

Overt quantifier raising of Neg-wh-quantifiers in Cantonese

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This paper reports the overt quantifier raising phenomenon in Cantonese, particularly to non-existential quantifiers in the combination of a negator *mou* and a wh-phrase. It claims that the overt quantifier raising by successive movements is driven by the uninterpretable features [quant] (Chomsky 1995) and [neg]. A NegQP structure for negative wh-quantifiers (Neg-whQ) is proposed to account for the SOV order in Cantonese. The proposed NegQP has an unpronounced quantifier operator \emptyset which carries [quant] feature as its head, negator *mou* in spec position which specifies the phrase with [neg] feature and a wh-phrase as its complement (any DP for other non-existential quantifiers). It gives the correct order of a neg-whQ where the negator *mou* precedes a wh-phrase (e.g. *bingo* ‘who’) and NegQP inherits both [neg] and [quant] features which triggers QR that applies to any neg-whQ in Cantonese.

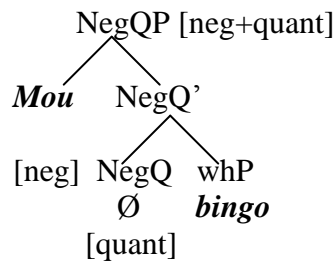
1. INTRODUCTION

Quantifier raising (QR) is a proposed movement of quantifiers, and is parameterised between being covert (English) and overt (Hungarian, French and Icelandic etc). Cantonese object quantifiers are seen to belong to languages with overt quantifier raising. Non-existential quantifiers in the combination of the negator *mou* and a wh-phrase, for example *mou-bingo*, *mou-matje* and *mou-bindou*, are referred as negative wh-quantifiers (neg-whQ) in this paper. Cantonese and Mandarin Chinese are syntactically the same in general. Neg-whQ is an exceptional case that is allowed to undergo QR in Cantonese but not in Mandarin, although overt QR is observed in both languages. This paper proposes the NegQP which combines the negator *mou* at its spec position, a quantifier operator \emptyset at its head position and any wh-phrase as its complement, and movements of NegQPs are triggered by its inherited [neg] and [quant] features. Following Chomsky’s (1995) approach, quantifiers raise to satisfy the uninterpretable [quant] feature in the vP-spec and also the uninterpretable [Neg] feature in the NegP-spec proposed in this study. In section 2, I put forth the proposed NegQP and present the account triggering overt QR. Section 3 provides a brief review and presents my original data in Cantonese including raised object neg-whQ to preverbal position and section 4 explains how NegQP accounts for data on dative and infinitival constructions where the raised neg-whQ licenses another wh-phrase as NPI and cancels WCO effect. Last but not least, section 5 concludes on the proposed account.

2. THE PROPOSAL

This paper proposes a negative wh-quantifier-phrase (NegQP), which accounts for all non-existential quantifiers including neg-whQ and can even be extended to all quantifiers in Cantonese. However, I limit the discussion to object neg-whQ. The proposed NegQP in (1) has an unpronounced quantifier operator \emptyset that carries [quant] feature as its head, negator *mou* in spec position that specifies the phrase with a [neg] feature, and a wh-phrase as its complement (any DP for other non-existential quantifiers). The proposed structure gives the correct order of neg-whQ where the negator *mou* precedes a wh-phrase (e.g. *bingo* ‘who’), and NegQP inherits both [neg] and [quant] features that trigger QR, which applies to all *mou*+wh-phrases in Cantonese.

