
(1e)	SOV	Na-e'ha my-son 'My son gave me a book.'	móxe'estoo'o book	ná-mét-aa'e (1)-give.DITR-3:1:I
(1f)	OSV	móxe'estoo'o book 'My son gave me a book.'	Na-e'ha my-son	ná-mét-aa'e (1)-give.DITR-3:1:I

The fact that the subject and object in a transitive construction can occur in basically any order with respect to each other and with respect to the verb shows that all variations regarding the order of constituents appear to be possible in Cheyenne,² which implies that the syntactic functions cannot be deduced from their position in the clause. Rather, in this language the clause constituents are ordered according to their discourse functions. More specifically, the topic tends to be associated with the postverbal position of the sentence and the focus is generally realized through its movement into a particular preverbal position.³

In Cheyenne, as in the other Algonquian languages, there are two major divisions of verb forms or inflectional sets, commonly referred to as 'orders' following Bloomfield (1946): Independent and Conjunct (Petter 1952; Meeussen 1962; Leman 1986; Russell 1987). The two orders occur in different syntactic environments, show distinct semantic properties, and use systems of agreement that are morphologically quite

different (Wolfart 1973; Goddard 1979; Leman 1986; Campana 1996; Brittain 1997, 2001; Cowell & Moss 2002a, 2002b; Richards 2004; Cook 2008; Johnson 2012; Déchaine & Wiltschko 2014; Drapeau 2017). In Cheyenne the Independent order includes all verb forms other than imperatives that can stand alone (e.g. main declarative clauses, polar questions and content questions with an interrogative adverb) and uses a person proclitic agreeing with the highest argument on the Person – Salience hierarchy. The Conjunct order is used for argument content questions and all dependent verb forms (including all subordinate clauses) and lacks a person proclitic. A sentence containing a verbal form in the Independent and Conjunct orders is illustrated respectively in (2) and (3):

- (2) Né-vo'èstanehéve Méave'ho'éno
 (2)-live.VAI.2 Lame.Deer
 'You live in Lame Deer.'
- (3) Ná-héne'ēna tsé-vo'èstanehéve-to Méave'ho'éno
 (1)-know.VTI.1:I PART⁴-live.VAI-2 Lame.Deer
 'I know that you live in Lame Deer.'

As evidenced by (3), the Conjunct order uses a complementizer prefix such as *tsé-*, *ho'-*, *òh-*, etc. instead the person proclitic. The conjunct marker serves to identify the different modes encoding evidential and modal information the Conjunct order is divided into (indicative, interrogative, optative, subjunctive, participial, etc.), which again have different syntactic distributions and exhibit somewhat distinctive suffixal agreement (Leman 2011: 24–26).

Finally, Cheyenne is considered to display a relatively regular and complex morphology, especially with respect to the verbal complex. It, thus, exhibits a templatic verb morphology (Petter 1952; Meeussen 1962; Leman 1986; Russell 1987), as shown by Figure 1 and illustrated by example (4)⁵:

- (4) Né-to'se-pèhev-óom-o-he?
 (2)-FUT-good.I-see.FTA-2:3-INT
 'Will you be happy to see him?'

As mentioned before, there are two different types of prefix depending on the type of construction. In the Independent order the verbal prefix is the element signaling the most pragmatically salient participant according to the Person – Salience hierarchy 2nd person > 1st person > 3rd person (proximate) / 4th or 5th person (proper obviative or further obviative) > Inanimate.⁶ In the Conjunct order, by contrast, the prefix can be either a complementizer indicating a specific type of verbal mode (e.g. independent, participial, dubitative, iterative, etc.). The preverbal particles are located between the prefix and the verbal stem expressing grammatical information such as the realis / irrealis distinction, past or future tense as well as negation, modality, direction, manner and the different types of aspect (continuous, perfective, ingressive, egressive, terminative, etc.). Because of the presence of certain preverbs generally denoting tense or aspect which occupy a position between the prefix and the verb or other verbs in the verbal complex, verbs may vary their form, thereby occurring either just as a full verb or adding an initial or final stem. Following the verbal stem, this language uses a morpheme ('Theme') indicating the transitivity of the predicate, the animacy of its argument(s) and the direct / inverse distinction.⁷ Then, there are a myriad of suffixes ('Agreement') covering the grammatical information of the arguments in terms of person, number, animacy, direct or inverse direction, and salience. In the last position

Figure 1. Verb structure in Cheyenne.

Cross-linguistically, IF specifies the type of speech act, that is, whether the utterance, for example, is an assertion, a question, or a command. Cheyenne does not use any marker to indicate declarative IF (5), but it does have some suffixes that serve to mark other types of IF. These morphemes, such as *-he* in polar questions (6), *-stse* in the immediate imperative or *-o'ó* in the delayed imperative⁸ (7), occupy the final position in the verbal complex:

- Consequently, as can be observed in (8) and (9) below, the only difference between a declarative sentence and a ‘yes / no’ question lies in the presence or absence of an interrogative particle respectively and in the different intonational properties they have:

- These two examples differ in the intonation with which they are pronounced and in that only the yes / no question shows an interrogative particle *-he*. Cheyenne does, therefore, have an equivalent of an interrogative particle, that is, it displays interrogative mode morphology in the verb. However, analogously as other Algonquian languages (Bloomfield 1958, for Eastern Ojibwe; Wolfart 1973, for Plains Cree; Frantz 1991, for Blackfoot; Cowell 2004, for Gros Ventre; etc.), this language only seems to present an interrogative IF operator in polar questions, but not in content questions, as the following example shows:

- (10a) Hénáá'e tsé-ho'áhe-to?
What PART-want.VTI-2:I
'What do you want?'

- (10á) * Hénáá'e tsé-ho'áhe-to-he?
 what PART-want.VTI-2:I-INT
 'What do you want?'

3. Cheyenne questions

Once a brief typologically-oriented grammatical sketch of the Cheyenne language has been provided, this section begins the analysis of its interrogative sentences, firstly, by examining in depth the formation of direct and indirect questions in depth and, secondly, by presenting a brief analysis of long-distance complex questions.

3.1. Direct questions

Cheyenne speakers generally ask questions in direct speech or directly, rather than indirectly. Direct questions are basically classified in two major groups: polar questions, in which the speaker asks the hearer for a 'yes' or 'no' answer, and content questions, in which the speaker asks the hearer to supply specific information about participants or settings. Thus, the latter involve the presence of an interrogative word such as 'who', 'what', 'where', etc., whose Cheyenne equivalents carry features for animacy, number, and obviation. 'Wh'-words in this language fall into two classes, which broadly correspond to interrogative pronouns and interrogative adverbs. The two sets are presented in [Tables 1](#) and [2](#):

As discussed above, this first series of pronouns can only function as interrogative pronouns:

- (11) Névááhe tsé-véstáhem-ata'e?
 who PART-help.VTA-3:2?
 'Who helped you?'
 (12) Hénová'e tsé-ho'áhe-to?
 what PART-want.VTI-2:I
 'What do you want?'
 (13) Táasévoone mó'éhno'hāme tsé-hohtóvá('tov)-óse?
 which horses PART-buy.VTA-2:33
 'Which horses did you buy?'

As discussed above, this second series of pronouns can function as both interrogative and indefinite pronouns:

- (14) Tósa'e é-hó'ta ne-maahe?
 where (I)-be.VII your-arrow
 'Where is your arrow?'
 (15) Tóne'she né-hohtóva-nòtse mó'éhno'ha?
 when (2)-buy.VTA-2:3 horse
 'When did you buy the horse?'
 (16) Tósa'e mó-nó'oestséhēhe
 somewhere DUB.(3)-hide.VTI-3:I
 'He must have hidden it somewhere.'
 (17) Tóne'she mó-évà-hóo'òhtsè-hevōhe
 sometime DUB.(3)-back-go.home.VAI-33
 'They must have come back home sometime.'

Table 1. Interrogative pronouns.

Interrogative pronouns ^a	Meaning
névááhe	who, which (animate singular proximate)
névááso	who, which (animate singular proximate)
néváasóho	who, which (animate singular obviative)
néváaseo'ó	who, which (animate plural)
hénáá'e	what, which (inanimate singular proximate)
hénová'e	what, which (inanimate singular proximate)
hénová'éto	what, which (inanimate singular proximate)
hénová'etse	what, which (inanimate singular obviative)
hénová'etotse	what, which (inanimate singular obviative)
hénová'eóótse	what, which (inanimate plural)
hénová'ehótse	what, which (inanimate plural)
táaso	which (inanimate singular)
táase	which (inanimate singular)
tóáse	which (inanimate singular)
tóaso	which (inanimate singular)
taasévóónèstse	which (inanimate plural)
táasévoo'e	which (animate singular)
táasévoone	which (animate plural)

^aAccording to my native consultants, the fact that some of these interrogative words present variants or alternative forms may be due to the previous existence of two distinct, although closely related, dialects, namely Tsistsistas and Sutaio, which gradually merged to form the modern-day Cheyenne language.

Table 2. Interrogative adverbs^a.

Interrogative adverbs	Meaning
tósa'e	where / somewhere
tónèš-	how / somehow
tónet-	how / somehow
tónè'se	when /sometime
tónesto	how much / how many

^aThe only exception is illustrated by the interrogative word *tónèš-* / *tónet-* 'how', which always occurs as a preverbal bound, rather than a free, particle, hence it is very difficult to know if it undergoes some type of movement:

- E.g.: a) É-tónèše-véhe?
 (3)-how-be.named.VAI
 'What's her name?' (Lit. 'How is she named?')
- b) Né-tónèšè-hénéēn-a?
 (2)-how-know.VTI.3:I
 'How do you know it?' (Leman et al. 2006: 274)

3.2. Indirect questions

Unlike most languages, whose question words appear in both main clauses and subordinate clauses, Cheyenne does not use interrogative pronouns in embedded

questions. Some verbs, such as *vóom* ‘see’, *héne’ēna* ‘know’, or *nòhtsèstov* ‘ask’, may take an interrogative clausal complement, giving rise to an embedded question, but this language seems to disallow the use of a ‘wh’-word heading the dependent clause:

These examples show that Cheyenne does not allow for interrogative elements such as *hénáá'e* / *hénová' e* 'what' or *névááso* / *névááhe* 'who' preceding dependent clauses.⁹

- (20) Mó¹⁰-’-ée-mét-aehehé hová’éhe tsé-ho’a(he)-éstse
DUB.(3)-PAST-around-give.VTA-X:3:I something PART-want.VTI-3:I
‘He must have been given what he wanted.’ (lit. ‘He must have been given
something that he wanted.’) (Leman et al. 2006: 85)
- (21) Né-héne’ena hé’tóhe tsé-hósèsta-éstse
(2)-know.VTI-2:I DEIC PART-tell.about.VTI-3:I
‘You know what he told about it.’ (lit. ‘You know about this that he told.’)

