Q-particles and the nature of Covert movement: evidence from Bùlì[*]

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Abstract

In this paper, I introduce *wh*-questions from Bùlì in which the *wh*-phrase stays in-situ. I argue that phenomena we are used to seeing with overt movement including, islands, intervention effects, and the that-trace effect also show up with the in-situ phrase, ultimately calling for the unity of covert and overt movement cross-linguistically.

1 Introduction

Wh-in-situ was long observed in languages of the world. An example of *wh-in-situ* in English, Japanese and Chinese is given in (1).

(1)   a.   who bought what?

          b.   John-wa   nani-o   kaimasita ka?
               John-TOP what-ACC bought   Q
               'what did John buy'

          c.   Hufei mai-le   shenme
               Hufei buy-PERF what
               'What did Hufei buy?'

(2)   what did John buy?

The *wh*-phrases *what*, *nani-o*, and *shenme* in (1) stay in-situ in contrast with the moved phrase in (2). A well known contentious issue is the status of the in-situ *wh*-phrase in *wh*-questions in languages that have them. For instance, do in-situ phrases undergo covert *wh*-movement? If so, how is this movement different from overt *wh*-movement? While some have argued that the in-situ *wh*-phrase undergoes covert movement (Aoun, Hornstein, & Sportiche, 1993; Huang, 1982a, 1982b; Nishigauchi, 1990; Pesetsky, 2000; Richards, 1997; Nissenbaum, 2000; Cable, 2007, 2010; Kotek, 2014), others have argued against this view(Watanabe, 2001; Chomsky, 1995).

    In this paper, I examine *wh*-questions in Bùlì, a Mabia (Gur) language spoken in Ghana, in which the *wh*-phrase stay in-situ. In the example in (3), the *wh*-word, $b^w\bar{a}$ 'what' stays in-situ and is preceded by the particle *ká*. Following Cable's (2007) analysis of questions in Tlinglit, I treat the *ká*-particle as an instance of overt Q.

(3)   bí:ká   dìg   *(ká) b^{w}ā:
          child.DEF cook Q   what
          'What did the child cook?'

Apart from contributing the basic data to the general linguistic knowledge base, my aim is to argue for the unity of overt and covert movement with the data from Bùlì. The paper shows that phenomena we are used to seeing with overt movement including,

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islands, intervention effects, and the that-trace effects show up with covert movement perfectly once extraneous factors are taken into account. The key to this observation is the presence of an overt Q-particle in the language. Whenever the Q-particle is not present, the sign of movement disappear.

Related to overt movement, a novel analysis is offered for the subject/object asymmetry linked to the alternation between *ālì* and *ātì*, which I suggest can be extended to the que/qui alternation in French.

The paper is structured as follows: First, in section 2, I provide some background on the clause structure and *wh*-questions of Bùlì. In section 3, I provide a brief background to the approach to questions I adopt in this paper, and present the diagnostics that show that *ká* is Q in the language in the sense of Hagstrom (1998) and Cable (2007). In section 4, I advance the primary purpose of this paper, presenting diagnostics that show that the *ká*-phrase undergoes covert movement and exhibits the same properties as overt movement. I turn to the discussion of the alternation between *ālì* and *ātì* in section 5. I present a discussion on the interaction between covert movement and the complementizer trace effects in 6. Finally in section 7, I provide a short conclusion.

2 Background

Bùlì is a strict SVO language:

(4) a. bí꞉ká   dìg   lāmmú
         child.DEF cook.PST   meat.DEF
         'The child cooked the meat'

     b. *bí꞉ká   lāmmú   dìg
         child.DEF meat.DEF   cook.PST
         'The child cooked the meat'

c. *lāmmú   bíːká   dìg
   meat.DEF child.DEF cook.PST
   'The child cooked the meat'

The in-situ strategy for wh-questions is illustrated in (5). Notice three things in particular: first, the question words appear in their non-peripheral canonical positions. Second, there is final vowel lengthening to indicate the clause is a question. This final vowel lengthening is also present in yes/no questions in the language. Finally, the particle Ka obligatorily precedes the question word or question containing phrase. I gloss this particle as 'Q' for reasons discussed below.

(5)　　a.　bíːká　　　dìg　　　*(ká) bʷāː
　　　　　　child.DEF cook.PST Q　　what
　　　　　　'What did the child cook?'

　　　　b.　bíːká　　　tè　　　*(ká) wānā lāmmúː
　　　　　　child.DEF give.PST Q　　who　meat.DEF
　　　　　　'Who did the child give the meat?'

　　　　c.　bíːká　　　dìg　　　lāmmú　*(ká) bɛ̄ː
　　　　　　child.DEF cook.PST meat.DEF Q　　where
　　　　　　'Where did the child cook the meat?'

　　　　d.　bíːká　　　dìg　　　lāmmú　tē　*(ká) wānāː
　　　　　　child.DEF cook.PST meat.DEF give Q　　who
　　　　　　'Who did the child cook the meat for ?'

The fact that the wh-words remain in the same position as their counterparts in a declarative sentence places the language in the 'wh-in-situ' category of languages. Bùlì also permits constructions like (6) in which the *ká*-phrase, which I will analyze as optional overt wh-movement, is found in clause initial position. In clause initial position, *ká* is optional. In these constructions, however, local subject wh-phrases are obligatorily followed by the particle *ālì* (6a) and non subjects are obligatorily followed by *ātì*.

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(6) a. (ká) wānā *(ālì) dìg   lāmmúː
         Q   who ALI cook.PST meat.DEF
         'Who cooked the meat?'

     b. (ká) bʷā *(ātì) bíːká   dìgìː
         Q   what ATI   child.DEF cook.PST
         'What is it that the child cooked?'

The scope of an in-situ wh-phrase is not clause bound, as (7) shows.

(7) a. fì   wèːnì   āyīn bíːká   dìg   **(ká) bʷāː**
         2SG say.PST C   child.DEF cook.PST Q   what
         'What did you say the child cooked ?'

     b. fì   páː-chīm mì   dìg   (ká) bʷāː
         2SG think   1SG cook.PST Q   what
         'What do you think I cooked ?'

     c. fì   páː-chīm mì   tē   *(ká) wānā lāmmúː
         2SG think   1SG give.PST Q   who   meat.DEF
         'Who do you think I gave the meat?'

In embedded questions, a wh-phrase remains in-situ (8). The complementizer $\bar{as\bar{\imath}}$ is used in embedded questions. Note that this is different from the complemetizer used in declarative sentences as in (7) above.

(8) a. Mary bèg   āsī John dìg **(ká) bʷāː**
         Mary ask.PST C   John cook Q   what
         'Mary asked what John has cooked'

     b. Mary à-bā   āsī John dìg   **(ká) bʷāː**
         Mary IMPF-wonder C   John cook.PST Q   what
         'Mary wonders what John has cooked.'

In the following sections, I will examine these and related data in more detail and explore the implications they have for syntactic theory. To lay the foundation for the main point of the paper, I will argue, in the following sections that *ká* is the Bùlì counterpart of

the Q-morpheme identified in languages such as Sinhala and Japanese(Hagstrom, 1998, 2004; Kishimoto, 2005), and Tlingit (Cable, 2007, 2010) . I will show that the in-situ *wh*-phrase headed by *ká* undergoes covert movement which, I argue, is comparable in many ways to overt movement. The language has certain properties which allow us to demonstrate this point particularly clearly, thus arguing strongly for the unity of overt and covert movement.

3   Wh-in-situ in the Context of Q-Theory of Questions

Cable (2007) has proposed that wh-phrases are embedded inside a functional layer QP, which is the actual target of so-called wh-movement. He argues that the fronting of wh-phrases in 'wh-fronting' languages is not due to a property of the wh-word itself, as has been traditionally assumed, but rather due to the Q-particle. When this Q-particle, which heads its own projection (QP), is fronted, it has the secondary effect of fronting the wh-word. Couched in the framework of 'probes' and 'goals' as developed within the Minimalist Program Chomsky (1995), the interrogative C head bears an uninterpretable instance of the interpretable Q-feature borne by Q. The interrogative C finds and Agrees with the interpretable Q valuing its uninterpretable Q-feature. This Agreement relation then triggers movement of the goal, the QP, into the projection of C. Because the QP necessarily contains the wh-word, it follows that movement of the QP into the projection of C implies movement of the wh-word into the projection of C.

