EXPLAINING OPTIONALITY WH-MOVEMENT IN BABINE-WITSUWIT'EN

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In this paper, I illustrate that Babine-Witsuwit'en, an endangered Athabaskan language of Northern British Columbia, exhibits optional wh-movement and I propose how to account for this optionality. In the first section, I show that many languages which appear to have optional wh-movement do not. Instead, the fronting in these language is motivated for other reasons such as focus, topicalization, or wh-clefting. In the second section, I argue that Babine-Witsuwit'en is truly optional. I show that the wh-fronting is the result of neither topicalization, clefting, nor focus movement, and that non-wh- phrases do not have the same freedom of position. Also, the fronting exhibits island violations characteristic of moved constituents. The fronted and in-situ versions mean the same thing and are not used in different pragmatic contexts. In the third section, I account for the optionality through optional selection of C from the lexicon and I examine the consequences of this proposal.

1 Apparent Optional Wh-Movement

In this section, I investigate numerous languages which at first glance may appear to have optional wh-movement. I show that the fronting in these languages is not optional, but is motivated for other reasons. The languages I discuss are from quite diverse language families: several languages of the Niger-Congo family (Kiswahili, Gikuyu, Igbo and Akan), Egyptian Arabic, and French.

None of the analyses in this section constitute complete analyses of wh-movement or question formation in each language. I do not investigate all question types or restrictions on all possible positions of wh-phrases. Instead, I aim to look at the relevant data in an effort to suggest a possible analysis. In the languages to be discussed below, I argue that the fronting in the languages discussed here is either a result of focus, topicalization, or wh-clefting. The features motivating the movement are not wh-features in Spec of CP, but focus or topicalization features. In the Minimalist Program, all movement is motivated by feature-checking, so, for example, when a particular word is topicalized in an English sentence, this occurs because that word raises to check off a Topic (TOP) feature. Focused elements behave similarly in some languages, raising to check off a FOC feature in a Focus Phrase (English uses...

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stress, not fronting, to focus words and phrases.) Wh-clefts also serve to focus a particular constituent. Clefting is a common method of focusing a constituent across languages. Some focus feature must be present in sentences that contain a focused word or phrase. So, I assume that in sentences with clefted elements, the fronting is a result of movement which is motivated by the need to check off a strong focus feature.

Also, in sentences involving topicalization or focus, the fronted version has a different meaning from the in-situ version. This is important because a crucial aspect of Minimalist syntax is that all syntactic operations must be minimal in derivational cost. Thus, the shortest and least complex derivations will be the only ones to succeed and yield a grammatical derivation. Under a Minimalist approach it is problematic if data exist in which two non-identical sentences have identical interpretations because it seems to suggest that optionality can exist in the computational system. In the languages discussed in this section each pair of related sentences does differ in meaning. Thus, the derivations being compared are not identical. One contains a focus or topicalization feature, the other does not.

I would like to suggest that this is the case in languages that involve “scrambling” as well. For example, objects in German can be scrambled to a position to the right of the subject. Langer (1995) argues that sentences with scrambled objects in German have different meanings from sentences with the canonical word order. He proposes that the relevant feature forcing movement in these cases is a focus feature. Thus, the derivations being compared are not identical—one contains a focus feature that must be checked off. The feature of the functional projection is checked off, but the focus feature of the lexical item remains and is interpreted at LF.

Akan, a member of the Kwa family, which is in turn a member of the Niger-Congo family, exhibits two strategies of question formation wh-words in situ or at the beginning of a clause, as shown below, in examples from Saah (1988).

(1) a Kofi koe he
Kofi go-PST where
‘Where did Kofi go?’

b she na Kofi koe
where FOC Kofi go-PST
‘Where did Kofi go?’

Saah says that because the wh-phrase appears in object position in (1a), it appears in the objective case without the prefix e. In (1b), the wh-phrase takes the nominative case because it occurs in sentence-initial position. Saah notes that there is a slight semantic difference between the two versions. The sentences with clause-initial wh-phrases are more emphatic than those in which the wh-phrase is in situ. The focus particle na is also an additional clue that what we have here is
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focus movement, not wh-movement. Saah gives examples where either the fronted version or the in situ version is less acceptable because a focus or non-focus reading is inappropriate. For example, the sentence in (2a) below is a fixed expression used as a greeting. Fronting of den ‘what/how’ is less preferred.

(2) a Wo ho te den?
you Poss self be-PRES what/how
‘How are you?’

b *Den na wo ho te
what/how FOC you Poss self be-PRES

Saah claims that because (2a) is a fixed expression, it cannot change its point of emphasis, so a clause-initial wh-phrase is therefore unacceptable. Likewise, there are some questions in which the fronted wh-phrase is preferred.

(3) a Aden ntu na wobaa ha?
reason why FOC you-come-PST here
‘Why did you come here?’

b *Wobaa ha aden ntu?
you-come-PST here reason why

Saah says that when a particular reason is being asked for, the wh-phrase is preferred in sentence-initial position.

Also, the focus particle na is the same particle used to focus any constituent regardless of whether it is a wh-phrase. Boadi (1974) shows that all major categories in Akan can be moved to sentence-initial position and focused by attaching na. Compare the focused (a) and non-focused (b) sentences below from Saah (1981) and Boadi (1974).

(4) a Mebaa ha nnera
I-come-PST here yesterday
‘I came here yesterday’

b Me na mebaa ha nnera
I FOC I-come-PST here yesterday
I was the one who came here yesterday

(5) a Kofi boɔ Ama
Kofi hit-PST Ama
Kofi hit Ama
Saah also shows that *eye* 'it is' may optionally occur in focused questions, further emphasizing that it is a focus and not a *wh*-movement construction.

It seems clear that the operation which fronts a *wh*-phrase in Akan is focus, not *wh*-movement.

1.2 Giküyü

Bergvall (1983) discusses *wh*-movement in the Bantu language Giküyü. She shows that *wh*-phrases are possible either in situ or at the beginning of the clause as shown below.

Note that when the *wh*-phrase is fronted, a focus particle *ne* (+ *o*, 'who', resulting in *nool*) must be present.