- (22) Ná-tá-hé-vé'hóom-o nev'á'esèstse néhe
 (1)-TRANSL-PURP-look.at.VTA-1:3 somebody DEIC
 tsé-ée-ma'xe-hoó'he-pe'pe'éstā-stse
 PART-around-much-overheard-hollerer.VAI-3
 'I'll go see who is hollering.' (lit. 'I'll go see whoever it is who is
 overheard hollering?') (Leman et al. 2006: 99)

Regarding the formation of embedded questions with interrogative adverbs, the same situation appears to exist, as indirect questions in Cheyenne do not appear to

require the presence of an interrogative adverb, such as *tósa'e* 'where' or *tóne'se* 'when':

- (23) Ná-sáa-héne'enov-ó-he tsé-x-hoo'(e)è-se
 (1)-NEG-know.VTA-1:3-NEG IND-RR-be.VAI-3
 'I don't know where he is.' (Leman et al. 2006: 61)
- (24) Ná-sáa-héne'en(a)-ó-he tsé-to'sè-he'se-anéotsè-se
 (1)-NEG-know.VTA-1:I-NEG IND-going.to-RR-give.birth.to.VAI-3
 'I don't know when she is going to give birth.' (Leman et al. 2006: 60)

However, a noticeable difference between interrogative pronouns and interrogative adverbs is that, as mentioned above, while the former can only be interpreted as interrogative, the latter are ambiguous between an interrogative and an indefinite reading, which can account for their presence in embedded questions preceding the dependent clause:

- (25) Ná-sáa-héne'enov-ó-he *tósa'e*
 (1)-NEG-know.VTA-1:3-NEG somewhere
 tsé-s-to'sè-tšhešéméa'tov-a'èse
 IND-RR-going.to-send-VTA-3:1
 'I don't know where he will send me.' (Leman et al. 2006: 71)
- (26) Ná-sáa-héne'en-ó-he-nóvo *tóne'se*
 (1)-NEG-know.VTA-11:3-NEG-11:3 sometime
 tsé-to'sè-he'se-néšéoe-vòse
 IND-going.to-RR-get.married.VAI-33
 'We don't know when they are going to get married.'

Although the same morphological form is shared by both interrogative and indefinite adverbs, we know that the latter interpretation, and not the former, is used in embedded clauses because they are not pronounced with the prosodic prominence that accompanies the interrogative elements. Thus, it seems plausible to claim that the presence of an interrogative element is disallowed in indirect questions in Cheyenne.

Another difference between pronouns and adverbs can be observed when we compare the verbal mode of the embedded clause following indefinite pronouns such as *nevá'esèstse* 'someone' or *hénáá'énèse* 'something' – sometimes accompanied by a demonstrative pronoun – and indefinite adverbs such as *tósa'e* 'somewhere' or *tónèše* 'sometime'. While the former require a clause with the verb conjugated in the Participial mode, the verb in the clause accompanying the latter takes the morphology of the Indicative mode. This difference could be accounted for by arguing that, while the structure of embedded questions including indefinite pronouns involves the formation of a cleft-like clause,¹¹ that of embedded questions containing indefinite adverbs are more similar to a (a)n adverbial relative clause, which can have an overt or covert antecedent depending on the presence or absence of the indefinite element.

Finally, another difference between the two types of embedded questions is that, as shown by examples (25) and (26), the formation of an embedded question involving an adjunct requires the addition of a preverbal particle that, as Leman (1985: 30) notes, serves to mark an oblique element (e.g. manner, location, tense, etc.), hence it could therefore be considered an example of what Algonquianists call a 'relative root'.

3.3. Long-distance complex questions

Although they are rather rare in the Cheyenne language, it is possible to find instances of long-distance complex questions, that is, questions where the ‘wh’-phrase, which occurs preceding the matrix predicate, is crossreferenced in the verbal affix of the embedded predicate:

- (27) Hénová’e tsé-nè-het-ata’e ne-měšeme
 what PART-ANAPH-tell.VTA-3:2 your-grandfather
 tsé-to’sè-hohtóva-to?
 PART-going.to-buy.VTI-2:I
 ‘What did your grandfather tell you to buy?’
- (28) Névaásoho tsé-nè-hesétam-ótse John
 who.OBV PART-ANAPH-think.about.VTA-2:3 John
 tsé-mosem-ose?
 PART-kiss.VTA-3:4
 ‘Who did you think that John kissed?’

4. Typology of content questions in Cheyenne

The different behavior exhibited by interrogative pronouns and adverbs observed in sub-section 2.1. is also reflected in the formation of content questions in Cheyenne, as this type of question can be formed in two different ways according to the type of interrogative word that is present in them (Leman 2011).¹² As will be discussed below, this choice has an effect on the type of verbal paradigmatic order involved in the formation of the interrogative sentence.

On the one hand, question words that stand for core arguments, such as the interrogative pronouns *névááhe* (SING) / *névááso* (SING) / *néváesóho* (OBV) or *néváaseo’o* (PL) ‘who’, *hénáá’e* (SING) / *hénová’e* (SING) / *hénová’éto* (SING) / *hénová’etotse* (OBV) or *hénová’éóòtse* (PL) / *hénová’ehòtse* (PL) ‘what’, *táase* ‘which’ (INAN.SING) / *táasévo’o* (AN.SING) or *taasévoone* ‘which’ (AN.PL) / *táasévoonèstse* (INAN.PL) or *tónèsto-* ‘how much / how many’, involve the use of the Conjunct order:

- (29a) Névááso táasévo’o Ho’honáéšé’-e?
 who PART-work.VAI-3 Montana-LOC
 ‘Who works in Montana?’
- (29a’) * Névááso é-hotse’ohè Ho’honáéšé’-e?
 who (3)-work.VAI Montana-LOC
 ‘Who works in Montana?’
- (30a) Hénová’e tsé-mese-to éšēēva?
 what PART-eat.VTI-2:I yesterday
 ‘What did you eat yesterday?’
- (30a’) * Hénová’e né-mese éšēēva?
 what (2)-eat.VTI yesterday
 ‘What did you eat yesterday?’

These examples illustrate that argument ‘wh’-questions involve the use of the Conjunct order and, consequently, the use of the Independent order is ungrammatical.¹³

On the other hand, question words like the interrogative adverbs *tósa’e* ‘where’, *tóneš-/tónet-* ‘how’ and *tóne’sè* ‘when’, which function as adjuncts, require the use of the Independent order:

- (31a) Tósa'e é- hotse'ohe?
 where (3)-work.VAI
 'Where does he work?'
 (31a') *Tósa'e tsé-hotse'ohe-to?
 where PART-work.VAI-2:I
 'Where does he work?'
 (32a) Tóne'se é-h-mév-o má'xeme-no?
 when (3)-PAST-eat.VTA-3:4 apple.OBV
 'When did he eat the apple?'
 (32a') *Tóne'se tsé-h-mév-òse má'xeme-no?
 when PART-PAST-eat.VTA-3:4 apple.OBV
 'When did he eat the apple?'

The examples above show that only the Independent order is compatible with adjunct 'wh'-questions.

Finally, it is of note that there is an interrogative adverb – the equivalent of the English interrogative adverb 'why' – that behaves differently from the other interrogative adverbs, since it is expressed in Cheyenne by means of the interrogative word *henáá'e* / *hénová'e* / *hénová'éto* 'what' and the preverbal prefix *-hése-* 'why' within a dependent clause.¹⁴ This word triggers the use of the Conjunct order and it seems plausible to assume, therefore, that this question word behaves like the interrogative pronoun 'what'. This could well be due to the close relationship existing between the question words 'what' and 'why':

- (33) Hénová'e tsé-hése-némene-to?
 what PART-because-sing.VAI-2
 'Why did you sing?' or 'What did you sing for?'

In summary, the formation of content questions in Cheyenne differs with respect to the type of 'wh'-word involved, as the choice of an interrogative adverb or pronoun conditions the choice of verbal order, namely Independent or Conjunct. As regards the syntactic structure of the two respective constructions, while there is hardly any doubt that content questions requiring Independent order – those including an interrogative adverb – have a mono-clausal structure, the analysis of content questions with interrogative pronouns is less evident. My assumption is that the use of Conjunct order in the formation of content questions containing an interrogative pronoun reveals a bi-clausal structure and, given the Conjunct order of verbal morphology is used in syntactic environments such as relative clauses or cleft constructions, this type of content question could be assigned a familiar structure. Evidence in favor of a bi-clausal and cleft-like structure for content questions with an interrogative pronoun in Cheyenne will be provided in the remainder of the paper.

5. Nominal clause structures in Cheyenne

Despite the fact that the presence of a copula is not a mandatory prerequisite for assuming a clefted structure for 'wh'-questions (Blain 1997: 1), cleft sentences are generally viewed as a subclass of copular construction (Jespersen 1927). Thus, while being aware that examples of content questions containing an interrogative pronoun in Cheyenne as those illustrated by (29a) and (30a) do not appear to show – at least overtly – a copula, important evidence in favor of a bi-clausal structure for such type of content question would come from the presence of an element functioning

as a copula. Consequently, it may be useful to examine the formation of copular sentences in Cheyenne in order to find out if this language always makes use of a copula – or another verbal form – in these constructions.

Cheyenne presents a good number of nominal clause structures – constructions where both the subject and predicate are nominal – that can be considered to be parallel to three of the types of copular constructions identified by Higgins (1979), namely predicative, equative and specificational, in English:

- (34) Ného'éehe é-nótaxe-(e)ve
 my.father (3)-warrior.I-be.FAI
 'My father is a warrior.'
- (35) Muhammad Ali é-cassiusclay-h-eve
 Muhammad Ali (3)-Cassius.Clay.I-EPE-FAI
 'Muhammad Ali is Cassius Clay.'
- (36) Tá'tóhe hetane é-na'séne
 DEIC man (3)-kill.people.VAI
 'The murderer was that man over there.'