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3.1 Wh-in-situ in Bùlì and the Theory of Q

In this section, I demonstrate that the *wh*-phrase is licensed by the particle *ká* which I argue to be the Bùlì counterpart of Q found in other languages. For instance *sá* in Tlingit (Cable, 2007, 2010), *da* in Sinhala, and *ká* in Japanese (Hagstrom, 2004; Kishimoto, 2005). As will be illustrated below, *ká* only attaches to nominals, and may not separate a DP from a functional head that selects it. The relevance of this particle to the discussion in this paper is seen in section 4 where I argue that the *ká* headed phrase undergoes covert movement.

Like Q in Tlingit, Sinhala, and Japanese, *ká* is obligatory in a wh-question, as seen in (9).

(9)   a.   bí:ká   dìg   (ká) bʷā:
            child.DEF cook.PST Q   what
            'What did the child cook?'

       b.   bí:ká   dìg   lāmmú   *(ká) bɛ̄:
            child.DEF cook.PST meat.DEF Q   where
            'Where did the child cook the meat?'

Secondly, the particle *ká* must c-command a wh-phrase (this c-command requirement also holds for Tlingit, (Cable 2010:32)). It can be directly attached to the wh-word as the above examples show or it can be attached to a larger wh-containing phrase as the (a) examples in (10)-(12) show. Where the Q doesn't c-command the wh-phrase, the constructions are ill-formed.

(10)   a.   Azuma dà   ká gbáŋ ālì   bʷā: ?
            Azuma buy.PST Q book CONJ what
            'Azuma bought a book and what?'

        b.   *Azuma dà   gbáŋ ālì   **bʷ** ā **ká**?
            Azuma buy.PST book CONJ what Q
            'Azuma bought a book and what?'

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(11)   a.   Asouk dà   **ká wān** gbáŋaː?
           Asouk buy.PST Q who book
           'Whose book did Asouk buy ?'

      b.   *Asouk dà   **wān k**á gbáŋaː?
           Asouk buy.PST who Q book
           'Whose book did Asouk buy ?'

(12)   a.   Asouk dà   **ká Azuma bʷ** āː?
           Asouk buy.PST Q Azuma what?
           'What belonging to Azuma did Asouk buy?'

      b.   *Asouk dà   **Azuma bʷ** āː **k**á ?
           Asouk buy.PST Azuma what Q ?
           'What belonging to Azuma did Asouk buy?'

One important distributional fact about Q-particles shared by many languages is
that, although a wh-phrase is allowed inside a complex-DP, the Q-particle must appear
at the edge of the island (Hagstrom 1998, Kishimoto 2005, Cable 2007, 2010). This same
property can be observed for Bùlì. *Ká* cannot appear inside but must appear at the edge
of the complex DP.

(13)   a.   *Fí   á-yáalí   [núrpók wāi   ālì dà   **k**á bʷā láː?]
           2SG IMPF-love woman REL.PRO C buy.PST Q what PRT
           'You love the woman who bought what?'

      b.   *Fí   á-yáalí   [núrpók [**k**á [wāi   ālì   dà   bʷā láː?]]]
           2SG IMPF-love woman Q   REL.PRO INFL buy.PST what PRT
           'You love the woman who bought what?'

      c.   Fí   á-yáalí   **k**á [núrpók wāi   ālì dà   bʷā láː?]
           2SG IMPF-love Q woman REL.PRO C buy.PST what PRT
           'You love the woman who bought what?

I argue, based on the distributional similarities of *ká* to the Q-particles *da* in Sinhala, *ka*
in Japanese and *sá* in Tlingit, that *ká* is Q in Bùlì, and as such it should be given an

analysis parallel to the Q-particles in these languages.

Despite these similarities, there are some points of divergence among the languages in terms of distribution and function of their Q-particles. The Q in Bùlì only attaches to nominals, and, unlike in Tlingit, it does not also mark indefinites with *ká*. It can also be used in declarative sentences to mark focus.The selectional requirement of Q thus independently rules out (13b) where Q is attached to the relative clause, and explains why the Q-particle cannot appear at the left-edge of the matrix as in (14a)-(14b) or subordinate clauses as in (14c), unlike in Tlingit where Q can mark subordinate clauses.

(14)   a.   bí:ká   dìg   *(ká) bʷā:
               child.DEF cook.PST Q   what
               'What did the child cook?'

        b.   *ká [bí:ká   dìg   bʷā:]
               Q child.DEF cook.PST what
               'What did the child cook?'

        c.   *fì   wè:nì   ká (āyīn) ká bí:ká   dìg   bʷā:
               2SG say.PST Q C   Q child.DEF cook.PST what
               'What did you say the child cooked ?'

Another point of divergence is that, in Bùlì, there can be at most one instance of *ká* per question, even in multiple wh-questions (15) (again unlike Tlingit, which can have multiple Q-particles in multiple wh-questions).

(15)   a.   John tè   bí:ká lām
               John give.PST child meat
               John gave the child meat.

        b.   John tè   **ká** wān bʷā:
               John give.PST Q who what
               'Who did John give what?'

        c. *John tè   **ká** wān **ká** bʷā:
               John give.PST Q who Q what
               'Who did John give what?'

Cable (2007, 2010) draws a distinction between Q-projection languages (16) and Q-adjoining languages (17). Only in a Q-projection language will movement triggered by a Q probe yield phrasal movement of the type usually called *wh*-movement. The Q-particle is barred from appearing in certain environments in Q-projection languages: (i) between a wh-possessor and the possessed NP, (ii) between a wh-determiner and its NP complement or (iii) between a pre or postposition and its complement. To the extent that these constructions are replicable in Bùlì, we should observe similar restrictions on the distribution of *ká* if the language is a Q-projecting language. As will be shown below, similar restrictions are observed for the distribution of *ká*.

(16)