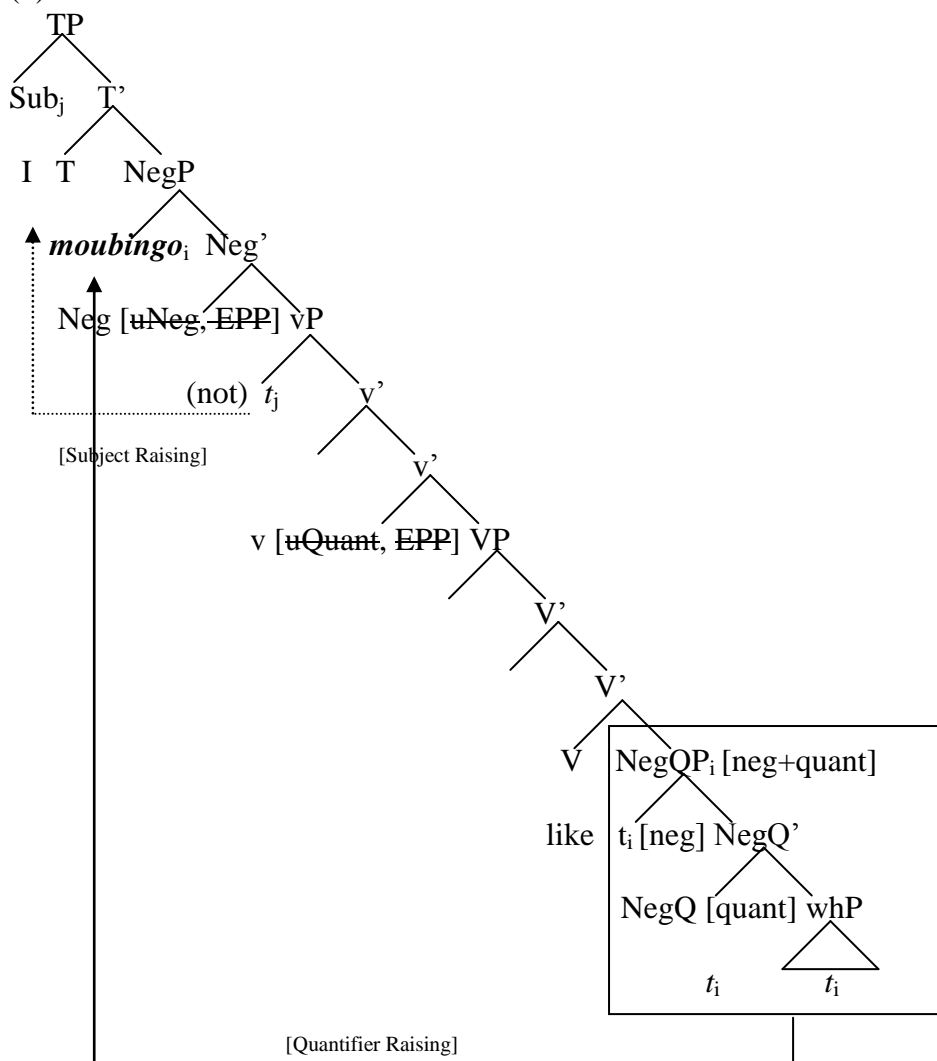
(1) NegQ-phrase:



I also propose that all neg-whQs undergo overt QR driven by inherited features [quant] and [neg] in Cantonese. Given current Minimalist approaches, I follow Chomsky's (1995) account that the unvalued [uQuant] feature in vP forces quantifiers to raise to [spec, vP] from its base generated object position. This accounts for all quantifiers raising overtly to preverbal positions. Neg-whQs first move to [spec, vP], then move to [spec, NegP] and check [uNeg].

(2) Ngo [mou-bingo]_i (m) zungji t_i
 I no who not like
 (a) 'I (dis)like nobody.'
 (b) 'I don't (dis)like anybody.'