In predicational sentences such as (34), the subject generally precedes the element predicating a property of the subject. Equative sentences like (35) exhibit the property of permutability, as the two elements, equally referential, can invert their position in the clause. Likewise, as evidenced from these two examples, Cheyenne uses a final verbal stem, namely *-(e)ve-*, functioning as a copula to form predicative and equative nominal clauses.

By contrast, specificational nominal clauses in this language, such as (36), exhibit a different construction. On the one hand, they behave like predicational sentences in terms of word order, as the more referential element – the element that provides the value for the variable – tends to precede the less referential element – the element setting up the variable – in the clause. On the other hand, the weakly referential element is expressed in the form of a predicative including a lexical verb.

Finally, greater variety is shown by identificational nominal clauses in Cheyenne, which can be expressed in many different ways, depending on the possibility of the more referential element to form a predicative by means of the equative particle – *(e)ve*, a possessive construction, a lexical verb or with no verbal form:

- (37a) Hé'tóhe é-môtsěšk(e)-eve
 DEIC (3)-knife.I-be.FII
 'This is a knife.'
- (37b) Náhe hetane ná-he-hé('tov)-noto
 DEIC man (1)-POSS-father.VTA-3:4
 'That man is his father.' (lit. 'He has that man as a father.')
- (37c) Tá'tóhe he'e Helen é-heševéhe
 DEIC woman Helen (3)-be.named.VAI
 'That woman is Helen.' (lit. 'That woman is named Helen.')
- (37d) Hé'tóhe máto na'ěstse hóhta'heo'o
 DEIC also one story
 'This is also another story.' (Leman 1987: 314)

These examples show that the demonstrative subject, which only has deictic, but not anaphoric reference, is used by the speaker to present an entity to the hearer and is the element that functions as the subject. By contrast, the second element, which serves to help the hearer to find out the identity of the person or

(38) Só'taenèstsestòtse hé'tóhe
Sutaio DEIC
'This is the Sutaio language.' (Leman 1987: 14)
Analogously, though rare, it is also possible to see instances of verbless questions:

(39) Hénáá'e há 'tóhe?
what DEIC
'What is that?' (Leman et al. 2006: 61)

(40) Táase ne-máheēō'o?
which your-house
'Which is your house?' (Leman et al. 2006: 259)

It seems at first sight that, unlike English clefted structures, which require a copula along with the dummy subject 'it', Cheyenne seems to require obligatorily neither a copula nor a subject-filler analogous to 'be' and 'it' respectively. Rather, these copular sentences would simply involve the presence of two consecutive NPs, thereby resembling verbless questions (as in (39) and (40)).

(41) Né(he)-(e)v(e)-ááhe ... ?
DEIC-be-FAI-?¹⁷
'Who ... ?'
(42) Hén(e)-o-(e)v(e)-áe ... ?
DEIC-?-be-FII-?
'What ... ?'

(43) Hén(e)o(e)v(e)-á'ehò-tse?
DEIC-be.FII-?-II
'What are they?'

- (44) Hén(e)o(e)-v(e)-áe héné?
 DEIC-be.FII-? DEIC
 ‘What is this?’
- (45) É-hotóá-(‘e)ve-o’o.
 (3)-buffalo.I-be.FAI-33
 ‘They are buffaloes.’ (Leman et al. 2006: 38)
- (46) Peter é-mòhónéheón-eve
 Peter (3)-hunter.I-be.FAI
 ‘Peter is a hunter.’
- (47) Ná-néeho-(e)ve Vóóhéhéve
 (1)-stand.I-be.FAI Morning Star
 ‘I am Morning Star.’

Examples (43) and (44) illustrate two content questions where the interrogative pronoun serves as the focused element and functions as the predicate¹⁸ of the sentence. Taking this into consideration, the question word is a focused element inside a copular sentence (e.g. ‘Who is it that ...?’). The reason why argument ‘wh’-phrases in Cheyenne occur in a clause-initial position may be due to the newsworthy principle, which predicts constituent order in this language. Mithun (1992: 46) shows the tendency that more newsworthy sentence constituents seem to precede less newsworthy constituents in some Native American languages. More specifically, according to Leman (1999: 37), and just like other Algonquian languages (Tomlin & Rhodes 1994 for Ojibwa), Cheyenne appears to have a tendency to place the newsworthy information (any element expressing a contrast, introducing or changing a topic, or representing new information) preverbally and inferable or evoked information postverbally. Accordingly, Cheyenne would exhibit a specific type of ‘wh’-movement involving the fronting of the most newsworthy information. This fact appears to confirm Rudin’s hypothesis (1988) that ‘wh’-words move for focus reasons, since they are inherently focused.

Examples (45) and (46) show two declarative copular sentences where the equative verb *-(e)ve* ‘be’ turns both the nouns *hotoa’e* ‘buffalo’ and *mòtšěške* ‘knife’ into nominal predicates, the only difference between them lying once again in the presence of a deictic in the latter sentence, which is coreferential with the only core argument of the predicate. Finally, example (47) illustrates a copular construction where an emphatic expression *ná-néehove*, including the copula *-(e)ve* ‘be’, serves to identify a person.

In summary, the copular construction in Cheyenne, which behaves syntactically in an analogous way to an interrogative pronoun in languages like English, can occur in three different patterns¹⁹: for instance, it may stand alone (48) or combined with other elements such as an NP (49) or another clause (50):

- (48) Né(he)-(e)v(e)-ááso?
 DEIC-be.FAI-?
 ‘Who is it?’
- (49) Né(he)-(e)v(e)-ááso náhe?
 DEIC-be.FAI-? DEIC
 ‘Who is that?’
- (50) Né(he)-(e)v(e)-ááso (náhe) tsé-mésè-stse?
 DEIC-be.VAI-? DEIC PART-eat.VAI-3
 ‘Who is eating?’ (lit. ‘Who is it / the one that is eating?’) (Leman et al. 2006: 191)

clause are normally considered to originate in argument position and subsequently move to the left periphery of the clause via ‘wh’-movement, whereas in-situ ‘wh’-words are understood to originate in the position normally associated with a non-‘wh’-word with the same grammatical relation.

As regards Cheyenne, the basic relationship between declarative clauses and their ‘wh’-question counterparts can be seen in the following examples, which systematically show what happens when the subject, object and adjunct are ‘wh’-questioned:

- (53a) Na-e’ha é-hóooésta mòxe’èstoo’o mòxe’èstónemáheó-ne
 my-son (3)-read.VTI book school-LOC
 ‘My son reads a book at school.’
- (53a’) Névááhe tsé-hóooést-o mòxe’èstoo’o mòxe’èstónemáheó-ne?
 who PART-read.VTI-3:I book school-LOC
 ‘Who reads a book at school?’
- (53a’’) Hénová’e tsé-hóooést-o ne-éha mòxe’èstónemáheó-ne?
 what PART-read.VTI-3:I your-son school-LOC
 ‘What does your son read at school?’
- (53a’’) Tósa’e ne-e’ha é-hóooésta mòxe’èstoo’o?
 where my-son (3)-read.VTI book
 ‘Where does your son read a book?’

These examples show that Cheyenne ‘wh’-words, regardless of the syntactic function they may have, appear at the front of the sentence or clause.²² Furthermore, as illustrated below, it is not possible to leave the ‘wh’-word in situ:

- (54a) * Ne-e’ha tsé-hóooést-o hénová’e mòxe’èstónemáheó-ne?
 your-son PART-read.VTI-3:I what school-LOC
 ‘What does your son read at school?’
- (54a’) * Ne-e’ha é-hóooésta mòxe’èstoo’o tósa’e?
 my-son (3)-read.VTI book where
 ‘Where does your son read a book?’

These examples therefore provide strong evidence that ‘wh’-questions in Cheyenne involve ‘wh’-movement.²³ However, despite the fact that the interrogative words in this language apparently always occur in clause-initial position and therefore its questions involve ‘wh’-movement, it seems, much more difficult to know whether this language forms ‘wh’-questions via traditional ‘wh’-movement (through ‘wh’-fronting) or via clefting.²⁴ With this in mind, let us examine the morpho-syntactic properties of questions in Cheyenne, with the aim of finding out whether they form a mono-clausal or bi-clausal construction, revisiting the debate on the question of whether ‘wh’-questions in Algonquian can be analysed as being located within the Complementizer Phrase (CP) (Brittain 2001 for Western Naskapi; Bruening 2004 for Passamaquoddy; Lochbihler & Mathieu 2010 for Ojibwa) or, by contrast, they are cleft-like constructions (Johns 1982 for Rainy River Ojibwe; Reinholtz & Russell 1995, Blain 1997, and Cook 2008 for Plains Cree; Oxford 2013 for Innu-Aimun; Bliss 2013 for Blackfoot).

Regarding the way ‘wh’-words reach the sentence-initial position, it appears prudent to analyse these elements separately, owing to the argument / adjunct asymmetry questions in Cheyenne display, that is, the fact that ‘wh’-words in this language are classified in two different groups according to the type of verbal order (i.e. Independent or Conjunct) they trigger in the formation of the interrogative sentence.

On the one hand, as evidenced from dialogues (55) and (56), it seems clear that interrogative adverbs (e.g. *tósa’e* ‘where’ and *tóne’she* ‘when’, among others) are

displaced from their original postverbal position in the declarative clause to the first position to form the question:

- | | | | |
|--------|---------------------------------------------------------------------|-------------------------------------|--------------------------|
| (55a) | Tósa'e
where
'Where does he work?' | é-hotse'ohe?
(3)-work.VAI | |
| (55a') | * É-hotse'ohe
(3)-work.VAI
'Where does he work?' | tósa'e?
where | |
| (55b) | É-hotse'ohe
(3)-work.VAI
'He works in Montana.' | Ho'honáéšé'-e.
Montana-LOC | |
| (55b') | Ho'honáéšé'-e
Montana-LOC
'In Montana he works.' | é-hotse'ohe
(3)-work.VAI | |
| (56a) | Tóne'se
when
'When did he eat the apple?' | é-h-mév-o
(3)-PAST-eat.VTA-3:4 | má'xeme-no?
apple.OBV |
| (56a') | * É-h-mév-o
(3)-PAST-eat.VTA-3:4
'When did he eat the apple?' | má'xeme-no
apple.OBV | Tóne'se?
when |
| (56b) | É-nè-mév-o
(3)-ANAPH-eat.VTA-3:4
'He ate it yesterday.' | éšeēva.
yesterday | |
| (56b') | Éšeēva
yesterday
'Yesterday he ate it.' | é-nè-mév-o
(3)-ANAPH-eat.VTA-3:4 | |

While the place adjunct *Ho'honáéšé'e* 'in Montana' and the time adjunct *éšeēva* 'yesterday' may occur in-situ occupying a post-verbal position,²⁵ their corresponding 'wh'-words *tósa'e* 'where' and *tóne'se* 'when' must obligatorily occur in clause-initial position. Furthermore, the fact that this type of question requires the use of a verbal form in the Independent order, which generally occurs in main clauses, so it seems plausible to argue that interrogative constructions involving interrogative adverbs in Cheyenne are mono-clausal and the 'wh'-adverbs undergo garden-variety 'wh'-fronting.