In complex questions, the *wh*-phrase may appear either in situ or fronted as well, as in Bergvall's example, and again the focus particle must be present.
The same focus particle is employed in non-wh-constructions

(9) Ni-maheere Kamau king’ang’i
FP-they-gave Kamau crab
‘They gave Kamau a crab’

A better translation of this sentence is something like “It is the case that they gave Kamau a crab” (John Mugane, personal communication) The fronting in Gikuyu wh-questions appears to be a straightforward example of a focus construction. There is no reason to believe that Gikuyu exhibits optional wh-movement. The fronting is simply a result of focus, used both in sentences with wh-phrases and without. In both sentence types, a phrase raises to check off a strong focus feature in a Focus Phrase.

13 Kiswahili

According to Hauman (1985) wh-words in Kiswahili may also appear either in situ or in sentence-initial position. The following examples are from Perrott (1957). (10) shows an in-situ wh-word and (11) shows a fronted wh-phrase.

(10) A-li-fika luna?
3sg-past-arrive when
‘When did s/he arrive?’

(11) Kwa nun chakula ki-me-chelewa?
why food 3sg-perf-late
‘Why is the food late?’

Welmers (1973) also says that wh-words may optionally occur in sentence-initial position. However, he argues for Swahili and numerous other Bantu languages that when a wh-phrase is fronted, it is topicalized. This is correct according to the native speaker I consulted. The in-situ versions are most common and most natural and the fronted versions may only be used in special circumstances, such as when telling a story (the fronted word must already exist in the discourse). The following (b) examples are unacceptable without some prior context.

(12) a Unatoka wapi?
you-go where

b *Wapi unatoka?
where you-go

‘Where are you going?’

(13) a Unasoma nini?
you-read what
'*Nim unasoma?
what you-read

'What are you reading?'

Bokamba (1976) calls the questions with fronted wh-words "focused" wh-questions. The focus is reflected in Bokamba's translations. Consider his examples below.

(14) a Beya pesaka mokunda mazono na nani?
Beya gave letter yesterday to whom
'To whom did Beya give a letter yesterday?'

b Na nani Beya pesaka mokunda mazono?
'To whom, specifically, did Beya give the letter yesterday?'

(15) a Beya pesaka Nzuzi mazono inki?
Beya gave Nzuzi yesterday what
'What did Beya give Nzuzi yesterday?'

b Inki Beya pesaka Nzuzi mazono
'What, specifically, did Beya give Nzuzi yesterday?'

Seyed Maulana (personal communication) reports however, that *in ni when' and *in na nni why are somewhat better than other wh-words in sentence-initial position.

(16) a Alifika lamu?
s/he-arrived when

b Lamu alifika?
'When did s/he arrive?'

(17) a Chakula kimechelewa kwa nni?
food it is late why

b Kwa nni chakula kimechelewa?
Why is the food late?

Maulana says that the fronted versions of these two wh-expressions have become more common in the last couple of decades. He suggests that it is because of the influence of English.
What seems clear is that optional wh-movement (movement of a wh-phrase to Spec of CP) is not at work in Swahili wh-questions, though topicalization features or focus features in TopP or FocP respectively may result in preposed wh-phrases.

1.4 Igbo

Goldsmith (1981) shows that wh-phrases in Igbo may occur in situ or fronted to the beginning of the clause.

(18) a lulu gmu

you ate what

“What did you eat?”

b Gmu ka lulu

what that you ate

“What did you eat?”

Goldsmith glosses the morpheme ka as ‘that’, but Welmers (1973) calls it a marker of topicalization. Welmers also notes that both orders in (18) are possible, but says the “topicalized” order in (18b) is preferred. The facts here seem very much like those in Akan. I think the fronting in Igbo is more akin to focus than topicalization. And as in Akan, obu it is may optionally precede the fronted question word, forming a cleft.

(19) O bu gmu ka lulu

it is what that you ate

“What is it that you ate?”

Thus, it appears that wh-phrases in Igbo are fronted as a result of focus features in a FocP—the wh-phrase fronts in order to check off this focus feature.

1.5 Egyptian Arabic

Wh-words in Egyptian Arabic, though not in Standard Arabic, may either occur in situ or fronted. Examples below are from Kenstowicz and Wahba (1983).

(20) a Famd istara ?eeh?

Famd buy what

1 There is another method of question formation in Igbo discussed in Goldsmith (1981) and Welmers (1973). This method takes the form of a relative clause and uses a generic word/complementizer keklu preceding the noun phrase. See Goldsmith (1981) for further discussion.
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b ?eek i i Farud i?ara?ah?
what that Farud buy-it
‘What did Farud buy?’

(21) a Farud i?ara ?ayv _kitaab?
Farud buy which book

b ?ayv _kitaab Farud i?araah?
which book Farud buy-it
‘Which book did Farud buy?’

(22) a Farud raah ?eek?
Farud where went

b ?eek Farud iaah?
‘Where did Farud go?’

Kensowicz and Wahba state that when an object \( wh \)-phrase appears in fronted position, it is associated with a resumptive pronoun when the \( wh \)-phrase is an NP, while no resumptive pronouns appear with adverbial \( wh \)-phrases. The resumptive pronoun appears as an enclitic to verbs, nouns, prepositions, and the complementizer \( mn \) ‘that’ There is no overt resumptive pronoun with subject \( wh \)-phrases. Also, the complementizer \( ill \) must occur after the argument \( wh \)-phrases \( mn \) ‘who’ and \( ?eek \) ‘what’ as in (20) but does not occur after \( ?eek \) ‘which’ nor any of the adjunct \( wh \)-words

Cheng (1991) points out the similarities that relative clauses and cleft sentences share with the \( wh \)-fronting constructions in Egyptian Arabic. Her examples comparing the constructions are below

relative clause
(23) Il-raagii illi Mona shaafit-uh
the-man that Mona saw-him
‘the man that Mona saw’

cleft
(24) (Dah) Muhamad illi gh
this Mohammed that came
‘It is Mohammed who came’
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**wh-question**

(25) a. Mun ill Mona darabit-uh
   who that Mona hit-hum
   'Who did Mona hit?'

   b. Eeh illi Mona ?ant-uh
   what that Mona read-it
   'What did Mona read?'

*Illi*, which Wahba (1984) treats as a complementizer, occurs in all of the above constructions. It is, however, distinct from the complementizer *inn* used in embedded clauses, as Cheng points out.