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        QP
       /\
      Q   XP
      |
      ká
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(17)

```
        XP
       /\
      Q   XP
      |
      ká
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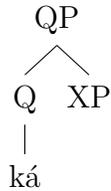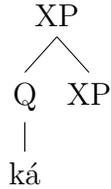
Ká cannot appear between a possessor NP and a possessed wh-phrase. Sulemana (2012) notes that the possessor DP precedes the possessed DP (18).

(18)   a.   Àbìlì y'erí
            Abili house
            'Abili's house'

       b.   Bí:ká   gbáŋ
            child.DEF book

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'The child's book'

c. Bí:ká   gbáŋká
child.DEF book.DEF
'The child's book' (Sulemana 2012:103-104).

Returning to wh-constructions involving possessive constructions, *ká* cannot appear between a possessor NP and a possessed wh-phrase (19).

(19)   a.   Asouk dà   **ká Azuma bʷ** ā:?
Asouk buy.PST Q Azuma what?
'What belonging to Azuma did Asouk buy ?'

    b. *Asouk dà   Azuma **ká bʷ** ā:?
Asouk buy.PST Azuma Q what?
'What belonging to Azuma did Asouk buy ?'

It can not appear between a wh-determiner and its NP complement (20).

(20)   a.   bí:ká   dìg   ká lām būna:
child.DEF cook.PST Q meat which
'Which meat did the child cook?'

    b. *bí:ká   dìg   lām ká būna:
child.DEF cook.PST meat Q which
'Which meat did the child cook?'

It cannot also appear between a preposition and its complement (21b), nor can it precede the preposition (21c). Example (21c) contrasts with the distribution of Q in Tlingit which allows Q to take a preposition as its complement.

(21)   a.   Fì   chèŋ   alī bí:ká
2SG go.PST P child.DEF
' You went with the child ?'

b. *Fì   chèŋ   alī̄ ká wānā:
   2SG go.PST P   Q who
   'Who did you go with?'

c. *Fì   chèŋ   ká alī̄ wānā:
   2SG go.PST Q P who
   'Who did you go with?'

The data from (19)-(21) show that *ká* is restricted from appearing in the structural positions that the Q in Q-projecting languages are banned from occurring. This is thus evidence that the language is a Q-projection language.

As the discussion shows, *ká* licenses the *wh*-phrase by c-commanding it, it cannot occur inside an island, it may not separate a DP from a functional head that selects it. We also saw that *ká* heads its own projection i.e it can either directly take a *wh*-phrase or a *wh*-containing phrase as its complement (Q-projection language). Since *ká* has the same range of restrictions as Q, I conclude that *ká* is Q. This serves as the background for next section where I argue that *ká* diagnosis covert movement.

4   Covert vs. Overt Movement

As shown above, the *wh*-phrase stays in-situ. A well known contentious issue is the status of the in-situ *wh*-phrase in *wh*-questions. For instance, do in-situ phrases undergo covert *wh*-movement? If so, how is this movement different from overt *wh*-movement? While some have argued that the in-situ *wh*-phrase undergoes covert movement (Aoun et al., 1993; Huang, 1982a, 1982b; Nishigauchi, 1990; Pesetsky, 2000; Richards, 1997; Nissenbaum, 2000; Cable, 2007, 2010; Kotek, 2014), others have argued against this view(Watanabe, 2001; Chomsky, 1995). This section argues strongly for covert movement of the in-situ *wh*-phrase, with evidence from Islands, scope, Binding Theory and Intervention effects, ultimately calling for the unity of covert and overt movement thus eliminating

the need to posit any overt/covert differences in island-sensitivity cross-linguistically.

4.1 Covert Movement of the ká-Phrase

I propose that in-situ *ká*-phrase undergoes covert movement and nothing else does. Does this phrase show the properties that are diagnostics of movement? I present evidence from Islands, scope, Binding Theory and Intervention effects that answers this question in the affirmative. I show that this covert movement is comparable in many ways to the overt movement of languages with overt movement like English.

Studies over the years have converge on several diagnostics for diagnosing whether a syntactic operation involves movement. A reliable and stable diagnostic for movement is island-sensitivity. Thus, If the *ká*-phrase involves any kind of movement, then we expect the *ká*-phrase to show island sensitivity. This expectation is borne out as shown earlier in (13) repeated as (22), and (23). Although wh-phrases are allowed inside an island, attaching the particle *ká* to the wh-phrase inside the island renders the construction ungrammatical (22a). It must appear at the edge of the island (22c). As noted earlier example (22b) with *ká* preceding just the relative clause is bad independent of islands because it attaches only to nominals.

(22)   *Complex DP island-relative clause*

    a. *Fí   á-yáalí   [núrpók wāi   ālì dà   **k**á bʷā lá:?]
        2SG IMPF-love woman REL.PRO C buy.PST Q what PRT
        'You love the woman who bought what?'

    b. *Fí   á-yáalí   [núrpók [**k**á [wāi   ālì   dà   bʷā lá:?]]]
        2SG IMPF-love woman Q   REL.PRO INFL buy.PST what PRT
        'You love the woman who bought what?'

    c. Fí   á-yáalí   **k**á [núrpók wāi   ālì dà   bʷā lá:?]
        2SG IMPF-love Q   woman REL.PRO C buy.PST what PRT
        'You love the woman who bought what?

When a wh-phrase is coordinated with another element, *ká* must precede the entire conjunction phrase (23b). Placing it immediately before the wh-phrase in the second conjunct (23a) results in ungrammaticality. This confirms earlier studies which show that covert movement obeys the CSC (Ruys, 1992).

(23)   *Coordinate structure Constraint*

    a. *Azuma dà [gbáŋ ālī̄   **k**á bʷāː?]
        Azuma buy book CONJ Q what
        'Azuma bought a book and what?'

    b. Azuma dà **k**á [gbáŋ ālī̄   bʷāː?]
        Azuma buy Q book CONJ what
        'Azumah bought a book and what?'

An Adjunct 'because' clause behaves like a nominal. As a result *ká* cannot appear inside (24b) but may appear at its edge (24c).

(24)   *Because-clause*

    a. bī́ːká   à   lā   John ali dà gbáŋká   la   ɲīŋ
        child.DEF IMPF laugh John ALI buy book.DEF PART body
        'The child is laughing because John bought the book'

    b. *bī́ːká   à   lā   John ali dà **k**á bʷā la   ɲīŋ   a
        child.DEF IMPF laugh John ALI buy Q what PART body
        'The child is laughing because John bought what?'

    c. bī́ːká   à   lā   **k**á John ali dà bʷā la   ɲīŋ   a
        child.DEF IMPF laugh Q John ALI buy what PART body
        'The child is laughing because John bought what?'

If-cluase

(25)   *Asouk lí dígí lām āsī̄ Apita dī̄n wéːní āyī̄n Azuma dà ká bʷā ?

        Asouk FUT cook meat if Peter PRT say C Azuma bought Q what

'What is it that Asouk will cook meat if Peter says Azuma bought?'

Without-clause

(26) *ká bʷā ātí Azuma gʷà āl̄ī-ān dà yā: ?

Q what C Azumah sleep without buy

'What did Azuma sleep without buying?'

Assuming that complex DP phrases, Coordinate structures, conditionals and adjunct clauses are islands for movement, these observations support the claim that there is covert movement involved in these constructions.

A second piece of evidence for the covert movement of the *ká*-phrase comes from scope, since scope in general might be a sign of movement. In-situ wh-phrases may take wide scope with respect to quantifiers. The wide scope reading of the wh-in-situ phrases might be explained if we assume that *ká*-phrase undergoes movement. In the sentence below, the in-situ wh-phrase can take wide scope over the universal quantifier as indicated. Assuming that the wide scope reading of the wh-phrase is possible if the wh-phrase moves above the universal quantifier Aoun and Li (1993), since there is no indication of overt movement in (27), we can reason that this movement has taken place covertly.

(27) wāi-mē:nā dìg *(ká) bʷā:

someone-all cook Q what

'What did every one cook?'

'For each person y, what is the x st y cooked x.'

'What is the x st everyone cooked x.'

A third piece of evidence for covert movement comes from the Binding theory. Nissenbaum (2000) shows that covert wh-movement feeds condition A of the binding theory. Consider the data in (28) from Nissenbaum (2000:126). The covert phrasal movement of the in-situ wh-phrase in (28a) licenses the anaphor. In contrast, since there is no such movement in (28b), the anaphor is not licensed resulting in the ungrammaticality of the sentence.

(28)　　a.　Who$_i$ thinks Mary was looking at which picture of himself$_i$?