As regards interrogative clauses with pronouns, while I claim that this type of 'wh'-question in Cheyenne exhibits a bi-clausal construction and therefore has the structure of clefts, the evidence provided so far is still insufficient. Thus, further evidence in favor of this assumption will be offered in the remainder of the paper where I will briefly examine and discuss each of the following properties in turn: a) the different behavior of 'wh'-words and NPs with respect to positioning, b) the inflection these elements can take and clause-boundedness; c) the presence of a deictic element after the 'wh'-word, d) the inflection shown by the Conjunct verb, e) the absence of multiple 'wh'-questions, f) the existence of subjacency effects, and g) the presence of weak crossover (WCO) effects.

6.1. Comparison between 'wh'-NPs and non-'wh'-NPs in terms of positioning

It would seem difficult to determine which position is in-situ in a 'wh'-question in a language where NPs can be freely ordered within a clause. In-situ would mean the same freedom for 'wh'-words as for non-'wh'-NPs, which is not attested in Cheyenne,

since the position of ‘wh’- words appears restricted to a clause initial position. Thus, the very fact that ‘wh’-words are restricted to a clause-initial position would seem to indicate that they do indeed undergo movement:

- | | | | | |
|------|-----------------------------------|------------------|------------------|-----------|
| (57) | Neváesóho | John | tsé-vóom-ose | éšeēva? |
| | who.OBV | John | PART-see.VTA-3:4 | yesterday |
| | ‘Who did John see yesterday?’ | | | |
| (58) | Neváesóho | tsé-vóom-ose | John | éšeēva? |
| | who.OBV | PART-see.VTA-3:4 | John | yesterday |
| | ‘Who did John see yesterday?’ | | | |
| (59) | John, | neváesóho | tsé-vóom-ose | éšeēva ? |
| | John, | who.OBV | PART-see.VTA-3:4 | yesterday |
| | ‘John, who did he see yesterday?’ | | | |
| (60) | *John | tsé-vóom-ose | neváesóho | éšeēva? |
| | John | PART-see.VTA-3:4 | who | yesterday |
| | *‘John did he see who yesterday?’ | | | |

As is clear from the examples (57–60), the ‘wh’-element must obligatorily appear at (or near) the left edge of the clause. Although it does not sound very natural, it is possible to place (more than) one element to the left of the ‘wh’-phrase in Cheyenne, as shown in (59). In this case, this element would be a marked topic and should be separated from the rest of the clause by a pause, which is represented by a comma in the written form of the sentence.²⁶ In any case, what is not possible is to place the ‘wh’-word postverbally, as is illustrated in (60). Thus, interrogative elements in this language would seem to be clear-cut cases of moved ‘wh’-words, rather than ‘wh’-words in-situ, leading to ‘wh’-movement.

6.2. Comparison between ‘wh’-NPs and non-‘wh’-NPs in terms of marking and clause-boundedness

Cheyenne, analogously as the other Algonquian languages, makes use of the obviation system whereby a distinct grammatical-person marking distinguishes a non-salient (obviative) third-person referent from a more salient (proximate) third-person referent in a given discourse context. Additional evidence that ‘wh’-words in Cheyenne behave differently from non-‘wh’- NPs is shown by the lack of obviation marking occasionally exhibited by the former. The presence of proximate / obviative agreement is generally obligatory in order to identify the role of a given NP in any sentence with two or more third-persons. Thus, in the following examples (61) and (62), the variation in terms of obviative marking in the ‘wh’-word would lead to a different interpretation:

- | | | |
|------|--------------------------------------------------------------------------|-------------------|
| (61) | Néváesóho | tsé-mósem-aese? |
| | who.obv | part-kiss.vta-4:3 |
| | ‘Who (obv) kissed him/her (prox)?’ / * ‘Who (obv) did s/he (prox) kiss?’ | |
| (62) | Névááso | tsé-mósem-aese? |
| | who | part-kiss.vta-4:3 |
| | ‘Who (prox) did s/he (obv) kiss?’ / * ‘Who (obv) kissed him/her (prox)?’ | |

It seems clear, then, that the ‘wh’-word must agree with the proximate / obviative value of the pronominal argument in the argument position with which they are

construed in order to determine correctly the syntactic function of each participant in the action.

However, although rare and perhaps typical of younger speakers, it is possible to observe examples where interrogative pronouns exhibit a different behavior from ordinary NPs in terms of marking in Cheyenne:

- (63a) Neváasóho tsé-mósém-ose John? —————→ ‘wh’-word: marked
 who.OBV PART-kiss.VTA-3:4 John?
 ‘Who (OBV) did John (PROX) kiss?’
- (63b) Névááso tsé-mósém-ose John? —————→ ‘wh’-word: unmarked
 who PART-kiss.VTA-3:4 John
 ‘Who did John (PROX) kiss?’ / * ‘Who kissed John (PROX)?’

Unlike (63a) where the ‘wh’-word either shows agreement with its corresponding argument on the verb, in (63b) the ‘wh’-word is unmarked with respect to the proximate / obviative status of its referent in a ‘wh’-question. It could thus be argued that that an unmarked ‘wh’-word can be acceptable where there is no chance of ambiguity. Thus, thanks to the information provided by the verbal agreement morpheme –*ose*, which indicates a proximate agent acting on an obviative patient, and the absence of obviative marking in the NP ‘John’,²⁷ which identifies this participant as the proximate agent of the action, it seems that the presence of the obviative marking in the question word is not absolutely essential. The ‘wh’-phrase here can be proximate even though its argument position, crossreferenced in the portmanteau form –*ose*, is obviative. This situation implies a contrast with respect to simple declarative clauses, which are not obviously bi-clausal, so, following Bruening (2001: 212–213), it seems plausible to argue that the fact that an argument ‘wh’-word can be proximate even if its trace position is obviative may mean that ‘wh’-questions in Cheyenne consist of two clauses, which count as two separate domains in computing obviation and, consequently, they display bi-clausal structure.

Another difference between NPs and ‘wh’-words lies in the fact that the former, unlike the latter, are clause-bound:

- (64a) Náhe hetane ná-héne’enōv-a tsé-méhót-amo oeškèseho.
 DEIC man (1)-know.VTA-3:1 PART-love.VTA-1:4 dog.OBV
 ‘That man knows that I love the dog.’
- (64b) * Oeškèseho náhe hetane ná-héne’enōv-a tsé-méhót-amo
 dog.OBV DEIC man (1)-know.VTA-3:1 PART-love.VTA-1:4
 ‘That man knows that I love the dog.’
- (65) Henáa’e tsé-né-het-o tsé-x-hohtóva-stse he-měšemo?
 what PART-say.VAI-2 PART-PAST-buy.VTI-3:I his-grandfather
 ‘What do you say that his grandfather bought?’

As evidenced by example (64b), NPs, unlike ‘wh’-words (65) – unboundedness is a typical property of ‘wh’-movement -, cannot occur separately from the clause where they are cross-referenced.

6.3. Presence of an antecedent

Once it has become clear from the evidence presented in the former section that interrogative pronouns move out of their base position to land in their derived position at the front of a clause in Cheyenne, the next goal is to find out what type of movement is involved.

The fact that the interrogative pronouns in this language, such as *névááhe* / *névááso* ‘who’ or *hénáá’e* / *hénová’e* ‘what’, occupy the clause-initial position in Cheyenne may be in fact related to the grammatical construction of which they are part, since content questions involving interrogative pronouns in this language seem to be clefted.

Important evidence for the assumption that these ‘wh’-questions present the form of cleft-like constructions is provided by a number of factors, such as the possible presence of a coreferential antecedent, the use of the Participial mode of the Conjunct order in the cleft clause, and the presence of a (sometimes covertly expressed) copula.

Deictic elements such as *tá’tóhe* (exoph, dis, an) / *tsé’tóhe* (exoph, prox, an) / *há’tóhe* (exoph, dis, inan) / *hé’tóhe* (exoph, prox, inan) / *náhe* (endoph, dis, an) / *néhe* (endoph, prox, an) / *háne* (endoph, dis, inan) / *héne* (endoph, prox, inan) (Leman 1985) may also occur following the interrogative element, this combination being usually non-agreeing:

- (66) Neváase-óo náhe tsé-ho’a’hasó’he-se?
 who.PL DEIC PART-arrive.I-ride.FAI-33
 ‘Who (pl) came?’ (lit. ‘Who are those that came riding
 on horses?’)

Following Blain (1997), I claim with respect to these cases that this deictic element could function as an overt antecedent for the complement clause, which supports the fact that cleft clauses bear a close resemblance to restrictive relative clauses cross-linguistically, which may be indicative that ‘wh’-questions in Cheyenne are cleft constructions.

6.4. Distribution of participial mode and verbal morphology

Besides the optional presence of a demonstrative pronoun before the putative ‘main verb’, further evidence to claim a cleft analysis of content questions with interrogative pronouns in Cheyenne appears to be offered by the fact that the putative ‘main verb’ bears morphology (the participial mode in the Conjunct order) that is otherwise indicative of relative clauses.