(26) Mona sftakart *inn* Farid saaflir
    Mona thought that Farid left
    'Mona thought that Farid left'

Cheng shows that the lack of island violations in *wh*-fronting sentences shows that *wh*-fronting questions and relatives clauses/clefts are the same process and do not involve movement of a relativized NP or *wh*-word.

Cheng argues instead that *wh*-fronting is the result of *wh*-clefiting. It is not a full cleft but a reduced cleft in the sense of McCloskey (1979). Cheng's reduced cleft structure (based on McCloskey's) is given below.

(27) [IP [OP mun] [CP OP, illi [IP Mona shaafit-uh]]
    who that Mona saw-hum
    'Who did Mona see?'

This differs from a full cleft like the English *It is a bagel that Hugh wants to eat* in that it has no copula and it has an NP subject. However, Cheng argues, in (27) there is still a subject-predicate relationship since the *wh*-word *mun* who is the subject of the predicate *illi Mona shaafit-uh* 'that Mona saw him' Given such a *wh*-clefiting analysis Cheng claims that the use of *illi* in *wh*-fronting constructions as well as relative clauses and clefiting follows *illi* is used in clauses in which a predicate sentence is created.

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2 However, *illi* is not required when the *wh*-phrase contains *any* which. Perhaps this has to do with its inherent presuppositionality. Thus *which* does not clef, but is instead part of a focus structure. Clefiting would be redundant with a *wh*-phrase that is inherently focused. This of course raises the question of why other languages allow clefiting with *which* Cheng does not deal with this issue and I leave it for future research. This is reminiscent of the dati in Akan discussed above—when a particular reason or thing is being asked for, the *wh*-phrase is preferred sentence-initially in a focused position.
The fronting of \textit{wh}-adjuncts in Egyptian Arabic appears to be a different process from that involving \textit{wh}-arguments. Cheng argues that it is not \textit{wh}-clefing, but topicalization.\textsuperscript{3} She compares the two constructions below:

\textbf{\textit{wh}-adjunct fronting}

(28a) Ma'a mun Mona raahit il-Qaharah

\textit{with whom} Mona went to Cairo

"With whom did Mona go to Cairo?"

\textbf{non-\textit{wh} topicalization}

b Fi-l-shar' dah Mona kaanit bitdawwar 'ala sha??ah

on-the-street DEM Mona was looking for apartment

"On that street, Mona was looking for an apartment."

\textit{ili} may not occur in adjunct \textit{wh}-fronting. Cheng argues that if we assume a \textit{wh}-movement analysis of this \textit{wh}-fronting, as in Wahba (1984), then we cannot explain why \textit{ili} is prohibited when \textit{wh}-adjuncts are fronted. Cheng speculates about why adjuncts are not allowed in the clefing construction, but leaves this as an open question. Cheng points out that resumptive pronouns are not allowed in non-island configurations with \textit{wh}-adjuncts.

(29a) Fi-l-shar' dah Mona kaanit bitdawwar 'ala sha??ah

on-the-street DEM Mona was looking for apartment

b *Fi-l-shar' dah Mona kaanit bitdawwar ala sha??ah hinaak

on-the-street DEM Mona was looking for apartment there

while they are required in island configurations.

(30a) Fi-l-hayy dah Ali kaan ye'raf naas kiti kaanu 'ayshun hinaak

in-the-suburb DEM Ali used to-know people many were living there

b *Fi-l-hayy dah Ali kaan ye'raf naas kiti kaanu 'ayshun

in-the-suburb DEM Ali used to-know people many were living

She notes that this is quite different from the behavior of resumptive pronouns in \textit{wh}-argument questions in which \textit{wh}-words may freely front in island constructions and resumptive pronouns are always present. This distinction provides additional evidence that argument and adjunct \textit{wh}-phrases behave differently in Egyptian Arabic.

\textsuperscript{3} Cheng notes that some speakers prefer \textit{wh}-adjuncts to always remain in situ
So Cheng argues that wh-fronting in Egyptian Arabic is the result of either wh-clewing (for argument wh-phrases) or topicalization (for adjunct wh-phrases).

16 French

There is apparent optional wh-movement in spoken French. Wh-phrases may occur either in situ or fronted in simple questions. When the wh-phrase occurs sentence-initially, est-ce que is required.

(31) a Qu’est-ce que tu fais?
   what is it that you do
   ‘What are you doing?’

   b Tu fais quoi?
   you do what
   ‘What are you doing?’

The fronted version in (31a) is clearly not the result of simply optionally moving the wh-word in (31b). The literal translations are different and different forms of the wh-phrases are required in each. Note that the wh-word (as opposed to the wh-est-ce-que-phrase) is required in the in-situ position while the longer wh-phrase is required in the fronted position.

(32) a Qu’est-ce que tu fais?
   what is it that you do
   ‘What is it that you are doing?’

   b *Tu fais qu’est-ce que?

(33) a Tu fais quoi?
   you do what
   ‘What are you doing?’

   b *Quoi tu fais?

This appears to be a straightforward instance of wh-clewing versus in-situ wh-question formation. Langacker (1965, 1972) suggests that the questions with qui est-ce que, qu’est-ce que, etc. are the interrogative counterparts of cleft sentences. Non-wh cleft sentences have the same construction. Some non-wh- and wh-cleft pairs from Langacker are below.

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1 I do not include here a discussion of subject inversion in which the main verb and subject invert (Que fais-tu ‘What do you do?’) This strategy of question formation is no longer very common in spoken French.
(34) a C'est un loup qui court la-bas
   it is a wolf that run over-there
   'It's a wolf that's running over there'

   b Qu'est-ce qui court la-bas?
   what is it that run over-there
   'What is it that's running over there?'

(35) a C'est Pierre qu'elle voit
   it is Peter that she sees
   'It's Peter that she sees'

   b Qui est-ce qu'elle voit?
   who is it that she sees
   'Who is it that she sees?'

Let's assume, then that French does not require *wh*-movement, but often employs *wh*-clef ting
There is, however, still fronting within the *wh*-clef, as illustrated in the movement transformation below

(36) C'est qui qui court la-bas \rightarrow C'est qui qui court la-bas = Qu'est-ce qui court la-bas?