　　　　b.　*Who$_i$ thinks Mary was looking at a picture of himself$_i$.

In-situ wh-phrases in Bùlì can feed condition A of the binding theory. Consider the examples in (29). The anaphor needs an antecedent within the same clause in order to be licensed (29a)-(29b). When the antecedent fails to c-command the anaphor then the result is ungrammatical (29c).

(29)　　a.　Amary$_i$ à-yā:　　wà-dēk$_{i/*j}$
　　　　　　Mary　IMPF-like 3SG-self
　　　　　　'Mary likes herself'

　　　　b.　*Amary$_i$ wè:ni āyīn mì　à-yā:　　wà-dēk$_i$
　　　　　　Mary　say　C　1SG IMPF-like 3SG-self
　　　　　　'Mary said that I like herself'

　　　　c.　*Amary$_i$ doama à-yā:　　wà-dēk$_i$
　　　　　　Mary　friends IMPF-like 3SG-self
　　　　　　'Mary's friends like herself'

The examples in (30) duplicates the English paradigm from Nissenbaum given in (28), though the judgments in Bùlì are stronger . The ungrammaticality of (30b) is expected because the antecedent of the anaphor is found in the matrix clause while the anaphor is in the embedded clause. The grammaticality of (30a) is surprising since the antecedent and

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the anaphor are in different clauses. The contrast between (30a) and (30b) is expected if covert movement is involved and importantly successive cyclicly in (30a). The covert movement of the *ká*-phrase into the matrix verb will license the anaphor. The example in (30b) is ruled out as ungrammatical because there is no such movement. It will later be shown that we lose the Nissenbaum effects in instances where the in-situ wh-phrase does not move covertly.

(30)   a.   Amary$_i$ wè:ni āyī̄n mì   à-yā: ká wà-dēk$_i$ foto   kuna:
              Mary   say   C   1SG IMPF-like Q 3SG-self picture which
              'Mary said that I like which picture of herself?'

        b.   *Amary$_i$ wè:ni āyī̄n mì   à-yā: wà-dēk$_i$ foto   wa-dɛ
              Mary   say   C   1SG IMPF-like 3SG-self picture DET-DEM
              'Mary said that I like this picture of herself'

4.1.1   Evidence from Intervention Effects

Another piece of evidence for the covert movement of the *ká*-phrase comes from intervention effects. The absence of intervention effects can also diagnose covert movement of the *ká*-phrase. It has been argued that languages make use of two methods of interpreting wh-in-situ phrases: Covert Movement (Chomsky, 1976; Huang, 1982b; Aoun et al., 1993; Pesetsky, 1987, 2000) and others, and Focus-Alternatives computation (Hamblin, 1973; Rooth, 1985, 1992; Beck, 2006; Cable, 2007, 2010; Kotek, 2014). Beck (2006) argues that the Focus-Alternative strategy of interpreting a wh-in-situ phrase is subject to intervention effects. If a focus operator like *only* occurs between an in-situ wh-phrase and the C that interprets it at LF, it will cause the derivation to crash (31a). This is because, the focus operator makes use of both the ordinary and focus semantic value of its sister. Since the wh-phrase lacks an ordinary value, the structure is uninterpretable, and hence ungrammatical. The Covert Movement strategy, however, is immune from intervention because the wh-phrase will move covertly above the intervener (31b) at LF, and thus will

be able to obviate intervention effects.

Structure of intervention

(31) a. *Focus-Alternatives computations:* *[C...intervener [...wh...]]

   b. *Covert movement:* [C...intervener [...wh...]]

Consider an instantiation of this schema from English. Pesetsky (2000) observes in English multiple wh-constructions that *Superiority obeying* questions are not subject to intervention while *Superiority violating* questions are subject to intervention. *Superiority-obeying* and *superiority-violating* constructions are shown in (32) and (33) respectively.

(32) a. Who bought what ?

   b. *What did who buy ?

(33) a. Which person bought which book?

   b. Which book did which person buy?

Pesetsky (2000) argues that *superiority obeying* in-situ wh-phrases in English undergo LF wh-movement while in *superiority violating* structures, the in-situ phrases is interpreted via feature movement. In effect these constructions have different LF representations as shown in (34). In (34a) all the wh-phrases move to the spec C at LF. On the contrary, in (34b) only wh_2 *'which person'* moves to the spec of C at LF. Wh_1 remains in-situ and is computed via feature movement.

(34) a. [who$_1$ what$_2$ [C [$_{TP}$ t$_1$ buy t$_2$]]] LF: Superiority-Obeying

   b. [which book $_2$ [C [$_{TP}$ which person$_1$ buy t$_2$]]] LF: Superiority-Violating

Beck (2006) proposes that when an in-situ wh-phrase such as wh$_1$ in (34b) doesn't un-

dergo covert movement, it is interpreted via Focus-Alternative computations and it is this strategy that is subject to intervention. Thus in the *superiority obeying* constructions (35) and (36a), all the wh-phrases move covertly, as a result, adding an intervener will not affect the interpretability of the sentences. On the other hand, because *which girl* remains in-situ in (36b) and is interpreted via focus alternative computation, adding an intervener above it will result in an uninterpretable structure hence the ungrammaticality of the sentence.

(35) a. Who did only John introduce to whom ?

b. Which children didn't buy which book?

(36) a. Which girl did only Mary introduce to which boy ?

b. *Which boy did only Mary introduce which girl to ?

Movement, whether overt or covert, which takes the wh-phrase outside the c-command domain of an intervener solves the problem of intervention. As shown in (35) and (36) for English, covert movement of the phrase prevents intervention. In many other languages including Korean overt movement obviates intervention. Consider the examples taken from Beck (2006). The sentence in (37a) is ungrammatical because the intervener *only* c-commands the wh-phrase. Contrast this sentence with (37b) where the intervener is absent and (37c) where the wh-phrase moved past the intervener.

(37) a. *Minsu-man nuku-lû-l po-ss-ni?   (Korean)
Minsu-only who-ACC see-Past-Q
'Who did only Minsu see?'

b. Minsu-mun nuku-lû-l po-ss-ni?
Minsu-Top who-ACC see-Past-Q
'Who did Minsu see?'

c. nuku-lû-l Minsu-man po-ss-ni?
who-ACC Minsu-only see-Past-Q
'Who did only Minsu see?' (Beck 2006:3)

Adopting the insights of these accounts, we can diagnose covert phrasal movement in Bùlì:

if the *ká*-phrase can appear below these interveners without resulting in ungrammaticality

then we conclude that covert phrasal movement has taken place. If on the other hand, the

relation between the *ká*-phrase and C is interrupted then we diagnose Focus-Alternative

computation for the wh-in-situ.

In-situ wh-phrases immediately preceded by *ká* are not subject to intervention effects:

wh-phrases are permitted under the c-command domain of focus-related elements like

only, also and negation as shown in (38). Overt movement over these elements is fine as

expected (39).

(38) a. John mɛ̄ dìg ká bʷāː?
John also cook Q what
'What did John also cook?'

b. John àn dìg ká bʷāː?
John NEG cook Q who
'What did John not cook?'

c. John ɲ**ī̄ːnī̄** dìg ká bʷāː?
John only cook Q what
'What did only John cook?'

(39) a. (ká) bʷā ātì John mɛ̄ dìgìː ?
Q what C John also cook
'What did John also cook?'

b. (ká) bʷā ātì John àn dìg ya ?
Q what C John NEG cook PRT
'What did John not cook?'

c. (ká) bʷā ātì John ɲ**ī̄ːnī̄** dìgìː?
Q what C John only cook
'What did only John cook?'

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We conclude from (38) that the *ká*-phrase has covertly moved above the intervener thus obviating intervention effects. To illustrate, a construction like (38a) will have as an LF (40). Crucially, the wh-phrase is above the intervener thus obviating intervention.

(40) $[_{CP}$ [ká bʷā]$_1$ $[_C$ $[_{TP}$ John mɛ̄ dìg $_{t1}$]]] LF: *showing covert movement*

4.1.2 Detecting Intervention

At this point it is possible that intervention effects are absent for some other reason. Perhaps *only, also and negation* are not interveners in the language. But the licensing of the wh-word by *ká*, covert-phrasal movement of the *ká*-phrase, make a prediction concerning intervention effects: placing an intervener between the wh-word and the Q-particle *ká* should trigger intervention. We can test this prediction with a Complex DP island where it is possible to fit interveners between *ká* and the wh-phrase. While it is possible to have an intervener above the island (41a), it is not possible to have an intervener within the island (41b) and (41c).

(41)   a. Fí **kàn** yáalí **ká** [núrpók wāi   ālì dà **bʷ**ā lá:?]