While some differences have been found in other Algonquian languages such as Plains Cree (Wolfart 1973; Blain 1997; Cook 2008), Rainy River Ojibwa (Johns 1982), Swampy Cree (Reinholtz & Russell 1995), Gros Ventre (Cowell 2004) or Arapaho (Cowell & Moss 2008), especially regarding the marking and inflection of the interrogative pronoun and the verb in the cleft-like clause, the same conclusion, that is, that ‘wh’-questions including interrogative pronouns involve the formation of cleft-like constructions has been reached. This cleft-like analysis would also account for the fact that the Conjunct order is only used with the first group of interrogative words, rather than with the second, since the interrogative pronouns ‘what’, ‘who’ and ‘which’ tend to appear in clefts more frequently cross-linguistically than the interrogative adverbs.²⁸

The occurrence of a complementizer-like element in ‘wh’-questions and other operator-type constructions in Algonquian is also well documented (Wolfart 1973; Johns 1982; Dahlstrom 1991; Blain 1997; Brittain 2001; Bruening 2004; Cowell 2004; Cowell & Moss 2008, among others). Nevertheless, some specific aspects regarding the use of the complementizer distinguish Cheyenne from most of other Algonquian languages. Firstly, it is of particular note that, unlike other Algonquian

languages where there are two types of complementizer, one being used in cleft constructions and relative clauses and the other in ordinary complement-type subordinate clauses, Cheyenne only uses one complementizer for all three types of construction²⁹:

- (67) Néváaseo'ó tsé-ohkê-hoestone-se?
 who PART-regularly-study.VAI-33
 'Who (are the ones that) study every day?'
 (68) Ka'ěškóneho tsé-hoestone-se é-pěhévahe-o'ó.
 children PART-study.VAI-33 (3)-be.good.VAI-33
 'The children that study are good.'
 (69) Ná-héne'ēn-a tsé-ohkê-hoestone-vòse ka'ěškóneho.
 (1)-know.VTI-1:I IND-usually-study.VAI-33 children
 'I knew that the children study every day.'

I hypothesize that, perhaps in the past, *tsé-* had a more restricted use but over the time it gradually replaced other different complementizers in order to become a multi-functional complementizer or subordinator. In some Algonquian languages³⁰ there are even several possibilities with respect to the choice of complementizer and type of verbal order in 'wh'-questions, but this does not occur in Cheyenne, as it can only use the *tsé-* complementizer and 'wh'-questions cannot be formed by means of the Independent order.

Thus, unlike other Algonquian languages, which have more options in terms of conjunct complementizers,³¹ as Cheyenne can only use the prefix *tsé-* serves to introduce a number of different constructions, we have to use the morphological distinction between Conjunct modes (e.g. Indicative, Participial, etc.) to discern what type of sentence is involved in every case. It is therefore of note that both the interrogative clause in (67) and the relative clause in (68) show the same pronominal affix, that is *-se*, which belongs to the Participial³² mode of the Conjunct order, while the complement clause in (69) shows a different affix, namely *-vòse*, which belongs to the Indicative mode of the Conjunct order. Accordingly, this coincidence in verbal morphology between questions and relative clauses supports the assumption that these two constructions are closely related. Finally, complement clauses (69–70) pattern like adverbial clauses (71), as both types of subordinate clauses exhibit forms of the Conjunct Indicative verbal order:

- (70) Ná-x-héne'ēn-a tsé-x-heše-pěhéve-noné-vòse ka'ěškóneho.
 (1)-PAST-know.VTI-1:I IND-PAST-RR-well.I-sing.FAI-33 children
 'I knew that the children sang well.'
 (71) Ná-x-hetóta(e)-omóhtahe tsé-h-pěhéve-noné-vòse ka'ěškóneho.
 (1)-PAST-happy-feel.VAI.3 IND-PAST- well.I-sing.FAI-33 children
 'I felt happy when the children sang well.'

In summary, further evidence confirming this analogy between interrogative clauses involving interrogative pronouns and relative clauses in Cheyenne comes from the fact that both constructions, besides being introduced by the prefix *tsé-*, show identical verbal morphology, requiring the embedded verb to be inflected as a Conjunct participle.³³ Likewise, in both constructions *tsé-* appears to play the same role as the English relative complementizer 'that'. Regarding the relative-like clause introduced by *tsé-*, it seems clear that it is not an independent noun phrase - as it occurs in equative clauses - , since this relative-like clause shows a full verbal structure

including tense marking and special third-person suffixal agreement that differs considerably from that found in the nominal domain (i.e. *-se*, standing for a third person plural participant in the Conjunct order vs. *-óo*, standing for a third person plural participant in nouns). Finally, as discussed above, given the capacity this type of ‘wh’-question has to add a deictic element or demonstrative functioning as an overt antecedent, as evidenced in (57 and (66), it seems plausible to suggest a cleft-like construction³⁴ (e.g. ‘Who is it / the one that ... ?’) for ‘wh’-questions including a interrogative pronoun in Cheyenne.

7. Additional evidence

Finally, although they may not be absolutely reliable tests, the existence of multiple ‘wh’- questions and the presence of crossover effects can also be seen to provide consistent evidence to prove whether a language requires ‘wh’-clefting or a garden-variety ‘wh’-movement.

7.1. Absence of multiple ‘wh’-questions

Although it is true that the existence of multiple ‘wh’-questions does not always allow a distinction between moved ‘wh’- or in-situ words, their absence leads to a better understanding of the type of ‘wh’- movement involved in the formation of content questions since they appear to be far more common in ‘wh’-movement languages than in ‘wh’-clefting languages (Calabrese 1984, 1987; Blain 1997: 88).³⁵

Multiple interrogations are apparently disallowed in Cheyenne or, at least, according to my consultants, they are relatively unusual.

Example (72) shows a possible way of expressing a multiple question in this language:

- (72) Névááso tsé-maa-vóom-ose?
 who PART-UNSPECIFIED.AGENT-see.VTA-3:4
 ‘Who saw whom?’

In this sentence there is only one content ‘wh’-word, *névááso*, which represents the argument functioning as object, since the interrogative pronoun referring to the agent is only represented by the pronominal affix and by a preverbal particle *-maa-*, whose presence serves to make the agent indefinite.

Consequently, this language appears to lack multiple ‘wh’-questions analogous to the English ‘Who bought what?’ where the two ‘wh’-words, *névááso* ‘who’ and *hénová’etotse* ‘what’, would occupy the same position as their corresponding non-‘wh’-arguments of the predicate with the syntactic functions of subject and object respectively.

7.2. Presence of island constraints and subjacency effects

Further evidence for the assumption that content questions involving interrogative pronouns in Cheyenne involve movement comes from the presence of island constraints and subjacency effects (Ross 1967; Chomsky 1973).³⁶

Unlike the extraction of an argument out of a complement clause, evidenced by example (56), the extraction from an adjunct clause to form a content question is

normally disallowed cross-linguistically. This also seems to be the case in Cheyenne, as illustrated by this example containing an adverbial subordinate clause:

- (73a) Né-h-vóom- Kim tsé-'-ěšě-noo'ehe-se
 o-he
 (2)-PAST- Kim IND-RR-already-leave.VTI-3:I
 see.VTA-2:3-
 INT
 he-maa'kaatáme?
 her-money
 'Did you see Kim after she left her money?'
 (73b) * Hénová'e tsé-h-vóom-òtse Kim tsé-'-ěšě-noo'ehe-se?
 what CONJ-PAST- Kim IND-RR-already-leave.VTI-3:
 see.VTA-2:3 I
 * 'What_i did you see Kim after she left t_i?'

Furthermore, bearing in mind that Cheyenne has externally-headed relative clauses and that relative clauses function as the peripheral modifiers of the head of a complex NP, similar constraints are expected to appear in this type of construction:

- (74a) Né-héne'enov-o-he hetane tsé-hohtóva-stse háne motšěške?
 (2)-know.VTA-2:3-INT man PART-buy.VTI-3:I DEIC knife
 'Do you know the man that bought this knife?'
 (74b) * Hénová'e tsé-héne'enov-òtse hetane tsé-hohtóva-stse?
 what PART-know.VTA-2:3 man PART-buy.VTI-3:I
 * 'What_i do you know the man that bought t_i.'

These examples would therefore provide evidence for violations of subadjacency and consequently for the presence of subadjacency effects in Cheyenne.

7.3. *Absence of crossover effects*

'Wh'-movement is considered to be subject to crossover effects. This term 'crossover effects' (Postal 1971) is commonly used to refer to restrictions on possible coreference found between certain phrases and pronouns. Crossover effects are divided into weak and strong crossover effects (Wasow 1979). Strong crossover effects occur when a 'wh'-word crosses over a coreferential pronoun, which is in an argument position, in its movement from its argument position to its displaced position clause-initially:

- (75) * Who_i does he_i love t_i ?

The coreferential reading indicated by the subscripts is robustly unavailable as the trace crosses over a pronoun, namely 'he', which is an argument of the predicate 'love'. This sentence would however be grammatical if the intentional coreferential reading were avoided.

Weak crossover effects occur when a 'wh'-word crosses over a coreferential pronoun, which is contained inside an NP argument:

(76) * Who_i do his_i parents love t_i ?

Unlike strong crossover, in instances of weak crossover the coreferential reading is possible, but quite unlikely.

It is well known that the presence of WCO can be a diagnostic for movement but its absence does not necessarily entail the absence of movement (Lasnik & Stowell 1991; Postal 1993). According to Blain (1997), however, the fact that a language originally lacked crossover configurations may also be an indication that the formation of content questions entails clefting. In this case, the interrogative pronoun could be considered to be base generated in a clefted nominal clause structure and undergo a vacuous movement within this clause, so that, ultimately, there may be no weak crossover configuration.

Although the correlation between the absence of crossover effects and ‘wh’-clefting may not be totally consistent – in some languages clefted questions do not involve movement -, it may be useful to give an account of the possible existence of restrictions on binding found between ‘wh’-words and pronominal arguments in Cheyenne.

Until relatively very recently, the obviation system has always provided Cheyenne with a fairly accurate and effective means of distinguishing two or more third person participants in terms of their reference.³⁷ Whenever two third person participants were present in the same construction, one of them obligatorily received proximate status and the other was marked as obviative:

- | | | |
|-------|-------------------------------------------------------------------------------------------|--------------------------------------|
| (77a) | Névááhe
who
‘Who _i does she _{*i/j} love t _i ?’ | tsé-méhot-aese?
PART-love.VTA-4:3 |
| (77b) | Néváesóho
who.OBV
‘Who _i does she _{*i/j} love t _i ?’ | tsé-méhot-ose?
PART-love.VTA-3:4 |

These two constructions are semantically equivalent, but they can be used in different contexts depending on the pragmatic status of each participant, namely whether the participant in question is relevant enough for the addressee, whether it is the first time it is mentioned in a given discourse context or not, etc.