The *wh*-word fronts in (36) and inversion takes place. *Wh*-questions may be clefted in the same way in English. For example, the following derivation mirrors the French one in (36)

(37) It's who that's running over there \rightarrow It's who that's running over there

= Who is it that's running over there?

Presumably, this fronting takes place to satisfy a strong focus feature. This is reflected in the focused interpretations in these clefted *wh*-sentences in both languages.

Fronting is required in embedded questions, though only *ce que* may be used, not *quoi*.

(The *quoi* form is only allowed in situ.) Also, inversion is prohibited in embedded clauses

(38) a Jean a demande [ce que Marie a fait]
   John had asked what Mary had done
   'John asked what Mary did'

   b *Jean a demande [quoi Marie a fait]

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\(^5\) Langacker (1972) notes that *quoi* cannot begin an embedded question. Instead, *ce* plus a relative clause must be used. Why this should be the case is not clear.
(39) a  Un homme [que je connais] m’a téléphoné
   a man who I know me had called
   ‘The man who I know called me’

b  *Un homme [je connais que] m’a téléphoné

Let’s look at how the selectional properties of verbs affect the restrictions on movement
Fronting is required with verbs that take interrogatives, such as demander ‘ask’, as shown above
in (38) However, a matrix verb which cannot take an interrogative exhibits a very different
pattern  The wh-word typically remains in situ

(40) Jean pense [que Pierre aime qui]?  
John thinks that Peter likes who

It may not front to the beginning of the embedded clause

(41) *Jean pense que ce que ce qui Pierre aime?

Thus, only verbs that take interrogatives allow wh-words to front in the embedded clause  This
occurs so that the wh-feature may be checked off  Wh-phrases may front to matrix sentence-
initial position with verbs that take [-wh] complements but in such cases the full est-ce-que-
phrase is required

(42) a  *Qui est-ce que Jean pense que Pierre aime?

b  *Qui Jean pense que Pierre aime?

This again is an instance of wh-clefting

So the generalization seems to be that a wh-phrase may always stay in situ unless the verb
takes an interrogative  In this case, the wh-phrase fronts in order to check off a strong wh-feature
in C  This same pattern exists in American Sign Language  (See Denham (forthcoming) for
discussion of this aspect of French and ASL)  French, therefore, does not have overt wh-
movement like English except when the properties of the verb require it  Also, a wh-phrase may
appear in initial position in a cleft construction

17 Summary  Focus  Tonicalization and Clefting

I have argued above that the languages that appear to exhibit optional wh-movement are
instead fronting wh-words in order to focus these elements either through wh-clefting or some
other focus mechanism, or to topicalize them. The basic position of wh-elements in the above languages seems to be in situ, and fronting occurs in order to check off features in the functional projections FocP or TopP.

2 True Optional Wh-Movement

In this section, I show that Babine-Witsuwit'en has optional wh-movement, unlike the languages examined in the previous section. I show that the wh-fronting is the result of neither topicalization, clefting, or focus movement. Also, the fronting exhibits island violations characteristic of moved constituents.

2.1 Background Information on Babine-Witsuwit'en

The basic word order in Babine-Witsuwit'en is SOV. This is illustrated in the following examples:

(43) Mary dilhtsun yik entry
Mary 3srefl brother 3s loves 3s
'Mary loves her own brother

(44) Lillian tлиц 'tyilekh
Lillian dress 3s makes 3s
'Lillian is making a dress'

(45) Silhtsen Mabel yunt'iy
1s brother Mabel 3s likes 3s
'My brother likes Mary'

(46) Lillian bitse' hafaide' Mabel yin'e'en
Lillian 3s daughter yesterday Mabel 3s saw 3s
'Lillian's daughter saw Mabel yesterday'

2.2 Optional Movement in Simple Questions

In questions, object question words may occur in sentence-initial position, as in (47a), though they may also remain in situ, as in (47b). The meaning in the (a) and (b) versions is the same.

(47)a Ndu Lillian yunket?
what Lillian 3s bought 3s

b Lillian ndu yunket?
"What did Lillian buy?"

Non-wh NPs do not have this freedom of movement in Babine-Witsuwin. A sentence corresponding to (48) with no wh-word allows only SOV order.

(48a) Lillian dus yunket
      Lillian cat 3s bought 3s'

b. *Dus Lillian yunket
   'Lillian bought a cat'

(48b) can only have the unlikely meaning that a cat bought Lillian. Along the same lines, a sentence like the following, where both subject and object are capable of being the agent fronting the object simply results in that NP becoming the agentive subject.

(49) Lillian George yunt'iy'
     Lillian George 3s likes 3s
     Lillian likes George'

(50) George Lillian yunt'iy'
     'George likes Lillian'

The object can precede the subject, but when it does, it is interpreted as focused and a focus marker 'en' (for human singular), 'em' (for human plural), and 'e' (for nonhumans) must follow it.

(51) George 'en Lillian yunt'iy'
     George FOC Lillian 3s likes
     'It's George that Lillian likes '

(52) Dus 'e George yunket
     cat FOC George 3s bought 3s
     'It's a cat that George bought' (not a dog)

Also, a fronted wh-phrase and a focused NP can both appear sentence-initially

(53) Hoo' lhes 'e nnts e Lillian yunket
      No bread FOC where Lillian 3s bought 3s
      No, where did Lillian buy the bread?’ (not the fish)

while two non-wh-elements may not be focused.
(54) a *Lhes 'e Friday 'e Lillian yunket
   bread FOC Friday FOC Lillian 3s bought 3s

   b *Friday 'e Lhes 'e Lillian yunket
   'Lillian bought the bread Friday '

This suggests that wh-fronting and NP focusing are distinct operations.

Adjunct wh-phrases may also occur either in situ or fronted, as shown in (55) and (57), but the non-wh counterparts do not generally occur in the fronted position, as shown in (56) and (58).6

(55) a Sharon book nts'ena yik'iyetalh'dic?
   Sharon book how 3s will read 3s

   b Nts'ena Sharon book yik'iyetalh'dic?
   ‘How will Sharon read the book?’