            2SG NEG love Q woman REL.PRO C buy what PRT
            'You don't love the woman who bought what?

        b. *Fí á-yáalí   **ká** núrpók wāi   mɛ̄ ālì dà **bʷ**ā lá:?
            2SG IMPF-love Q woman REL.PRO also C buy what PRT
            intended: 'You love the woman who also buy what?

        c. *Fí á-yáalí   **ká** núrpók wāi   ālì **kàn** dà **bʷ**ā lá:?
            2SG IMPF-love Q woman REL.PRO C NEG buy what PRT
            intended: 'You love the woman who didn't buy what?

        d. *Fí á-yáalí   **ká** [núrpók wāi   ɲ**ī:nī** ālì dà **bʷ**ā lá:?]
            2SG IMPF-love Q woman REL.PRO only C buy what PRT
            intended: 'You love only the woman who bought what?

        e. ká wānā ālì   dàg [núr wāi   ālì **kàn** dà gbánká lá:?] sàg
            Q who INFL point [man REL.PRO INFL NEG buy book   PRT] show

wānā
who
'Who showed the man who didn't buy the book to who?'

The acceptability of (41a) makes two relevant points. First the relation between *ká* and the wh-word is not interrupted because the intervener is above both the particle and the wh-phrase. Secondly, the *ká*-phrase, in this instance, *ká* and its complement (the island) will covertly move across the intervener thus obviating intervention effects. The ungrammaticality of (41c)- (41d) is predicted because the relation between the wh-phrase and it licenser is interrupted by an intervener. An intervener within an island where it does not c-command the in-situ wh-phrase is grammatical (41e) however.

As demonstrated, the *ká* headed phrase, though in-situ, behaves like overtly moved phrases by being sensitive to the same islands, and also being able to obviate intervention effects among others. The conclusion drawn from this is that, the *ká* headed phrase undergoes covert which is comparable to the overt movement we observe for overt movement languages like English.

4.2   Ká-less Phrases do not Move

We have argued in the previous section that the *ká*-phrase undergoes covert movement. In this section, I present independent evidence for the non-movement of comparable phrases that lack *ká*. *Ká*-less wh-phrases occur in multiple questions. In multiple wh-questions, *ká* appears to the left of the highest wh-containing phrase (42).

(42)   a.   John tè   **ká** wān bʷāː?
              John give Q   who what
              'Who did John give what?'

        b.   (ká) wānā āl̀ì   dìg   bʷāː?
              Q   who   ALI cook what
              'Who cooked what'

c. (ká) bʷā   ātì wānā dìgì꞉
   Q   what C   who   NEG cook PRT
   'What is it that who cook ?'

Having multiple *ká* (43a) or placing it on the lowest wh-phrase (43b) results in ungram-
maticality (an open question for the current account is why there is one *ká* which appears
on the highest wh-phrase).

(43)   a. *John tè   **ká** wān **ká** bʷā꞉
          John give Q   who Q   what
          'Who did John give what?'

       b. *John tè   wān **ká** bʷā꞉
          John give who Q   what
          'Who did John give what?'

Considering the observation in the preceding section that the *ká*-phrase can feed condition
A of the binding theory, we predict that in multiple questions, the wh-phrase without
ká should not feed condition A. An antecedent in a matrix clause should not license an
anaphor in an embedded wh-phrase without *ká* since it doesn't involve movement. This
prediction is indeed borne out in (44).

   A multiple question is possible in an embedded clause (44a). In (44b), there is only
one wh-phrase *ká wà-dēk$_i$ foto kuna* 'which picture of herself' in the embedded clause.
Because this wh-phrase is preceded by the Q-particle *ká*, it moves covertly into the
matrix clause thereby licensing the anaphor. Example (44c) on the other hand, involves
a multiple question. In this construction, the Q-particle *ká* is on the wh-phrase *ká núr
bānā* 'which people' and it is that phrase which moves covertly. The anaphor in the
second wh-containing is not license in this context because the wh-phrase containing it
doesn't move hence the ungrammaticality of the sentence.

(44) a. Amary$_i$ pā-chīm bísāŋá tè **ká** wān bʷāː?
         Mary think child.PLU give Q who what
         'Who does Mary think the children gave what?'

   b. Amary$_i$ pā-chīm bísāŋá   tè núrmà   ká wà-dēk$_i$ foto
       Mary think child.PLU.DEF give man.DEF.PLU Q 3SG-self picture
       kuna:
       which
       'Which picture of herself does Mary think the children gave to the people'

   c. *Amary$_i$ pā-chīm bísāŋá   tè ká núr bānā wà-dēk$_i$ foto
       Mary think child.PLU.DEF give Q man which 3SG-self picture
       kuna:
       which
       'Which people does Mary think the children gave which picture of herself'

Another argument for the non-movement of the *ká*-less wh-phrase comes from interven-
tion. We saw that placing an intervener above a wh-phrase preceded by *ká* doesn't trigger
intervention. In multiple wh-contexts where the second wh-phrase is not preceded by *ká*
and doesn't move, we predict intervention effects. This is indeed the case as shown in
(45) below.

(45) a. *John **àn** tè **ká** wān bʷāː
         John NEG give Q who what
         'Who did John not give what?'

   b. *Ká wānā ālì **kàn** dìg **b**ʷā
       Q who INFL NEG cook what
       'Who did not cook what'

   c. (ká) bʷā ātì wānā **àn** dìgì yā:
       Q what C who NEG cook PRT
       'What is it that who did not cook ?'

Although the *ká*-phrase can move across the intervener in (45a), the second *wh*-phrase will
not, resulting in an intervention effect. In example (45b) where negation is below Wh_1
and above Wh_2, the result is ungrammatical because of intervention effects. Example

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(45c) shows that if all the *wh*-phrases are above the intervener we do not get intervention effects. Note that this extends to other interveners including 'only' and 'also'.

We have seen in this section that there are basically two kinds of *wh*-in-situ in the language: the one preceded by *ká* and the one without a *ká*. As argued in the previous section, drawing from different kinds of evidence, the in-situ *wh*-phrase preceded by *ká* is the only one that undergoes covert movement. The *ká*-less one, on the other hand, doesn't undergo any kind of movement.

4.3   The Left-peripheral ká-phrase

In this section, we turn to constructions like (46) repeated from (6) where the *ká*-phrase is found at the left-periphery of the clause. Bùlì is a language where you not only see the goal but the probe as well, *àtì*. I show that, as far as wh-movement is concerned, Bùlì is a language where both overt and covert movement behave nearly identically except for the phonology—with both interacting with Islands, intervention effects, and binding theory in perfectly identical ways, once extraneous factors like linear precedence is taken into account.

In these constructions, as noted earlier, the wh-phrase is obligatorily followed by *àtì* if the wh-phrase is a non subject (46a)-(46b), and *àlì* if it is a local subject. We take up the discussion of *àlì*/*àtì* in the next section.

(46)   a.   (ká) bʷā *(ātì) bí:ká   dìgì:
             Q   what ATI   child.DEF cook
             'What is it that the child cooked?'

        b.   (ká) wānā *(ātì) bí:ká   dìg lāmmú   tē:
             Q   who ATI   child.DEF cook meat.DEF give
             'Who is it that the child cooked the meat for ?'

        c.   (ká) wānā *(ālì) dìg   lāmmú:
             Q   who ALI   cook meat.DEF

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'Who cooked the meat?'

I follow (Ferreira & Ko, 2003; Hiraiwa, 2005b) in assuming that these constructions involve overt movement of the goal to the Spec of the probe, *ātì*, thus making overt movement optional in the language. The fact that the gap can be found several clauses away and is subject to islands is evidence that this construction involves movement (see (Ferreira & Ko, 2003; Hiraiwa, 2003, 2005a) for more examples).

The gap can be found several clauses away. The wh-phrases originate from within the embedded clauses in (47).

(47)   a.   (ká) bʷā *(ātì̄) fī   wèːnì̀ āyī̄n bíːká   dìgìː
            Q   what C   2SG say C   child.DEF cook
            'What did you say the child cooked ?'

       b.   (ká) bʷā *(ātì̄) fī   páː-chī̄m mì   dìgìː
            Q   what C   2SG think   1SG cook
            'What do you think I cooked ?'

Like the in situ construction discussed above, the left-peripheral Q behaves like movement, sensitive to familiar islands as seen in (48)-(52).