Regardless of whether the construction is direct or inverse, disjoint reference between proximate and obviative participants in Cheyenne is obligatory, meaning that it is not possible for a sentence like ‘Who does she love?’ to have a coreferential reading between the ‘wh’-phrase and the pronoun, so there is no strong crossover configuration,³⁸ unlike in English, where the ‘wh’- operator cannot be interpreted to be coreferential with the pronominal subject.³⁹

Coreference between proximate participants and, at least until very recently, between obviative participants was also obligatory. Accordingly, it was not possible to observe weak crossover effects in constructions involving the use of a possessive contained inside a noun phrase:

- | | | | |
|-------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------|
| (78a) | Névááhe
who
‘Who _i does his _i mother _j like t _i ?’ | tsé-péhév-átám-aese
PART-good.I-consider.FTA-4:3 | he-ške?
his-mother.OBV |
| (78b) | Néváesóho
who.OBV
‘Who _i does his _i mother _j like t _i ?’ | tsé-péhév-átám-aetsese
PART-good.I-consider.FTA-5:4 | he-ške?
his-mother.OBV |

The obligatory coreference between proximate participants and between obviative participants is evidenced from these two examples where a possessor of a possessed NP takes its reference from the preceding antecedent. Thus, the possessive pronoun is obligatorily coreferential with the question word, which stands for the patient argument of the predicate and is marked as proximate in (78a) (*névááhe* ‘who’) and obviative in (78b) (*néváesóho* ‘who’). This obligatory coreference between equal participants therefore makes the sentence grammatically correct and precludes the possibility of cross-over effects. It is particularly striking that in (78b) both the question word *néváesóho* ‘who’ and the agent participant *he-ške* are treated as obviative, though of a different kind, namely proper obviative and further obviative.⁴⁰ In order to distinguish these two types of obviative argument, it is necessary to resort to the information provided by verbal morphology, as the pronominal suffix in the verb, *-aetsese*, shows that a further obviative participant, namely *he-ške* ‘his mother’, acting on a (proper) obviative participant *néváesóho* ‘who’.⁴¹

A non-coreferential reading of this question would involve the following construction:

- (78c) *Névááhe* *tsé-péhév-átám-áesese* *he-ške?*
 who PART-good.I-consider.FTA-5:3 his-mother.OBV
 ‘Who_i does his_j mother_k like t_i?’

This example shows a further obviative participant acting on a proximate participant and implies that the possessor of the possessed NP must refer to another participant (a proper obviative argument) which may not be present in the discourse span but whose reference can easily be retrieved from the context.

The fact that constructions like those above are grammatical does not preclude the possibility that their coreferential interpretation could be largely avoided in everyday conversation and this is exactly what occurs nowadays since the intentional coreference is commonly unavailable and, consequently, a more common option is to interpret the question word and the possessor of the possessed NP as non-coreferential, thereby showing weak crossover effects. This is also possible due to the gradual impoverishment of obviation morphology, which has consequently relaxed the once obligatory coreferentiality among obviative arguments within the same discourse span. Thus, nowadays, it is possible to observe weak crossover effects in Cheyenne also, as can be illustrated in the formulation of a question like ‘Who_i does his_j mother_k like t_i?’ Cheyenne speakers tend to vary with respect to the grammatical construction they use to interpret this question: while older speakers tend to favor the construction evidenced from (78c), younger speakers seem to opt for a different construction,⁴² namely the one illustrated by the example (78b), repeated below as (79), but with a different interpretation:

- (79) *Néváesóho* *tsé-péhév-átám-aetsese* *he-ške?*
 who.OBV PART-good.I-consider.FTA-5:4 his-mother.OBV
 ‘Who_i does his_j mother_k like t_i?’

This construction now shows a non-coreferential reading between two (proper) obviative participants, namely *néváesóho* ‘who’ and the possessor ‘his’, which appears to be linked to the morphological degradation lately undergone by the obviative marking, which leads us to understand the coreferentiality between obviative arguments is not so strictly observed nowadays.

Regarding the existence of restrictions on the binding between phrases and pronouns in complex sentences, it is possible to find examples of weak crossover effects in some other Algonquian languages. For instance, Blain (1997: 219) provides an example of a complex construction in Plains Cree:

- (80) Awînihi nâpêw kâ-sâkih-â-t kâ-ocêm-â-t?
 who.OBV man CONJ-love.VTA-DIR-3 CONJ-kiss.VTA-DIR-3
 ‘Who_i did the man who loves her_{*i} / j kiss?’

This example shows a disjoint reference between a question word and a pronominal affix standing for the patient argument of a predicate despite the fact that both participants are marked as obviative, which, assuming that they are the same kind of obviative (not a proper obviative and a further obviative), appears to suggest that weak crossover effects hold in this language.

The equivalent Cheyenne construction with a coreferential reading among obviative participants would be grammatical, although it is largely avoided due to its pragmatic oddity:

- (81) Névâesóho hetane tsé-méhot-ose tsé- másém-ose?
 who.OBV man PART-love.VTA-3:4 PART-kiss.VTA-3:4
 ‘Who_i did the man who loves her_i / *j kiss?’

Although my consultants acknowledge that it may also be possible nowadays to understand this construction in the non-coreferential reading, which reflects again a certain relaxation in the application of an obligatory coreference between obviative referents, namely *névâesóho* ‘who’ and the pronominal affix crossreferencing ‘her’, the example involving a non-coreferential reading would indeed be expressed in Cheyenne as follows:

- (82) Névâesóho hetane tsé-méhot-amose tsé- másém-ose?
 who.OBV man PART-love.VTA-3:5 PART-kiss.VTA-3:4
 ‘Who_i did the man who loves her_{*i} / j kiss?’

Instead of forcing a non-coreferential reading of two proper obviative participants, in this example we have two different obviative markings, that is the proper obviative for *névâesóho* ‘who’ and the further obviative for ‘her’.

Bruening (2001: 113) offers another instance of weak crossover effects in Passamaquoddy:

- (83) * Wen elitahasi-t wikuwoss-ol eli-kselom-ot?
 who IC-think.VAI-3⁴³ his.mother.OBV CONJ-love.VTA-2:3
 * ‘Who_i does his_i mother think you love t_i?’

The ungrammaticality of this construction may be due to the lack of coreferentiality between two proximate arguments, namely the question word and the possessor contained inside the agent NP, which implies the existence of weak crossover effects.

Although examples of long-distance ‘wh’-extraction are extremely rare in Cheyenne, the equivalent example to (83) in Cheyenne in the coreferential reading proves that, in this language at least, weak crossover effects do not seem to hold:

- (84) Névâáhe tsé-nê-hesétam-ataótsese he-vésenóho tsé-méhot-òse?
 who CONJ-ANAPH-think.VTA-4:2⁴⁴ his-friend.OBV CONJ-love.VTA-2:3
 ‘Who_i does his_i friend_k think that you love t_i?’

The matrix verb in this example, which exhibits the copying-to-object phenomenon, displays an inverse pattern in its morphology – the object (a second person singular participant) outranks the subject (a fourth person singular participant) in the person-animacy hierarchy. This construction illustrates the configuration that Bruening (2001) argued that it was that eluded WCO effects. Unlike the Passamaquoddy example, in Cheyenne the coreferential reading in (84) shows a coreference between proximate referents as one might expect – in this case *névááhe* ‘who’ and the possessor of the obviative form of the NP headed by the noun *vésené* ‘friend’, namely *vésenóho*.

The non-coreferential counterpart to (84) would be as follows:

- (85) *Névááhe* *tsé-nè-hesétam-ata’ótsese*⁴⁵ *he-vésenamóho* *tsé-méhot-öse?*
 who CONJ-ANAPH-think.VTA-5:2 his-friend.OBV CONJ-love.VTA-2:3
 ‘Who_i does his_j friend_k think that you love t_i?’

Interestingly, the non-coreferential interpretation in (85) includes a further obviative of the former noun, that is *he-vésenamóho* ‘his friend’, implying that the possessor of the possessed NP it heads bears the proper obviative marking and, consequently, is not coreferential with the question word, which is proximate.

In conclusion, I would like to put forward the hypothesis that crossover configurations have always been absent in Cheyenne thanks to the accuracy with which the obviation system has been able to distinguish third person participants but also that, nowadays, due to a gradual process of morphological erosion, it is possible to attest the presence of weak crossover effects. This morphological erosion, probably triggered by the fact that contexts including more than two – or even only two – third person participants are not common in Cheyenne, has had the effect of leveling the paradigms of obviation, especially in the case of nominal morphology, not so much in verbal morphology, resulting in a more relaxed application of the supposedly obligatory coreference between obviative participants.

Thus, unlike what occurs with proximate referents, which should always be understood as coreferential – obviously insofar as they occur within the same discourse segment —, the erosion undergone by the further obviative nominal marking, which would allow the differentiation between different types of obviative argument in the older stages of the language, means that nowadays two obviative referents may be understood either as coreferential or non-coreferential.⁴⁶ Finally, the last step of this gradual process of morphological erosion, which is especially noticeable in the language spoken by the younger generation, has been the appearance of crossover effects, especially with regard to direct morphology, since the coreference between proximate participants is apparently still strictly respected.

In conclusion, it seems that, in recent times, the application of the assumed coreference between obviative participants within the same discourse span is being affected by the gradual process of morphological impoverishment that the obviation system is suffering. This process causes the difference between the proper obviative and the further obviative(s) to be lost especially in the marking of nouns. This relaxation is therefore giving rise to the presence of weak crossover effects, but this could be considered an epiphenomenon of a gradual process of morphological erosion.

8. Conclusion

A long-running issue concerning Algonquian content questions has been surveyed in this paper. The general question of whether these constructions can be analysed as having a uni-clausal or a bi-clausal structure has been discussed with respect to a number of Algonquian languages with different results: some linguists conclude that ‘wh’-elements in Algonquian are within a regular Complementizer Phrase (CP) projection (Brittain 2001 for Western Naskapi; Bruening 2004 for Passamaquoddy; Lochbihler & Mathieu 2010 for Ojibwa), whereas other authors have put forward the idea that ‘wh’-questions are cleft-like constructions (Johns 1982 for Rainy River Ojibwe; Reinholtz & Russell 1995, Blain 1997 and Cook 2008 for Plains Cree; Oxford 2013 for Innu-Aimun; Bliss 2013 for Blackfoot).