(56) a Sharon book 'agh yik'iyetalh'dic
   Sharon book quickly 3s will read 3s

   b *'Agh Sharon book yik'iyetalh'dic
   Sharon will read the book quickly ‘

(57) a Sharon stseghe' nts'ena yilht'l'ol?
   Sharon ha11 how 3s braided 3s

   b Nts'ena Sharon stseghe' yilht'l'ol?
   ‘How did Sharon braid my hair?’

(58) a Sharon stseghe' dzikh yilht'l'ol
   Sharon hair crooked 3s braided 3s

   b *Dzikh Sharon stseghe' yilht'l'ol

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6 There is some variability with adjuncts. Sentential adverbials have more freedom of position as in many languages.

(1) a Lillian bveez lhan iwhanetadell
   Lillian her daughter tomonow will return

   b Lhan Lillian bveez iwhanetadell
   Lillian’s daughter will return tomonow
‘Sharon braided my hair crooked’

2.3 Optional Movement in Complex Questions

The optional fronting of both argument and adjunct wh- phrases also occurs in complex questions. Example (59) shows the three possible positions for an argument wh-phrase.

(59) a George [Lillian nditm book'ah yik'iyelhc] yilih? George Lillian which book 3s read 3s tell ‘Which book did George tell Lillian to read?’

b George [nditm book’ah Lillian yik’iyelhc] yilih?

c Nditm’ book’ah George [Lillian yik’iyelhc] yilih?

These orders, however, are not allowed in non-wh-sentences

(60) a George [Lillian gg1 book yik iyelhc] yilih? George Lillian that book 3s read 3s tell ‘George told Lillian to read that book’

b *George [gg1 book Lillian yik iyelhc] yilih?

c *Gg1 book George [Lillian yik’iyelhc] yilih?

The same is true with adjuncts. The wh-phrases may occur fronted, while the non-wh-adjuncts may not.

(61) a George [Lillian bicay nts’e noolyekh] wika’nimzin? George Lillian her grandson where 3s play 3s wants

b Nts’e George [Lillian bicay noolyekh] wika’nimzin?

‘Where does George want Lillian’s grandson to play?’

(62) a George [Lillian bicay ‘ats noolyekh] wika nimzin George Lillian her grandson outside 3s play 3s wants

b ‘Ats George [Lillian bicay noolyekh] wika nimzin outside George Lillian her grandson 3s play 3s wants
The fact that wh-phrases may occur either in-situ, fronted in the embedded clause (in complex questions), or fronted in the matrix clause, while non-wh-phrases must stay in their canonical positions provides evidence that the operation at work in the wh-constructions is neither scrambling nor topicalization since either of those operations should apply to non-wh-phrases as well.

2.4 Clefting

Additional evidence that wh-movement is the operation at work here comes from the fact that the clefting operation is also distinct. The verb 'it' 'be' is required in clefting constructions, as is the emphatic particle hun.

(63)a Ggun duni budiclye
   that man I know
   'I know that man'

b Ggun duni budiclye hun 'it' 'be'
   that man I know EMPH be
   It is that man that I know

But with a wh-word in fronted position, no form of 'be' is necessary, nor is the emphatic hun. And again, in (64b), for example, the fronted wh-word is not emphatic. The meaning is the same as in (64a).

(64)a Ggun duni mbi udiclye?
   that man who 3's know
   'Who does that man know?'

b Mbi ggun duni udiclye?
   Who does that man know?

2.5 Extraction from Islands

Non-finite verbs do not exist in Babune-Witsuwit'en so it is unlike Iraqi Arabic (Walba 1991) in which wh-phrases can occur in situ in matrix questions and non-finite embedded clauses but not in embedded tensed clauses.
In order to show that wh-movement (which I am assuming is movement to Spec of CP) occurs in the clauses above with fronted wh-phrases, we need to show that the relevant structures exhibit a sensitivity to syntactic principles typical of movement operations. Wh-islands are of no use in Babine-Witsuwt’en since there is a restriction on having more than one wh-phrase per sentence.

Extraction out of sentential subjects is bad, as expected

(65) a George mb1 yudihye Lillian yilhgg?  
   George who 3s know Lillian 3s surprised
   'That George knows who surprised Lillian?'

b *Mb1 George t, yudihye Lillian yilhgg?
   'Who that George knows surprised Lillian?'

Extraction from coordinate structures are also unacceptable

(66) a George tl'ah mb1 hibin e'n?  
   George and who you saw
   'You saw George and who?'

b *Mb1 George tl'ah hibin'e'n?
   'Who did you see George and?'

We have evidence, then, that the fronted wh-phrases are moved to the fronted position rather than base-generated there since they obey typical island constraints seen in many languages.

2.6 Summary

We have seen in this section that optional wh-movement exists. I have shown that wh-phrases are allowed to front to clause-initial position in Babine-Witsuwt’en. Non-wh-phrases are not allowed this freedom of position. I have also shown that this fronting does not appear to be the result of any other kind of fronting operation such as topicalization, focus, or clefting. In addition, Babine-Witsuwt’en exhibits island violations characteristic of movement, suggesting the wh-elements are not base-generated in the fronted positions. I conclude the wh-movement exists in the language, but is optional.
Explaining Optional Wh-Movement

I have given evidence in the previous section that Babine-Witsuwit'en exhibits optional wh-movement. The movement is not motivated by focus or topicalization features. The wh-phrase may appear in situ or fronted with no apparent differences in meaning and no differences in pragmatic context, and extraction of the wh-words exhibits island constraints typical of movement. In this section, I account for this optional wh-movement through optional selection of C.

3.1 No LF Wh-Movement

Following Aoun & Li (1993b), I assume that there is no LF movement of wh-elements, as first proposed by Huang (1982). They assume instead that the wh--phrases are coindexed with a higher operator. A question operator has been proposed by Katz & Postal (1964), Baker (1970), van der Waerden & Williams (1981), Pesetsky (1987), and Benmamoun (1991a, b). Assuming no LF movement of wh-elements is much more in line with Minimalist assumptions. All movement must be motivated, but if we assume LF movement of in-situ wh-phrases in questions with multiple wh-words in English, what could motivate the movement? The first wh-word has already raised to check the feature off, so no feature remains, and there is therefore no motivation for a second wh-element to raise. Chomsky (1995) also assumes that wh-in-situ elements make use of "something like unselective binding" in determining their interpretations, as suggested here. So, I assume that there is no LF-raising of wh-elements, but that they either raise overtly to check off a wh-feature in C (which is always strong, that is, if it is present at all, it has a [−wh] feature), or they remain in situ and are coindexed with an operator in a higher position.