Complex DP island-relative clause

(48)   a. ***k**á bʷā ātí fí   á-yáalí   [núrpók wāi   ālì̀ dà láː?]
              Q what C 2SG IMPF-love woman REL.PRO C buy PRT
              'What do you love the woman who bought ?'

       b. *ká bʷā ātī̄ fí   á-yáalí   núrpók wāi   ātī̄ Azuma pòlì̀ āyī̄n wà
            Q what C 2SG IMPF-love woman REL.PRO C Azuma think C   3SG
            dà láː?
            buy PRT
            'What is it that you love the woman who Azumah thought she bought ?'

Coordinate structure Constraint

(49)   *ká bʷā ātí Azuma dà [gbáŋ āl̄i ?]

Q what C Azuma buy book CONJ

'What did Azuma buy a book ?'

Because-cluase

(50)   *ká bʷā ātí bíːká à lā John ali dà la ɲīŋ a

Q what C child.DEF IMPF laugh John ALI buy PART body

'What is the child laughing because John bought ?'

If-cluase

(51)   *ká bʷā āt̄ī Asouk lí díɡí ās̄ī Apita d̄ın wéːní āȳin Azuma dà ?

Q what C Asouk FUT cook if Peter PRT say C Azuma bought

'What is it that Asouk will cook if Peter says Azuma bought?'

Adjunct Island

(52)   *ká bʷā ātí Azuma gʷà āl̄i-ān dà yāː ?

Q what C Azumah sleep without buy

'What did Azuma sleep without buying?'

Another piece of evidence for overt movement comes from binding theory and recon-struction. Wh-movement does not obviate binding relations from the position which movement took place. Consider the following examples in English. An R-expression cannot co-refer with a c-commanding pronoun (53a), so *John* in the object DP cannot co-refer with the subject pronoun. When we move the object containing the R-expression

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John, to a position where the subject no longer c-commands it, still does not make the construction better (53b). This follows from the observation that wh-movement does not obviate binding possibilities (in this case principle C violations). This observation is easily explained under the copy theory of movement (Chomsky 1995) where a moved element leaves behind a copy of itself, rather than a trace.

(53)   a. *He$_1$ likes [which picture of John$_1$]

         b. *[Which picture of John$_1$] does he like

Reconstruction effects are observed for the wh-phrase in the left periphery. As expected, in (54b), moving the wh-phrase to the left does not bleed the satisfaction of principle A.

(54)   a. wà$_i$ ɲà ká wà-dēk$_i$ fōtō   kūnā:
            3SG see Q 3SG-DEK picture which
            'Which picture of himself did he see?'

         b. ká wà-dēk$_i$ fōtō   kūnā ati wà$_i$ ɲà:
            Q 3SG-DEK picture which C 3SG see
            'Which picture of himself did he see?'

It is important to note, however, that the antecedent for the anaphor must be a pronoun. The construction becomes bad if the subject is replaced by an r-expression (55b).

(55)   a. John$_i$ ɲà ká wà$_i$-dēk   fōtō   kūnā:
            John see Q 3SG-DEK picture which
            'Which picture of himself did John see?'

         b. *ká wà-dēk$_i$ fōtō   kūnā ati John$_i$ ɲà:
            Q 3SG-DEK picture which C John see
            'Which picture of himself did John see?'

A constraint like (56) seems to be responsible for the impossibility of demonstrating

reconstruction effects with r-expressions .

(56)   An R-expression may not be linearly preceded by a nominal co-indexed with it.

Other data that support (56) independent of reconstruction are given below. In all the ungrammatical cases below, an R-expression follows a a co-indexed pronoun or a reflexive. Even though the pronouns and anaphors do not c-command the r-expressions in (57)-(58), the sentences are still judged to be ungrammatical[1].

(57) a. *wà$_i$ màwá   à-yā: John$_i$
          3SG mother.DEF IMPF-like John
          'His mother likes John'

      b. wà$_i$ màwá   à-yā: wà$_i$
          3SG mother.DEF IMPF-like 3SG
          'His mother likes him'

      c. Ajohn$_i$ màwá   à-yā: wá$_i$
          John   mother.DEF IMPF-like 3SG
          'John's mother likes him'

---

[1]What still remains as a puzzle and needs explanation under this account is the contrast in (i)-(ii) where there also seem to be no reconstruction effects for principle C. I leave this for future work.

(i)   a. *wà$_i$ ɲà   ká   John$_i$ fōtō   kūnā:
          3SG see.PST John picture market P
          'Which picture of John did he see?'

      b. ká John$_i$ fōtō   kūnā ati wà$_i$ ɲà:
          Q John picture which C 3SG see.PST
          'Which picture of John did he see?'

(ii) a. *wà$_1$ pà   ká Ajohn$_1$ gāŋ kùnā fōtō:
          3SG take Q John   side which photograph
          which side of John did he photograph?

      b. ká Ajohn$_1$ gāŋ kùnā ātì wà$_1$ pà   fōtō:
          Q John   side which C 3SG take photograph
          which side of John did he photograph?

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(58) a. *wà$_i$ fotowa a-da:ni   John$_i$
        3SG picture IMPF-worry John
        'His picture worries John'

    b. wà$_i$ fotowa a-da:ni   wà$_i$
        3SG picture IMPF-worry 3SG
        'His picture worries him'

    c. John$_i$ fotowa a-da:ni   wà$_i$
        John picture IMPF-worry 3SG
        'John's picture worries him'

5   The *alì/atì* Alternation

We turn in this section to another phenomenon in the language relating to the alternation between *ālì* and *ātì*. *Ālì* obligatorily follows any subject wh-phrase. A conclusion consistent with the data is that *ālì* is variant of *ati* used when the subject is extracted. I argue in this section that *ālì* is not a variant of *ati* but occupies a distinct structural position in the clause.

An attempt to explain this alternation was first given by (Hiraiwa, 2005b). He argues that the alternation is determined by the locality of the satisfaction of EPP on C: if the EPP is satisfied by a local goal such as the subject, then *ālì* appears, but on the other hand, if the EPP is satisfied by a non local goal then *ātì* appears. His analysis is based on the assumption that both *ālì* and *ātì* are C heads which is realized differently based on the goal that satisfies its EPP needs. I will show that despite the complementary distribution between *ālì/ātì*, they occupy different structural positions in the clause. While *ātì* is an instance of C, *ālì* appears lower in the clausal spine. More specifically, I propose that the presence of the complementizer *ātì* blocks the pronunciation of *ālì*, which in principle is always present in the functional structure, but is not pronounced unless the immediately c-commanding complementizer, *ātì* is deleted.

The examples in (59)-(60) show the restrictions on the distribution of *ālì* and *ātì*. *Ātì* is used when a non subject moves overtly to the left periphery (59a), while *ālì* is used in cases involving local subjects [2]. Example (59b) shows that ālì is ungrammatical with non-subject extraction, while (60b) shows that ātì is not possible with subject questions either.

(59)   a.   ká wānā ātì bíːká   dìg lāmmú   tēː
               Q who ATI child.DEF cook meat.DEF give
               'Who is it that the child cooked the meat for ?'

        b.   *ká wānā ālì bíːká   dìg lāmmú   tēː
               Q who ALI child.DEF cook meat.DEF give
               'Who is it that the child cooked the meat for ?'

(60)   a.   ká wānā ālì dìg lāmmúː
               Q who ALI cook meat.DEF
               'Who cooked the meat?'

        b.   *ká wānā ātì dìg lāmmúː
               Q who ATI cook meat.DEF
               'Who cooked the meat?'

Example (61) shows that *ātì* and *ālì* may not occur in the same clause.

(61)   a.   *ká bʷā ātì wānā ālì dìg
               Q what ATI who ALI cook

---

[2](Ferreira & Ko, 2003) report instances like (i) where a non-subject argument is possible with *ālì* (ia) while the use of adjuncts wh-phrases with *ālì* is marked(ib). Many speakers however find ungrammatical the use of *ālì* with non-subjects extractions.

(i)   a.   (ká) bʷā ālì/ātì àtìm nàgì
               Foc what C   Atim hit
               'What did Atim hit ?'

        b.   (ká) bɛ   ??ālì/ātì àtìm nàgì Mary
               Foc where C   Atim hit
               'Where did Atim hit Mary ?'

'What is it that who cooked ?'

b. *ká wānā ātì   ālì   dìg   lāmmú:
   Q who ATI ALI cook meat.DEF
   'Who cooked the meat?'

Example (62) shows the repair process in this situation. $\bar{A}$lì is suppressed in the context where the initial wh-phrase is not a subject (62a)-(62c) and when it is a subject (62c), $\bar{a}$lì surfaces.

(62)   a.   ká bʷā   ātì   wānā dìg
          Q what ATI who   cook