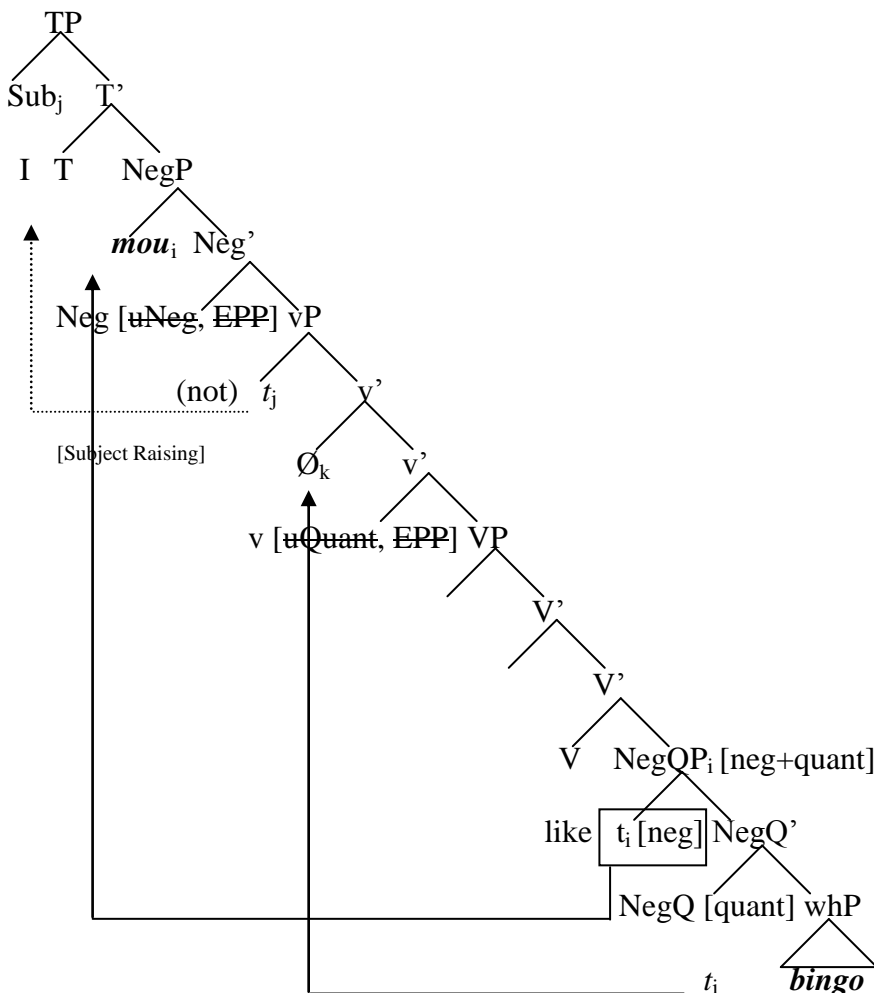
(3)



Example (2) displays the word order for a construction (also possible in negated context) with a neg-whQ as the object, where overt quantifier raising is observed. The structure is illustrated in (3), which gives both the non-existential *nobody* and existential polarity *not+anybody* interpretations of *mou-bingo*. NegQP carrying [neg] and [quant] features undergo successive movement to [spec, vP] valuing [uQuant] and [EPP] features in the head of vP. Since the features [uNeg] and [EPP] in head of NegP is unvalued, they force NegQP to raise further and land at [spec, NegP]. After the overt movement, it gives the NegQP-S-V order that possibly accounts for cases where NegQP is topicalised and appears in pre-subject position in surface structure. In fact, there should be an overt subject raising from V-to-T in Cantonese as well, such that S-NegQP-V order is preserved.

- (4) Ngo mou_i (m) zungji [_{t_i} bingo]
 I no not like who
 ‘I don’t (dis)like anybody.’

(5)



The proposed structure could well account for example (4), where only the negator *mou* moves out of the NegQP and licenses *bingo* in-situ as a negative polarity item (NPI). In this structure, only the existential polarity reading survives. As illustrated in the representation (5), the negator in [spec, NegQP] first undergoes successive raising to [spec, NegP] and satisfies the [uNeg] and EPP features. Next, the unpronounced quantifier operator \emptyset carries along [quant] feature and raises to spec of vP and check the [uQuant] and EPP features. The v-to-T

raising of the subject DP follows. The structure is preserved with the raising of the quantifier operator \emptyset satisfying both [uQuant] and EPP features and yields the wh-phrase in-situ construction. In this structure, the raised negator *mou* c-commands the wh-phrase *bingo* in-situ and licenses it as NPI.

To summarise this section, a NegQP is proposed which contains a negator *mou* as its specifier, an unpronounced quantifier operator \emptyset as its head and any DP (wh-phrase in this discussion) as its complement. The proposal follows Chomsky's (1995) account that the unvalued [quant] feature in vP forces quantifiers in Cantonese to raise to [spec, vP] from their base generated object position. This accounts for all quantifiers raising overtly to preverbal position in Cantonese. NegQP, which is a specifically proposed phrase for all Cantonese non-existential quantifiers, inherits the [neg] feature from its specifier and the [quant] feature from its head. It is driven to undergo overt quantifier raising to preverbal position by [uQuant] at [spec, vP] and [uNeg] at [spec, NegP], which also satisfies the EPP features in the two spec positions.