3.2 The Proposal

3.2.1 Optional Selection of C

I propose that the optionality in wh-questions arises at the point of selection from the lexicon, rather than assuming the unsatisfying solution that the same wh-feature can either be strong or weak within any given language. Chomsky (1993) states that the strength of features is what varies across languages, so having such variation within a language loses any explanatory value. Also, I attempt to eliminate feature strength completely in wh-features, as does Chomsky in recent lectures. Thus, if an interrogative C is present at all, a wh-feature will be present which must be checked off.

Optional selection of lexical items falls out naturally in the Minimalist Program. Chomsky (1995) states that "it is at least reasonably clear that [the lexicon] contains some functional categories complementizer (C), for example" (240). Thus, it is in the lexicon, I believe (or more precisely, in the array selected from the lexicon, the 'numeration') where we are most likely to find optionality. Any item may be selected or not. Chomsky says that there is no
meaningful question as to why one numeration is formed rather than another—or rather than none, so that we have silence” (227) He likens this to asking the question of why some integers are added together rather than others when doing addition. Or proposing that a theory of vision explain why someone chooses to look at a sunset. The problem of choice of action is real, he says, but largely mysterious. It is not our task here to investigate lexical choice. So let's assume that an interrogative C can either be selected or not for any particular derivation. If C appears in the numeration, then it will have a wh-feature, prompting wh-movement. If C does not appear in the numeration, then no wh-movement takes place.

This proposal accords well with Minimalist assumptions. In section two I showed that two nonidentical sentences may have identical interpretations in Babme-Witsuwit'en. However, this situation should not arise under Minimalism because only the most economical derivation of an array of items succeeds. It may be explained, however, because of the fact that the arrays for the two sentences in an optional wh-movement language such as Babme-Witsuwit'en are not identical. One contains C, the other does not. The derivations being compared are therefore, nonidentical and each succeeds because it is the most economical derivation for that particular array.

Let's examine how optional selection of C can explain the facts in Babme-Witsuwit'en. As shown in section two, the wh-phrase in the following examples can occur in any of the three positions shown.

(67) a George [Lillian nditm book bikt iyelhidic] yilhm?  
   George Lillian which book 3s read 3s 3s told 3s

b George [nditm book Lillian bikt iyelhidic] yilhm?

c Nditm book George [Lillian bikt iyelhidic] yilhm

'Which book did George tell Lillian to read?' 9 10

---

9 We must, of course, make a distinction here between two kinds of C: an interrogative C and a declarative C. With Chomsky (1995) I assume that declarative C is listed in the lexicon and can be phonologically realized as that. I also assume that interrogative C is a distinct lexical entry. In English, it can appear as the overt lexical items whether and if, or simply as the feature [wh]. In what follows when I refer to C being selected from the lexicon, I am referring to an interrogative C.

10 There are no intransitives in Babme-Witsuwer' en. Perhaps a better translation of yilhm is 'say' rather than 'tell.' The verb in the embedded clause is fully inflected and 'Lillian' is the subject of the embedded clause. Thus, the structure of the sentence is quite different from that of the English translation.

11 Any of the sentences in (71) can also be yes/no-questions, though the yes/no-question marker lec (or tak for some speakers) is required sentence-finally. The preferred method of yes/no-question formation is a two-sentence structure like the one below.

(i) George nyushlakit lec? Sharon nts wh whastalk?
If no C is selected, (67a) is the result, as the tree below illustrates

(68)

If a C is selected, either (67b) or (67c) results. In both cases, the wh-phrase raises to check off the strong wh-feature in C. The trees corresponding to these two sentences are given below.

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11 Only the relevant movement is shown. Case-checking of the subject and object is overt in Babine-Wetunak in with the DPs raising to AgrSP and AgrOP respectively. The verb also raises through AgrO T and AgrS checking off features as assumed in Chomsky (1993).
(69) AgrSP
    George TP
    VP
    t_i V'
    CP V
    nditni book_k C'
    C[w] AgrSP
    Lillian TP
    AgrOP
    t_k VP
    t_j V'
    t_k bik iyelhdsc
So via Merge C ends up in either the embedded clause or the matrix clause.

The initial proposal seems straightforward enough. In the following sections we examine some of the details.

3.2.2 Shortest Move

In Chomsky's recent work, Shortest Move takes over much of the work that has been done by Subjacency, the Head Movement Constraint, and Relativized Minimality in earlier versions of Principles and Parameters theory. Shortest Move assumes that a constituent must move into the first position of the right kind up from its original position. In (70) above, the wh-phrase may move in one fell swoop to the matrix Spec of CP because this is the shortest move available. There is no other intervening A' Specifier position. So, the movement is the shortest possible move for the wh-phrase and therefore results in a convergent derivation.
3.2.3 The Role of C and a Question Projection

In this section I examine the role of C in Babine-Witsuwit'en and propose a projection distinct from CP where features relevant for clausal typing and scope appear.

As we saw in section two, the overt position of the wh-phrase does not appear to determine scope in Babine-Witsuwit'en. Since the meaning is the same regardless of the position of the wh-phrase in complex questions, the surface position of the wh-phrase cannot be the determiner of scope, nor can the presence of C, since C is not present when the wh-phrase is in situ under my proposal.

These facts fall out if we assume a scope marker/question projection, distinct from C, which is always present in a question. As I argued above, following Aoun & Li (1993b), the wh-elements are copied and interpreted with respect to a question operator in a higher position. They receive a bound variable reading by virtue of the fact that they are bound by this operator in an A'-position. Proposals by Katz & Postal (1964), Baker (1970), and Pesetsky (1987) also suggest a question operator located in CP (or the equivalent S/S'). As is well known, many languages have overt wh-question morphemes. The following examples from Aoun & Li show a question morpheme in Chinese (71) and Japanese (72).

(71) Dare-ga ki-masu ka?
    who-NOM come-POLITE Q
    'Who will come?'

(72) Sher lai ne?
    who come Q
    'Who is coming?'