          'What is it that who cooked ?'

       b.   *ká bʷā   wānā ālì   dìgi:
          Q what who   ALI cook
          'What is it that who cooked ?'

       c.   ká wānā ālì   dìg   bʷā
          Q who   ALI cook what
          'who cooked what?'

The fact that these particles are in complementary distribution might seem to suggest that they are occupying the same location in the clause. The placement of adverbs show that these particles do not occupy the same location, even though they are in complementary distribution. While $\bar{a}t\grave{\imath}$ is above TP (assuming that the subject is in Spec TP), $\bar{a}l\grave{\imath}$ is more deeply embedded in the clause. In (63a), the adverb occurs before $\bar{a}l\grave{\imath}$ while in (63c) $\bar{a}t\grave{\imath}$ precedes the adverb. Similarly in (64a) the adverb occurs before $\bar{a}l\grave{\imath}$ but precedes $\bar{a}t\grave{\imath}$ in (64b).

(63)   a.   ká wānā ɲīem   ālì   á   dīgī lām
          Q who   usually ALI IMPF cook meat
          'Who usually cooks meat?'

       b.   *ká wānā ālì   ɲīem   á   dīgī lām
          Q who   ALI usually IMPF cook meat

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'Who usually cooks meat?'

c. ká bʷā̄ ātī Azuma ɲīem á dīgī:
    Q what ATI Azuma usually IMPF cook
    'What is it that Azuma usually cooks ?'

d. *ká bʷā̄ ɲīem ātī Azuma á dīgī:
    Q what usually ATI Azuma IMPF cook
    'What is it that Azuma usually cooks ?'

(64) a. ká wānā dīem ālì dīgī lām
          Q who yesterday ALI cook meat
          'Who cooked meat yesterday ?'

      b. *ká wānā ālì dīem dīgī lām
          Q who ALI yesterday cook meat
          'Who cooked meat yesterday ?'

      c. ká bʷā̄ ātī Azuma dīem dīgī:
          Q what ATI Azuma yesterday IMPF cook
          'What is it that Azuma cooked yesterday ?'

      d. *ká bʷā̄ ɲīem ātī Azuma á dīgī:
          Q what yesterday ATI Azuma IMPF cook
          'What is it that Azuma cooked yesterday?'

The distribution of *ālì* and *ātì* in relative clauses also makes the same point. The language has two strategies for forming Relative Clauses (see (Hiraiwa, 2003) and (Hiraiwa, 2005a) for more on this topic). The two strategies exhibit certain differences with respect to the location of the head of the relative and in the kind of morphology permitted in the structure. In a left-peripherally headed relative clause, exemplified in (65) and (66), the head appears to the left of the relative clause. When *ātì* is used it precedes the subject, as in (65) and when *ālì* is used it follows the subject, as in (66). The important point here is that *ālì* and *ātì* are not in the same location. Example (67) shows a subject relative clause where just like a subject question, *ālì* is used. Example (68) once again shows that *ālì* and *ātì* are in complementary distribution in both subject and object relative clauses.

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(65) a. Núr wāi   ātì mí ɲà lā   nālā
          man REL.PRO ATI 1SG see DET nice
          'The man who I saw is nice'

     b. *Núr wāi   mí ātì ɲà lā   nālā
          man REL.PRO 1SG ATI see DET nice
          'The man who I saw is nice'

(66) a. Núr wāi   mí ālì ɲà lā   nālā
          man REL.PRO 1SG ALI see DET nice
          'The man who I saw is nice'

     b. *Núr wāi   ālì mí ɲà lā   nālā
          man REL.PRO 1SG ALI see DET nice
          'The man who I saw is nice'

(67) a. Núr wāi   ālì ɲà mí lā   nālā
          man REL.PRO ALI see 1SG DET nice
          'The man who saw me is nice'

     b. *Núr wāi   ātì ɲà mí lā   nālā
          man REL.PRO ALI see 1SG DET nice
          'The man who saw me is nice'

(68) a. *Núr wāi   ātì mí ālì ɲà lā   nālā
          man REL.PRO ATI 1SG ALI see DET nice
          'The man who I saw is nice'

     b. *Núr wāi   ātì ɲà mí lā   nālā
          man REL.PRO ALI see 1SG DET nice
          'The man who saw me is nice'

We again note an asymmetry between *ālì* and *ātì* in (6) repeated as (69) in embedded clauses. Though in theory a clause-initial matrix-subject (69)is ambiguous between the in-situ and overt-movement strategies, *ālì* is obligatory. Example (70) confirms this observation in a clause-initial subject wh-phrase in an embedded question under the complementizer *āsī̄*.

(69) a. (ká) wānā *(ālì) dìg lāmmú:
          Q   who ALI   cook meat.DEF

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'Who cooked the meat?'

b. (ká) bʷā *(ātì) bíːká   dìgìː
   Q   what ATI   child.DEF cook
   'What is it that the child cooked?'

(70)   Mary bèg āsī̄ ká wānā ālì dìg lāmmú

       Mary ask C Q who ALI cook meat.DEF

       'Mary asked who cooked the meat.'

These data suggest either that the subject must move, and cannot remain in-situ, or *ālì* surfaces for a reason that transcend the overt/covert distinction. The evidence available seem to point to the latter option. Consider (71), While the subject question is embeddable (71a), those involving non subjects are ungrammatical whether inherited as a matrix or embedded question (71b)-(71d). Example (71a) shows a clear in-situ subject question. Examples (71b)-(71d) show that overt movement is limited to matrix questions, and there is no partial movement as also shown by (71b). Example (71d) checks that no embedded overt movement, neither to the left or right of *āsī̄* is acceptable. All these suggest that the *ālì*/*ātì* alternation transcend the overt/covert movement distinction which I turn to into the next section.

(71)   a. fì wèːnì āyī̄n ká wānā ālī̄ dī̄g lāmmúː
           2SG say   C   Q who ALI cook meat.DEF
           'Who did you say cooked the meat?'

       b. ??fì wèːnì āyī̄n ká bʷā ātì bíːká   dìgìː
           2SG say   C   Q what ATI child.DEF cook
           intended:: 'What did you say that the child cooked?'

       c. ??Mary bèg āsī̄ ká bʷā ātì bíːká   dìgìː
           Mary ask C   Q what ATI child.DEF cook
           intended:'Mary asked What the child cooked?'

       d. *Mary bèg ká bʷā āsī̄ bíːká   dìgìː
           Mary ask Q what C   child.DEF cook

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intended:'Mary asked What the child cooked?'

5.1   The new Account

The account I present here is based on the assumption that *ālì* is situated lower in the TP as shown by the data in (63)-(68).The theory I propose to account for the *ālì/ātì* alternation is given in a form of a pronunciation rule in (72). This novel analysis of the *ālì/ātì* alternation extends to other cases in the language. One key observation is that *ālì* is used in other contexts including Pseudo-relatives that mirror counterparts in Romance.

ALI Pronunciation Rule

(72)   Phonologically delete *ālì*: when it is immediately c-commanded by *ātì*.

This rule explains why we only pronounce *ālì* when the subject is extracted. It also explains, why in relative clauses, we only pronounce *ālì* when *ātì* is not present in the functional layer. We are able to explain the complementary distribution between the two particles even though they do not occupy the same position. Under this account, *ālì* is not the form of a complementizer that shows up specifically when you extract a subject but it is only pronounced when *ātì* is deleted. As shown above, *ālì/ātì* clearly do not occupy the same structural position, thus any account built on the competition for the same location cannot hold.

6 Covert Movement and the Complementizer trace effects

Another phenomenon associated with overt-movement is the that-trace effects or more generally complementizer trace-effect (Perlmutter, 1968)(Perlmutter, n.d.) phenomenon. In the languages that have been found to show this effect, a subject cannot be extracted when it follows a complementizer. Consider some constructions illustrating this phenomenon from (73)-(74). These examples are taken from (Pesetsky, 2016). In the ungrammatical (b) examples a trace immediately follows the complementizer.

English

(73)   a.   Who do you think_ met Sue?

        b. *Who do you think that_ met Sue?

French

(74)   a.   Qui a-t-il dit que Marie voulait voir___?
             who has-he said that Marie wanted to.see
             'Who did he say that Marie wanted to see?'

        b. *Qui a-t-il dit que___ voulait voir Marie?
             who has-he said that   wanted to.see Marie
             'Who did he say wanted to see Marie?'