This paper has provided evidence for the assumption that Cheyenne has two different types of ‘wh’-questions, namely a bi-clausal and a mono-clausal construction, which exhibit ‘wh’-clefting and more traditional ‘wh’-movement respectively, and whose major morpho-syntactic properties are schematized in Table 3:

The evidence supporting the conclusion that Cheyenne content questions involving interrogative pronouns are cleft-like constructions has been provided by the following facts: (1) the possible presence of a neutral pronoun functioning as the antecedent of the dependent clause, (2) the use of the same complementizer in this type of question and in related constructions such as relative clauses or specificational clauses and of the Participial mode of the Conjunct order, also exhibited by relative clauses, (3) the morphological structure of the ‘wh’-word in this language, which appears to imply the existence of a copula in ‘wh’-content words as in nominal predicates, (4) the absence of multiple ‘wh’-questions, and (5) the lack of a crossover configuration and, by extension, of crossover effects. It seems that, in recent times, the application of the assumed coreference between obviative participants within the same discourse span is being affected by the gradual process of morphological

Table 3. ‘wh’-questions in Cheyenne.

Type	Question Word	Verbal Order	Structure
Interrogative pronoun	<i>Névááhe</i> (sing) ‘who’ <i>Névááso</i> (sing) ‘who’ <i>Néváasóho</i> (OBV) ‘who’ <i>Néváaseo</i> ‘o (pl) ‘who’ <i>Hénáá’e</i> (sing) ‘what’ <i>Hénová’e</i> (sing) ‘what’ <i>Hénová’éto</i> (sing) ‘what’ <i>Hénová’etotse</i> (OBV) ‘what’ <i>Hénová’eo’otse</i> (pl) ‘what’ <i>Hénová’ehótse</i> (pl) ‘what’ <i>Táase</i> (INAN, sing) ‘which’ <i>Táasévoonestse</i> (INAN, pl) ‘which’ <i>Táasévoone</i> (ANIM, sing) ‘which’ <i>Táasévoone</i> (ANIM, pl) ‘which’ <i>Tónesto-</i> ‘how much/many’	<p>→</p> <p>Conjunct</p> <p>→</p>	<p>→</p> <p>Bi-clausal</p> <p>→</p>
Interrogative adverb	<i>Tósa’e</i> ‘where’ <i>Tónesh-tónet-</i> ‘how’ <i>Tónesh</i> ‘when’	<p>→</p> <p>Independent</p> <p>→</p>	<p>→</p> <p>Uni-clausal</p> <p>→</p>

impoverishment that the obviation system is suffering. This process causes the difference between the proper obviative and the further obviative(s) to be lost especially in the marking of nouns. This relaxation is therefore giving rise to the presence of weak crossover effects, but this could be considered an epiphenomenon of a gradual process of morphological erosion. Finally, content questions including interrogative adverbs are mono-clausal constructions and exhibit the traditional ‘wh’-movement to clause-initial position.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. The examples I use throughout this paper come from two different sources: from published studies, especially Leman et al. (2006), and native speaker elicitation via telephone and email correspondence from 2010 to 2016. Unless accompanied with citations, examples come from my own notes. Financial support for this research has been provided by the Spanish Ministry of Economy and Competitiveness (MINECO) through the projects FFI2014-53788-C3-1-P and EDU2014-54673-R. I would like to express my heart-felt gratitude to my late and dear friend Ralph Redfox for having kindly and patiently shared their beautiful language with me and ‘Richard Littlebear and Eugene Blackbear for his invaluable help. I would also like to thank Wayne Leman, Donald G. Frantz and Andrew Cowell for having helped me with my questions so kindly and patiently. Of course any errors are entirely my own responsibility.
2. For detailed information on Cheyenne word order, see Leman (1999).
3. More accurately, according to Leman (1999: 37), and just like other Algonquian languages (Tomlin & Rhodes 1994, for Ojibwa), Cheyenne appears to have a tendency to place the newsworthy information (any element expressing a contrast, introducing or changing a topic, or representing new information) preverbally and inferable or evoked information postverbally. Although the correlation between focus and newsworthy information is complete, it seems logical to think that ‘wh’-words, which are traditionally assumed to be inherently focal (see Erteschik-Shir (1986) for a discussion), must be placed at the front of a sentence preceding both the main verb and any other more topical participant.
4. Leman (1986: 14) considers the Conjunct prefix *tsé-*, which tends to occur in relative (Participial mode), complement (Indicative mode) and adverbial clauses (Indicative mode), a realis marker.
5. Abbreviations used in this paper: (1) – first person singular agreement, (2) – second person singular agreement, (3) – third person / proximate singular agreement, (4) – fourth person / proper obviative agreement, (5) fifth person / further obviative agreement, (11) – first person plural agreement, (22) – second person plural agreement, (33) – third person plural agreement, (I) – inanimate singular agreement, (II) – inanimate plural agreement; A – adjunct, AGR – agreement, AN – animate, ANAPH – anaphoric, CISL – cislocative - CONJ – conjunct marker, DEIC – deictic, DIS – distal, DITR – ditransitive, DUB – dubitative mode, ENDOPH – epenthetic sound – EPE, endophoric, EXOPH – exophoric, FAI – animate intransitive final stem, FII – inanimate intransitive final stem, FTA – animate transitive final, FUT – future, I – initial stem; IF – Illocutionary Force, IMP – imperative illocutionary force, INAN – inanimate, IND – indicative mode, INT – interrogative illocutionary force, LOC – locative, O – object, OBV – obviative, PART – participial mode, PAST – past, PL – plural, PROX – proximal, S – subject, SING – singular, REFL – reflexive, RR – relative root, TRANSL – translocative, V – verb, VAI – animate intransitive, VTA – transitive animate, VTI – transitive inanimate. Cheyenne verbal theme-sign suffixes (Bloomfield 1946) are glossed according to the person features of the arguments they correspond to as ‘more agent-like:more patient-like’. For example, ‘1:2’ would stand for a first person agent and a second person patient. In view

of the complex morphophonology of this language, I will treat the agreement suffixes as an unanalyzed whole to keep the glosses as uncluttered as possible.

6. The concept ‘obviative third person’ refers to a grammatical person marking that distinguishes a more salient third person referent (named proximate or third person) from a non-salient third person referent (normally referred to as obviative or fourth person) in a given discourse context. Although it is extremely rare, there could even be a fifth person or further obviative in a specific context. Finally, the term ‘inanimate’ refers to a third person argument referring to an inanimate participant.
7. Building upon the Person – Salience hierarchy, the direct / inverse marker serves to indicate the role that is assigned to every argument of a predicate in a transitive construction so that, while the direct construction is used when the subject or more agent-like participant of the transitive clause outranks the object or more patient-like participant in the hierarchy, the inverse is used when the object outranks the subject.
8. The difference between these two types of Imperative, that is to say, between ‘Immediate’ and ‘Delayed’ Imperatives, lies in the immediacy with which the command is expected to be carried out.
9. This restriction that no interrogative pronoun can occur in embedded questions also applies in Blackfoot (Frantz 1991) and Arapaho and Gros Ventre (Cowell, in personal communication).
10. This marker is used to express the dubitative or inferential mode of the verb in the Independent order.
11. See page 7.
12. This correlation between the choice of verbal order and the type of interrogative element is not observed in the same way in the other Plains Algonquian languages. Blackfoot appears to work similarly as Cheyenne with regard to the formation of content questions with an interrogative pronoun, since many of these questions involve clausal nominalization. Frantz (1991: 120) calls this construction a conjunct nominal because, although the verbal form in this construction carries suffixes similar – but not identical - to those of the conjunctive order, they function as a cleft clause:

E.g. a) Tsá anistápii-wa ann-(y)i-hka kit-s-í-íníi-hpi,hka?
 what be.vii.I DEIC-I-NONVIS 2-EPEN-PAST-see.VTI-3:I-NOM.NONVIS
 ‘What did you see?’ (Lit. ‘What is it that you saw?’)

However, some content questions with ‘who’ or ‘what’ require suffixes of the independent paradigm:

E.g.: b) Tsikáa á-íno-yíiwa?
 who.4 DUR-see.VTA-3:4
 ‘Who does he see?’ (Frantz 1991: 135)

As regards content questions containing an interrogative adverb, most of them require inflectional suffixes of the independent paradigm:

E.g.: c) Tsimá kit-s-ít-okooyi-hpa? -> independent
 where 2-EPEN-RR-dwell.VAI-NONAFFIRM
 ‘Where do you live?’ (Frantz 1991: 137)

However, it is also possible to build content questions with ‘where’ or ‘when’ through clausal nominalization:

E.g.: d) Tsimá otá(ó)pii-hpa? -> conjunct nominal
 where NOM.live.VAI-NOM
 ‘Where does he live?’ (Lit. ‘Where is it that he lives?’) (Frantz, p.c.)

This variety of constructions may be due to the fact that Blackfoot does not appear to mark the distinction between the Independent and Conjunct orders so clearly as Algonquian languages do (Cook 2014: 311).

Arapaho (Cowell & Moss 2008) behave slightly differently from Cheyenne in this respect. Thus, similarly as Cheyenne, Arapaho content questions including the interrogative adverbs ‘where’ and ‘when’ always require the use of the Independent order:

- E.g. e) Toot-heih-to’usin?
 where-2.PAST-fall.down.VAI
 ‘Where did you fall down?’ (Cowell, p.c.)
 f) Toot-heih-noohow-oo?
 where-2.PAST-see.VTA-3
 ‘Where did you see him?’ (Cowell, p.c.)

By contrast, unlike Cheyenne, content questions containing the interrogative pronoun ‘who’ and ‘what’ in Arapaho may take either Independent or Conjunct order inflections:

- | | |
|------------------------------------------------------------|---------------------------------------------|
| g) Henee’eehek
who
‘Who fell down?’ (Cowell, p.c.) | nih-to’usi-’?
PAST-fall.down.VAI-3 |
| h) Henee’eehek
who
‘Who did you see?’ (Cowell, p.c.) | heih-noohow-ooo?
2.PAST-see.VTA-2:3.PART |

Very interestingly, the use of Independent or Conjunct order in Arapaho appears to be associated to transitivity so that an intransitive construction requires Independent order inflection and a transitive construction entails Conjunct order inflection. As regards the syntactic structure of the questions involving Conjunct order, Cowell and Moss (2008: 246) argues that the Conjunct order is used to form relative clauses, which require Conjunct order dependent participle inflection, and, consequently, the interrogative pronouns would function like the heads of a relative clause, hence these constructions could be considered basically clefted questions.