3. BACKGROUND ON CANTONESE *MOU+WH-PHRASE*

3.1. The observed SOV order with an object *mou+wh-phrase*

Cantonese allows the canonical SVO, possible VOS and OSV orders (where NP dislocation applies), but never allows SOV order in general. SOV is not observed even in interrogatives as Cantonese is one of the wh-in-situ languages (Mandarin Chinese, Japanese etc).

(6) Ngo zungji nei
I like you
'I like you.'

(7) Zungji nei aa ngo
Like you PCL I
'Like you, me'

(8) Nei, ngo zungji
You I like
'You, I like.'

(9) *Ngo nei zongji
I you like
'I like you.'

Cantonese canonically has the SVO word order as in (6), but it permits other orders as well since NPs are subject to scrambling. The subject of the sentence can be right-dislocated to give rise to the VOS order, as in (7) with the particle *aa* following the object. OSV is also possible when the object is topicalised as in (8). SOV is generally impossible, as (9) displays the ungrammaticality.

(10) Ngo [mou-bingo]_i zungji *t*_i
I no who like
(a) 'I like nobody.'
(b) 'I don't like anybody.'

- (11) *Ngo zunji mou-bingo
 I like no who
 ‘I like nobody.’

However, Neg-whQ undergoes obligatory and overt raising to preverbal position as in (10) whereas *mou-bingo* in-situ in (11) is ungrammatical. Neg-whQ can be extracted as a whole and this will be discussed in a later section. Crucial to the structure in (10) with an overt raising of neg-whQ are the two given interpretations, the one which treats a negator *mou* and wh-phrase *matje* as a non-existential quantifier *nothing* and the one which treats it as *mou* licensing a wh-phrase as a negative polarity item *anything*. Christensen (2004) refers to the former as “zero quantification” and the latter as “sentential quantification”.

- (12) John [mou-matje]_i soeng maai *t_i* me?
 John no who want to buy Q
 (a) ‘Is it true that John wants to buy nothing?’
 (b) ‘Doesn’t John want to buy anything?’

In interrogatives, the two possible interpretations of *mou-matje* could give very distinct readings. As (12) illustrates, it gives either a non-existential reading of *mou-matje* resulting in a yes-no question, or an existential polarity reading of *mou-matje* resulting in a rhetorical question that actually presupposes the reading ‘John wants to buy something.’

- (13) *Wo [meiyou-shei] xihuan
 I no who like
 *Wo xihuan [meiyou-shei]
 I like no who
 ‘I like nobody.’

- (14) Meiyou-shei xihuan wo
 No who like me
 ‘Nobody likes me.’

- (15) Wo meiyou xihuan shei
 I no like who
 ‘I don’t like anybody.’

- (16) Wo shei dou xihuan
 I who also like
 ‘I like everyone.’

Although Cantonese and Mandarin Chinese have similar syntactic structure, such overt raising of object neg-whQs is forbidden in Mandarin Chinese as in (13). *Meiyou-shei* in the combination of the negator *meiyou* and the wh-phrase *shei* in (13) is ungrammatical neither in preverbal positions nor post-verbal positions, but it can appear in the subject position as in (14). Overt quantifier raising is observed only with universal quantifiers with *dou*-quantification (Cheng 1995) as in (16). Examples (15)-(16) also show that, as in Cantonese, wh-phrases in Mandarin Chinese can also be licensed as existential polarity by negation *meiyou* in (15) and universal quantifier by *dou* in (16).

- (17) Bingo mou/m soeng maai matje (le)?
 Who no/not want to buy what
 (a) ‘Who didn’t want to buy what?’

(b) 'Who didn't want to buy anything?'

(18) Shei bu xiang mai shenme (ne) (Cheng 1994: 23)

Who not want buy what

(a) 'Who didn't want to buy what?'

(b) 'Who didn't want to buy anything?'