A family of analyses for example (Chomsky 1981, Erlwine 2014, and Pesetsky in preparation) leads one to belief that maybe subjects extractions involve a smaller clause, missing the complementizer layer. What remains a puzzle in the that-trace effect is that though it is often claim that covert movement shows this effect as well, the data in languages

like English is not fully obvious. Is there evidence in a language that all things being equal has a covert movement strategy as well as an overt movement strategy that the clause should have to be reduced in a that-trace context even with covert movement? I argue that things we are used to finding in overt movement including the that-trace effects show up with covert movement in this language.

6.0.1 Subject Extraction

What we have established in the previous sections is that the language has both a covert movement and an overt movement strategy. All things being equal, one might expect long distance extraction to have both overt movement and covert movement possibilities and one might expect the C to disappear in order to obviate that-trace effects. What we indeed observe for the covert movement option is that the probe, *ati* has to disappear (75). This looks just like the that-trace effect showing up in the language with covert movement. The fact that *ālì* appears in the embedded clause with long distance covert movement shows that rule in (72) is triggered.

(75)   a.   fì   wèːnì āyīn ká wānā ālī dīg lāmmúː
                2SG say   C   Q who ALI cook meat.DEF
                'Who did you say cooked the meat?'

        b.   fì   pāchīm ká wānā ālī dīg lāmmúː
                2SG think Q who ALI cook meat.DEF
                'Who do you think cooked the meat?'

What about short distance subject extraction? Both movement options should in principle be available for local subject extraction as well. Consider a derivation involving local subject extraction as in (76) where the use of *ālì* is obligatory (76a) and the use of *ātì* is ungrammatical (76b). As shown earlier, *ātì* and *ālì* do not cooccur (76c). On the overt movement strategy, this might be a kind of that-trace effect teaching us that the clause is

smaller. It is thus no longer a mystery that on short subject extraction we get an *ālì* this follows from the rule in (72), because the CP layer involving *ati* can't be there we get an *ālì* pronounced. But if the CP layer just can't be there in local subjects extractions, we also immediately explain why the only way to get a local distance question is to delete the CP layer in the overt strategy and it will end up looking like the in-situ strategy.

(76) a. ká wānā āl̀ì dìg lāmmúː
          Q who ALI cook meat.DEF
          'Who cooked the meat?'

      b. *ká wānā āt̀ì dìg lāmmúː
          Q who ATI cook meat.DEF
          'Who cooked the meat?'

      c. *ká wānā āt̀ì āl̀ì dìg lāmmúː
          Q who ATI ALI cook meat.DEF
          'Who cooked the meat?'

One of the claims of the analysis presented is that the question probe, *āt̀ì* is always present in the clause. Furthermore, *ālì* is not C but deeply embedded in the clausal spine. If *ālì* is not C, then extraction of the subject cannot possibly be to Spec *ālì*.

I argue that subject extraction just like non subject extraction, the complementizer *āt̀ì* is triggering movement to its specifier. Thus (76b) has a derivation where the subject occupies the specifier of *āt̀ì*. The presence of āt̀ì blocks āl̀ì from being pronounced. Thus (72) predicts (76b) where *āl̀ì* is not pronounced. It however doesn't explain the ungrammaticality of (76b).

The source of ungrammaticality of (76b), I argue comes from the more familiar phenomenon of that-trace effects. In (76b) a trace immediately follows the complementizer āt̀ì. When āt̀ì is deleted as a way of obviating the that-trace effect, āl̀ì is pronounced as required by (72). Thus *āt̀ì* it is always present except when the need to avoid a that-trace effect arises in which case it is deleted. This explain the grammaticality of (76a) above.

With this backgorund we now in a position to explain (76c). Consider the derivation of this sentence in (77). This sentence is ruled out by both the that-trace effect because the subject trace is immediately following the complementizer, and the pronunciation rule in (72). Because *ātì* is present, *ālì* cannot be overtly realized.

(77) a. *[ká wānā [ātì___ ālì dìg lāmmúː]]
    Q who ATI ALI cook meat.DEF
    'Who cooked the meat?'

I argue that the analysis given above for the occurrence of āli̱ in the clausal spine is also a plausible analysis of the more familiar que/qui alternation in French (Rizzi, 1990) (Taraldsen, 2001) (Rizzi & Shlonsky, 2007) and (Koopman & Sportiche, 2008) illustrated in (78). *Qui* appears in the embedded clause when a subject is extracted (78a), When non-subject is extracted as in (78a), que is used.

(78) a. Qui tu crois qui est venu
    'Who do you think came'

  b. Qui tu crois que Jean a vu
    'Who you believe that John has seen'

Most accounts of this alternation including (Rizzi, 1990; Taraldsen, 2001; Rizzi & Shlonsky, 2007) link the appearance of *qui* to the existence of a morphological process that alters the form of the regular complementizer que to qui, when a subject is extracted. Thus qui appears when a subject is extracted. (Koopman & Sportiche, 2008) offers an analysis of this alternation. They argued that wh-subject extraction in French is extraction from the subject of a pseudo relative CP small clause headed by qui. On this account, qui is the head of a small clause from which its subject is extracted rather than a morphological alternate for que. Examples of French pseudo relatives are given in (79), (Koopman Sportiche 2008: 3). Wh-movement will target the subjects of these small

clauses in square brackets.

(79)   a.   C' est   [Jean   qui part]
               It's John leaving
               oila [Jean qui part]

               There is John leaving

In Bùlì, āli̇̀ is found in pseudo relative constructions(80) showing a deep connection with the French qui. It is true for subjects, and only āli̇̀ can be used, āti̇̀ is not possible in these constructions (80c).

(80)   a.   Mí̦ ɲà [Asouk ālí à   lā   (lā)]
               1SG see Asouk ALI IMPF laugh PRT
               'I saw Asouk laughing.'

        b.   Mí̦ wòmù [bíːká   ālí à   kūmū (lā)]
               1SG hear   child.DEF ALI IMPF cry   PRT
               'I heard the child crying.'

        c.   *Mí̦ ɲà [Asouk ātí à   lā   (lā)]
               1SG see Asouk ATI IMPF laugh PRT
               'I saw Asouk laughing'

In pseudo relatives in Bùlì, I argue that āli̇̀ surfaces because it involves a clausal constituent that lacks a C layer. Just like āli̇̀ in Bùlì, qui in French can be argued to be present in the clausal spine but only gets pronounced when que is deleted. Thus the que/qui alternation can be made to follow from (72). That is the presence of a higher complementizer, que blocks the pronunciation of qui. In instances where que is not present as in (79) qui is pronounced. Under this account, āli̇̀ and qui are not special forms of complementizers that show up when subjects are extracted, a conclusion independently reached by (Koopman Sportiche 2008).

6.0.2 Non Subject Extraction

Consider a derivation of (46a) repeated as (81) involving a non subject extraction. Under this account we do not expect *ālì* to be pronounced because of the rule in (72). Because *ātì* is present, it blocks the pronunciation of *ālì* hence the ungrammaticality of (81b). A representation is given in (81c). It is assumed that the QP occupies Spec *ātì*.

(81)   a.   (ká) bʷā *(ātì) bíːká   dìgìː
               Q   what ATI child.DEF cook
               'What is it that the child cooked?'

        b.   (ká) bʷā *(ātì) bíːká   ālì dìgìː
               Q   what ATI child.DEF cook
               'What is it that the child cooked?'

        c.   [ká bʷā ātì [bíːká   dìgìː]] .
               Q   what ATI child.DEF cook

7 Conclusion

In this paper we looked closely at the syntactic properties of wh-constructions in Bùlì. The facts about wh-questions in the language, I argue, make a strong case for the elimination of the need to posit any overt/covert differences in island-sensitivity cross-linguistically. The present work, I hope, thus contribute to our understanding of the question of wh-in-situ and its status as far as movement is concerned. A novel analysis is also offered for the subject/object asymmetry linked to the alternation between *ālì* and *ātì*. I argue that *ālì* is only pronounced when the higher complementizer *ātì* is not present.

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