Finally, Cowell (p.c.) states that Gros Ventre works analogously as Arapaho.

13. Although I have not been able to find out why, some of my consultants also used the interrogative pronouns *táase* ‘which’ (INAN.SING) / *táasévoóe* (AN.SING) or *taasévoone* ‘which’ (AN.PL) / *táasévoonèstse* (INAN.PL) or *tónèsto-* ‘how much / many’ with the Independent order.
14. Although this structure appears to represent an example of a scope marking construction, it should not be considered so, since the scope marker cannot be iterated at the left edge of any of the clauses embedded within the scopal position in examples of long-distance dependency and the variable, represented by the preverbal particle *-hése-*, can also be found in non-interrogative environments.
15. I gloss the prefixes *né(he)-* and *hén(e)-* in (42a) and (42b) as deictic, rather than ‘who’ or ‘what’ respectively because they are very commonly used in elements such demonstratives to distinguish between animate and inanimate referents.
16. If the assumption that this morpheme functions as a copula, then we should argue that some interrogative pronouns, such as *hénáa’e* ‘what’ or *táase* ‘which’, a d-linked interrogative pronoun used to ask about inanimate singular participants, show a covertly-expressed copula.
17. This pronominal affix could be used to refer to an abstract referent in an intransitive construction involving a state, perhaps including the interrogative IF particle *-he*, which would imply that the interrogative word is in situ within the copular sentence – after it has been extracted from the original main clause to form the cleft construction – so the interrogative

particle is necessary to distinguish the declarative and the interrogative interpretation of the sentence.

18. Cook (2008: 283) makes the same claim for Plains Cree.
19. Wolfart (1973: 34) also states that in Plains Cree the 'wh'-word *awina* 'who': (i) may stand alone as a complete utterance; (ii) may occur in an equational sentence; or (iii) may function predicatively 'with a conjunct clause depending on it', i.e. a verbal clause with an *e-* or *ka-* complementizer or conjunct marker.
20. These Conjunct Participial order clauses would function as relative clauses complementing an overt- or covertly expressed antecedent and would, therefore, behave as dependent, rather than as main, clauses. In fact, they can only stand on their own when they are interpreted as headless relative clauses (e.g. *Tsé-a'xaemèstse* = 'The one who is crying ...').
21. A and U stand for 'Actor' and 'Patient' respectively.
22. The possibility to place a constituent before the 'wh'-word will be addressed below.
23. According to Cheng (1991), wh-in situ languages have the following properties: (1) the wh-word is in A-position (at S-structure), (2) questions are associated with a question particle, and (3) 'wh'-words are polarity items, i.e. they are ambiguous between an interrogative and an indefinite interpretation.

Examining to what extent these four properties are present in Cheyenne:

(1) The fact that 'wh'-words strictly occur in sentence-initial position does not necessarily indicate they are not occupying an A-position.

(2) Cheyenne only has an interrogative particle in polar questions. According to Cheng (1991), if there is a Q-particle for yes/no questions, then there must also be a 'wh'-question particle, so Cheyenne seems to counter-exemplify this claim. However, Cheng allows for the possibility that the 'wh'-Q particle may be overt or covert.

(4) Cheyenne presents some forms for indefinite pronouns (e.g. *neva'esestse*, *hénáá'énese*, *hénová'énese*) that resemble considerably interrogative pronouns but they do not appear to function as interrogative pronouns. With the exception of these forms, interrogative and indefinite pronouns are clearly distinct forms. In addition, the 'wh'-environment is distinguished by obligatory initial position and the use of the conjunct verb form. By contrast, indefinites behave like ordinary NPs since they can occur either before or after the verbal complex and free occur with the independent form of the verb.

In sum, Cheyenne does not satisfy all of the 'wh'-in situ diagnostics listed above and consequently it is not a 'wh'-in situ language.

24. Although clefted questions tend to involve 'wh'-fronting, they can also display in-situ 'wh'-words, as the following example in Japanese shows:

E.g.	John-ga	katta-no wa	nani?
	John-NOM	bought-NO TOP	what
	'What is it that John bought?' (Otsuka 2015: 175)		

25. Although all my consultants concur on the order VA (46B and 47B) as the unmarked pattern for these two answers, they also agree that the order AV (46B' and 47B') is grammatical in this context, thereby highlighting the flexibility of Cheyenne regarding the positioning of words in a sentence.
26. The same could be said to occur in some examples including a deictic element preceding a 'wh'-word such as:

Tá'tó=névááso?

E.g.:

DEIC=who

'Who is that?' (Leman et al. 2006: 191).

E.g. ¿Eso qué es?
 DEIC what be.PRES.3SG
 ‘What’s that?’

- E.g.: Névááso tsé-mòsém-ose tsé'tó=ka'èškóne-ho / John-evaho?
 who CONJ-kiss.VTA-3:4 DEIC=boy.OBV /John.OBV
 'Who kissed this boy / John?'/* 'Who did this boy / John kiss?'

- E.g.: Tsé-s-tšěhe'kéahé-to ná-'òhkè-het-òhomó'he-ohe
 CONJ-PAST-be.young.VAI-1(1)-PAST-usually-RR-dance-go.VAI.1
 'When I was little, I used to dance like that.' (Leman 1987: 177)

- | | | | | | |
|------|----------|-------------------|---------------|----------------------------|----------------|
| E.g. | Tsé'tóhe | ka'ěškónê-heso-no | naa | tsé'tóhe | kāse'éehe-ho |
| | DEIC | child-DIM-PL | and | DEIC | young.woman-PL |
| | Naa | kāsováahe-ho | nea'háanevóho | tsé-nôhtóv-oéstone-tano-se | |
| | and | young.man-PL | DEIC.AN.PL | PART-know.how.I-read.VAI- | want.FAI-33 |

33. It is also of note that participle agreement (Bruening 2004: 259) occurs successive-cyclically on every verb along the path of extraction, that is, it marks every clause a 'wh'-element has moved through, even in a clause including a predicate of which such a 'wh'-element is not a semantic argument, as can be clearly seen in long-distance questions such as the following:

E.g.	Hénová'étotse	amo'a'ováhtsestótse	tsé-nê-het-at-ose
	which	bike	PART-ANAPH-tell.VTA-3:4
	na-mešéme	tsé-to'se-hohtova-tsese?	
	my-grandfather	PART-going.to-buy.VTA-4:I	
	'Which bike did my grandfather tell him to buy?'		

It is very interesting to notice the use of participle agreement in the first verbal form, namely *tsénêhetatose* '(my grandfather) told him', which is not the relative clause modifying the 'wh'-element.

34. See page 8.
35. The ban on multiple 'wh'-questions in cleft constructions can be apparently explained by arguing that the 'wh'-word is the predicate, rather than an argument, of the nominal clause and there can only be one predicate per predication (Calabrese 1984, 1987). Furthermore, according to Blain (1997: 88), the clearest evidence of the absence of overt wh-movement involves the prohibition of multiple 'wh'-questions, so she proposes that Plains Cree wh-phrases, like focused NPs, are clefted.
36. This correlation between 'wh'-clefting and the presence of island effects depends on the condition that the 'wh'-phrases display movement. In fact, a common analysis of clefts (Chomsky 1977) is that clefts involve base generation of the wh-word which binds a silent operator that undergoes A'-movement. For example, Chang (2000) claims that Tsou questions are indeed cleft constructions but its 'wh'-words remain in-situ, hence they do not exhibit island effects.
37. Besides, Cheyenne has a rich verbal morphology including a theme morpheme indicating whether the action is direct or inverse and a number of pronominal affixes offering grammatical information (e.g. person, number, animacy, obviation, syntactic relation, etc.) about the obligatory arguments of the predicate.
38. The only possibility for coreference with respect to two participants, for instance between a 'wh'-operator and a pronominal affix standing for the subject, would be in a reflexive construction such as:

E.g.:	a. Névááhe	tsé-méhot-ahtsè-stse?
	who	PART-love.VTA-REFL-3:3
	'Who _i does she _i / * _j love t _i ?'	
	b. Néváesóho	tsé-méhot-áhtsé-tsese?
	who.OBV	PART-love.VTA-REFL-4:4
	'Who _i does she _i / * _j love t _i ?'	

39. Because two co-arguments being co-valued must be marked as reflexive, we should use a bi-clausal sentence such as '*Who_i does he_i think that Mary likes t_i?' to illustrate strong crossover.
40. I venture the hypothesis that in the past there could have been a distinct marking for further obviative in nouns: in this case it could be something like *he-škemo*.
41. One of the consultants, however, notes that the example (78b) could also be interpreted as 'Who_i t_i likes his mother?', understanding the interrogative pronoun as the further obviative (5), the possessor of the NP as the proximate (3) and the possessed NP as the normal or proper obviative (4). This is due to the lack of distinctive nominal marking between the proper obviative and the further obviative, which does not allow us to establish an unambiguous correspondence between participants and semantic roles.
42. One of my consultants acknowledges that nowadays a less complex option would definitely involve using the same construction as that in (56) but with a non-coreferential reading:

E.g.:	Névááhe	tsé-péhév-átám-aese	he-ške?
	who	PART-good.I-consider.FTA-4:3	his-mother.OBV
	'Who _i does his _j mother _k like t _i ?'		

This fact is very significant because it would mean that the obligatory coreference between proximate participants also seems to be relaxing.

43. Taking into account that the possessed NPs of a third person possessor must always be obviative, not proximate (Rhodes 1992; Dryer 1998: 37; among others), in my humble opinion there could be a mistake regarding the marking of the agent of the matrix verb, which should bear obviative marking.
44. This is an instance of long-distance agreement or copying-to-object.
45. I assume that there might formerly have been a different form used to express a further obviative agent acting on a second person patient but that nowadays, owing the rare occurrence of this situation, the form crossreferencing a proper obviative agent is used instead.
46. The difference might lie in the length of the discourse span, which might range from a single clause to a whole text.

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