Negations can license wh-phrases as existential polarity items (equivalent to English negative polarity item NPI *any*-phrases) in both Mandarin Chinese and Cantonese. Negators *mou* and *m* therefore can license *matje* as existential quantifier *anything* in (17) in Cantonese and the same licenser licensee relationship applies to negators *meiyou/bu* and the wh-phrase *shenme* in (18) in Mandarin Chinese. Therefore, examples (17)-(18) show ambiguity as to whether the object wh-phrase *what* is interpreted as interrogative in (a) or as NPI in (b).

Regarding the significant difference between Cantonese and Mandarin Chinese on object neg-whQ, I focus on cases where the negator *mou* immediately precedes the wh-phrase as a neg-whQ that undergoes overt raising to a preverbal position. The above sentences raise the question of whether the negator is base-generated in NegP position, which is anyhow above VP, or whether it attaches to the wh-phrase in object position as a phrase on its own and moves as a NegQP. The ideal goal is the later option and this is to be reviewed in the next section with a detailed discussion of the status of two different negators *mou* and *m* in Cantonese.

3.2. The two negators *mou* 'No/Without' and *m* 'Not'

On a par with Norwegian neg-phrases in which “*ingen* is in effect the Spellout of *ikke+noen* ('not+any/some')” (Kayne 1998: 130), the morphology of Cantonese neg-whQs is a composition of a negator *mou* and a wh-phrase being licensed as indefinites. To argue that *mou*+wh-phrase is a NegQP rather than simply *mou* in NegP attracting the wh-phrase to land at preverbal position, we have to look at the negator *mou* in detail.

(19) Ngo [mou-bingo]_i m zungji *t_i*

I no who not like

(a) 'I don't like nobody.'

(b) 'I don't dislike anybody.'

Raised neg-whQ can appear with another negative morpheme *m* as illustrated in (19). According to Kratzer (1995), Potts (2000) and Penka & von Stechow (2001), negative phrases can actually be decomposed into negation and an existential/indefinite element. The overt raising of *mou-bingo* in (19) actually gives rise to the non-existential reading in (a) and the existential reading in (b).

(20) Ngo mou m zungji bingo

I no not like who

'I don't dislike anybody.'

(21) Ngo m/mou zungji Tom

I not/no like Tom

'I don't like Tom.'

Example (20) shows that *mou* by itself appears in a position that precedes the negative morpheme *m*, stranding *bingo* in-situ. Both *mou* and *m* generally have the same function as negation in (21), but the two negators seem to be different when they co-occur in one

construction. This is the starting point to look at where *mou* and *m* locate at in the structures. We would expect a negator which is base-generated in NegP to be located at the head of NegP. So before looking at where *mou* of the neg-whQ is base generated, it is necessary to address where *m* is located as well, since *mou* can co-occur with it.

- (22) Q: Nei m zungji bingo (aa)?
 You not like who
 ‘Who do you not like?’
 (a) Mou aa (Ngo mou m zungji bingo)
 NO PCL (I no not like who)
 ‘No. (Not anyone.)’
 (b) Mou-bingo aa
 No who PCL
 ‘Nobody.’

Firstly, either the negator *mou* or the neg-whQ *mou-bingo* can stand as an answer to the question in (22). The interrogative wh-phrase *bingo* is being asked in (22); the two possible answers (a) and (b) are given. Answer (a) with only the negator *mou* actually implies a non-existential interpretation as in the bracket, equivalent to the neg-whQ in answer (b). This suggests that *mou* in (a) could well be extracted from *mou-bingo* in (b).

- (23) Q: Nei zung-m-zungji Mary?
 You like-not like Mary
 ‘Do you like Mary?’
 (a) M zungji
 Not like
 ‘Don’t like.’
 (b) *M
 not
 ‘Not.’

But, *m* cannot be extracted alone and has to be extracted along with the verb as an answer to the question in (23).

- (24)*Ngo m mou zungji bingo
 I not no like who
 ‘I don’t dislike anybody.’

- (25)*Ngo m [mou-bingo]_i zungji *t_i*
 I not no who like
 ‘I don’t like nobody.’

Secondly, the negator *mou* or the raised neg-whQ *mou-bingo* must precede the negator *m* in all circumstances, or else ungrammaticality results, as in (24)-(25). The head of NegP cannot be filled twice when the two negators co-occur.

- (26) Ngo mou hakji m sik matje
 I no intentionally not eat what
 ‘I don’t intentionally not eat anything.’