Presumably all languages have similar question licensors, though they may not be overt. Aoun & Li argue that these question markers occur in a question projection, Qup. They assume in their analysis of Chinese questions that this question projection occurs within the clause whose Spec position is filled by a question operator and whose head is filled by a question licenser (such as the overt marker ka in Japanese, ne in Chinese, or the abstract marker Qu in a language like English), resulting in a structure like the following:

\[ \text{XP projection is located in this position comes from island effects in Chinese. Kim (1989) and Benmamoun (1991a,b) have similar proposals. Kim suggests that Korean question morphemes originate within IP. The position of the XP likely varies across languages.} \]
Katz & Postal (1964) were the first to propose an element that serves to type a sentence. They proposed that there is a Q morpheme, which types the sentence as a question, and a wh-morpheme, which “specifies the element or elements of the sentence that are 'questioned'”.

Aoun & Li adopt this general idea and suggest that their QuP is instead an XP that generates other types of sentences including indicatives, suggestions, etc., as well as questions. So, the head of XP can have any of the four combinations of the features [±Q], [±wh]. If the features are [+Q, +wh], a wh-question will be generated and a question operator will occur in the Spec position of this projection. Aoun & Li propose that the operator then moves to the Spec of Comp inside or outside the clause. [+Q, -wh] will result in yes/no-questions, [-Q, -wh] will result in statements, and [-Q, +wh] will result in exclamatory statements (such as *How nice it is today!*)

I think the essence of these proposals is basically correct. There is some evidence which suggests the presence of a projection distinct from CP which marks scope and houses question morphemes. Features that type the sentence are also present here. We now need to investigate whether there is additional evidence for the separation of CP and QuP.

3.2.4 Separating Wh-Movement and Scope

We have established that there is no LF wh-movement. Instead, a question operator is linked to a wh-phrase. I have also suggested that this scope operator is in its own projection, distinct from CP, following Aoun & Li (1993b). However, what evidence is there for a projection distinct from CP which deals with scope and which is the position for features relevant to question interpretations? There are two kinds of evidence. First, in languages which generally exhibit wh-movement, the position of the topmost wh-element is not always in the scope-taking position. If wh-elements move to Spec of CP and this is the scope-taking position, how can such data be explained? For example, McDaniel (1989) shows that in languages with overt wh-movement (German and Romani) the wh-phrase can sometimes appear in a position lower than the position from which it takes scope, and there is a “scope-marker” (was in German, vo in Romani) in the scope-taking position. Data from McDaniel (1989) is shown below in (74) and (75) first from German and then from Romani.
(74) Was, glaubt [IP Hans [CP [mit wem], [IP Jakob jetzt t spricht]]]?
"What does Hans believe with whom Jacob is now talking?"

(75) So, [[IP o Demuri muslnol [CP [kas], [IP Arifa dikhla t]]]?
"What does Demuri think whom Arifa saw?"

She concludes, then, that scope assignment and *wh*-movement are independent even in these languages which generally exhibit overt *wh*-movement.

Also, Reis & Rosengren (1992) argue that there is *wh*-movement in non-interrogative imperative sentences in German. Consider their example below:

(76) Wen sag mir doch mal gleich daß Peter gestern besucht hat
whom tell me modal modal right away that Peter yesterday visited has
"Tell me right away who Peter visited yesterday."

The *wh*-word *wen* 'whom' does not take scope. They conclude from examples like this one that scope assignment should be dissociated from *wh*-movement.

The second kind of evidence that there is a projection distinct from C which is where scope is marked follows from the previous discussion. That is, *wh*-elements in in-situ languages are obviously not in scope-taking positions overtly. And we saw in Babme-Witsuwit'en, and will see again in the next section, that *wh*-phrases in the intermediate position in complex questions take matrix scope. However, I have argued that the presence of C is optional. If a language has no C, then there must be another projection in which the operator is located.

Based on such evidence, it seems clear that scope assignment and *wh*-movement are distinct operations and we should not presume that the position of the topmost *wh*-phrase is the scope-marking position, even in *wh*-movement languages. It also seems clear that the scope operator is in a distinct projection. I would like to suggest that every sentence in most languages contains a QuP, which contains elements which mark scope and sentence type. The variation across languages with respect to the position of *wh*-phrases is then a result of the presence or absence of interrogative C, which is distinct from the QuP found in many languages.

3.2.5 The Nature of QuP/TyP

As suggested above, every sentence must be typed as either a declarative, a *wh*-question, a *yes/no*-question, or an exclamatory statement. (And perhaps other types exist in some languages.) This can be done by features in the head of QuP, which I now rename TyP for Typing Phrase. As mentioned above, Aoun & Li (1993b) suggest that there are binary Q- and *wh*-features which make up the four sentence types. Chomsky and Lasnik (1977) also suggest that each clause must be identified as ±WH marking it as a declarative or relative clause (±*wh*) or

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1 For a discussion of parametric variation with respect to QuP see Denham (forthcoming)
The purpose of the features in TyP is to type a clause, while the purpose of the operator in Spec is to mark scope. Some languages, such as German and Roman, have overt scope markers in the head position of TyP. Let's consider here some of the possibilities in Babine-Witsuwit'en.

As I have mentioned above, binary features seem unnecessary. If a wh-feature is present at all, it motivates the raising of a wh-feature (and its accompanying wh-phrase) to check off the feature in C. If no C is present, no wh-feature is present.

<table>
<thead>
<tr>
<th>sentence type</th>
<th>typing features</th>
</tr>
</thead>
<tbody>
<tr>
<td>wh-question</td>
<td>Q, wh</td>
</tr>
<tr>
<td>yes/no-question</td>
<td>Q</td>
</tr>
<tr>
<td>declarative</td>
<td>no features</td>
</tr>
</tbody>
</table>

Q-features remain at LF and allow the sentence to be interpreted as a question. The wh-features in the head position in C project an operator through Spec-head agreement. The operator then links to the wh-phrase(s) and marks scope.

Let's consider some derivations. If the wh-phrase stays in situ, the derivation is just as in Chinese, for example. There is no CP present, but there is a typing phrase which houses the operator (in questions) and the typing features in the head. Consider the derivation for the sentence in (78a) below.

(78a) a George [Lillian ndu yunket] udhilhe?
      George Lillian what 3s bought 3s 3s know

b George [ndu Lillian yunket] udhilhe?

c Ndu George [Lillian yunket] udhilhe?

---

14 I do not know the structure of exclamations in Babine-Witsuwit'en, so I do not include them here. Perhaps they contain a wh-feature, but no Q feature, as is the case in English.

15 Aoun & Li (1993b) suggest that overt Qu-markers, such as those in Japanese and Chinese, are generated by Spec-head agreement. The presence of the operator in Spec, they suggest, triggers the occurrence of an agreement marker in Comp. I believe the opposite is true. The head of TyP is selected from the lexicon, carrying either an overt marker, or the feature bundle indicating the type of question. If wh-question features are present ([Q wh]) then a Spec position is projected and an operator appears there.

16 As with all of the tree structures given here, the situation is idealized. Under derivationalist assumptions overt movement is interwoven with structure-building. Thus no such structure exists at any point in the derivation. Some of the necessary movements are not indicated here.
"What does George know (that) Lillian bought?"

(79) TyP
  ↑                  ↓
Opk         TyP'         
  ↑            ↓
Ty[=kΩ] AgrSP
  ↑
George, TP
  ↓
VP
  ↓

"uddhye

Features in the head Ty type each clause 17 These features are +Interpretable features. Chomsky (1995) claims that 'certain features' enter into interpretation at LF while others are uninterpretable and must be eliminated for convergence. 'We, therefore, have a crucial distinction between ±interpretable' (277) This distinction is exactly the one we find between TyPs and CPs A TyP like the one in the higher clause in (79) contains +interpretable features that need not be checked and may then survive to LF where they are interpreted. The wh-feature in a C, however, is a ±interpretable feature that must be checked before LF in order to insure convergence. The wh-feature in the higher Ty above projects an operator into the Spec TyP position. This operator then links to the wh-word ndu 'what', which has a wh-feature, in the insitu position. This marks the scope of ndu

I have suggested that every clause has a Typing Phrase. 'Lillian e know being a verb that takes a proposition/sentence (as well as an interrogative) may hook up to a clause headed by a declarative Ty head, that is one with no features ([Ω])

17
If a C is selected and ends up in an intermediate position via Merge in a sentence like (78b), then the wh-phrase with its inherent wh-feature moves to check off the -Interpretable wh-feature and the wh-phrase is linked to an operator in the upper TyP, as shown below.

(80)  
```
  TyP
 /\  
Opk  TyP'
 |  /\  
Ty[wh Q] AgrSP
 | /\  
George, TP
 | /\  
VP
 /\  
t_i  V'
 |  /\  
Ty'  V
 |  /\  
udihye
 |  /\  
Ty[en] CP
 |  /\  
nC
 |  /\  
C[wa] AgrSP
 |  /\  
Lillian, TP
 |  /\  
AgrOP
 |  /\  
t_k  VP
 |  /\  
t_j  V'
 |  /\  
t_k  yunket
```

As in all operator-variable relationships, the operator must link to a variable to avoid vacuous quantification. And if a C is selected and ends up in the higher clause of a biclausal structure, then the wh-phrase raises to check off this feature -Interpretable. A TyP is also present here. This structure is given below in (81).

144
As mentioned above, this long-distance movement does not result in a Subjacency violation. Subjacency has been eliminated in favor of Shortest Move. No other A'-position is available, so ndu ‘what’ makes the shortest possible moved to the higher Spec of CP.

There are clearly other cases of optional choice in the grammar, though these work a bit differently. For instance, section one introduced the optional features TOP and FOC which may be selected if an element in a sentence is topicalized or focused. What is different in these kinds of sentences, however, is that there is a difference in the meaning of the sentence with no fronted element and the sentence with the fronted element. This is because the sentence with the fronted element lets say it’s topicalized, contains a topicalization feature in a TopP which has been checked off by raising a word or phrase which carries a Top feature. The topicalization feature of the lexical item(s) survives to LF where it is interpreted, and the meanings of the two sentences are, therefore, very different—one is topicalized the other is not. However, in Babuni-Witsuwit en, the meaning of a sentence with an in-situ wh-phrase is identical to that with a
fronted \textit{wh}-phrase As I have said, and will demonstrate below, such optional \textit{wh}-movement is triggered by the presence of a C, which may be optionally selected from the numeration. When a C is selected, a \textit{wh}-phrase raises to check off its \textit{wh}-feature Contrary to sentence pairs containing optional topicalization or focus features, however, there is no meaning difference in these sentence pairs. This is because the features relevant to interpretation are in a separate phrase (\textit{TyP}).

In 3.1, we saw how optional selection of C can explain the varying positions of the \textit{wh}-words in Babine-Witsuwit'’en. The addition of the typing projection changes the general proposal very little, but it enables us to account for the scope facts as well as providing an account of the data from other languages.

3.3 Summary and Conclusions

In this section, I have proposed an analysis of optional \textit{wh}-movement. For languages like Babine-Witsuwit’’en, selection of C from the numeration is optional. I have also argued that \textit{wh}-elements in situ overtly remain in position and do not raise to Spec of CP at LF. Rather, they are linked/indexed with a \textit{wh}-operator. This operator is located in a typing projection, \textit{TyP}, in sentence-initial position.

The distinction between \textit{+Interpretable} and \textit{-Interpretable} features appears to be the relevant difference between features of \textit{Ty} and features of C and the possible combinations of these sets of features can account for the positions and interpretations of \textit{wh}-phrases in Babine-Witsuwit’’en.

4 Conclusions

In this paper, I have argued that Babine-Witsuwit’’en has optional \textit{wh}-movement. I have suggested that many other languages which appear to have optional \textit{wh}-movement do not. Instead, the movement in these languages is motivated by focus- and topicalization-features. The optional \textit{wh}-movement in Babine-Witsuwit’’en can be explained by optional selection of C from the lexicon. \textit{Wh}-elements are linked/indexed with a \textit{wh}-operator which is located in a typing projection, \textit{TyP}, in sentence-initial position.

In other work (Denham, forthcoming), I discuss how this proposal accords with the data in languages that have \textit{wh}-movement and those that do not, thus outlining a broad theory of \textit{wh}-movement within the Minimalist Program.
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