- (27)*Ngo mou m hakji sik matje
 I no not intentionally eat what

‘I don’t intentionally not eat anything.’

- (28) Ngo mou/m hakji sik matje
 I no/not intentionally eat what
 ‘I don’t intentionally eat anything.’

Finally, an adverb can be inserted between *mou* and *m* in (26), which suggests that the two cannot appear as a constituent. Besides, an adverb can never appear between the negator *m* and the verb in (27). This again confirms that the later attaches more closely to the verb. However, an adverb can intervene between a negator and a verb in (28) when there is only one negator in the construction where *mou* and *m* do not interact at the same time.

To summarise, the above suggests that the negators *mou* and *m* are indeed not totally the same when they co-occur. The former can be extracted along with a wh-phrase as a neg-whQ combination or alone, yet give the same non-existential interpretation *nobody*. The later can only be extracted along with a verb and gives sentential negation interpretation only. Negator *mou* has a hierarchically higher position than *m* and they do not form one constituent. This is supported by the fact that *mou* must always precede *m*, and no adverb can intervene between *m* and the verb but may occur in between *mou* and *m* when they interact. Therefore *mou* in neg-whQ is proposed to be base-generated within the NegQP as a complement of the verb throughout the study.

3.3. Overt quantifier raising in Cantonese

This study argues that the observed movement is overt quantifier raising (QR) as suggested by Rognvaldsson (1987), Haegeman (1995) and Rizzi (1990). Such overt QR is observed in languages such as French with “strong” quantifiers and Icelandic optionally.

- (29) János [**minden diákot**]_i [VP szeretne [ha meghívna *e_i*]]. (Kiss 1995: 226)
 John every student would:like if invited:we
 ‘John would like if we invited every student.’

It cannot simply be referred as Chomsky’s object shift (2001), since such raising is restricted only to and even obligatory to object quantifiers in Cantonese creating SOV¹ order. The overt quantifier raising observed in Cantonese resembles Kiss’ (1995) proposal for Hungarian that the quantified NP in (29) raises.

- (30) Ngo [moujan/ sojaujan/muigojan dou/ joujan / mou bingo]_i (m) zungji *t_i*
 I nobody/ everyone also/ someone/ no who (not) like
 ‘I (not) like Q.’
- (31) Ngo [mou-bingo]_i zungji *t_i*
 I no who like
 (a) ‘I like nobody.’
 (b) ‘I don’t like anybody.’

¹ The wh-movement in the following example applies only to object wh-phrases in Archaic Chinese of the Warring State period (475-221 BC). This suggests a long history of the movement of object phrases morphologically consisting of wh-elements and it was actually hypothesised as “the result of a general prohibition on quantificational material in VP” (Aldridge 2006: 13).

e.g. Wu shei qi? Qi Tian hu? (Aldridge 2006: 1)

I who deceive deceive Heaven Q
 ‘Who do I deceive? Do I deceive Heaven?’

I first argue that such overt quantifier raising applies to all quantifiers in Cantonese and requires all “strong quantifiers” (Diesing 1992), such as the non-existential *moujan* ‘nobody’, universal *sojaujan* and *muigojan* ‘everyone’ with *dou*-quantification, existential *jaujan* ‘someone’ and neg-whQ *mou-bingo* ‘nobody’, to raise to preverbal positions as illustrated in (30). The example with neg-whQ in (10) is repeated here again in (31), displaying the special features of QR with the negator *mou* that yields both non-existential quantifying and negative polarity interpretations of the wh-phrase *bingo*.

- (32) Wo shei_i dou bu xihuan t_i
 I who also not like
 (a) ‘I like nobody.’
 (b) ‘I don’t like anyone.’

- (33)*Wo [meiyou-shei]_i xihuan t_i
 I no who like
 ‘I like nobody.’

Overt QR is observed in Mandarin Chinese only with universal quantifiers with *dou*-quantification. Wh-phrases can be licensed as quantifiers as well with different licensors, and *shei* ‘what’ is licensed as a universal quantifier with *dou* following and it is raised to a preverbal position as in (32). Other licensing of wh-phrases as quantifiers will not be discussed in this paper. What should be noted is that overt QR is disallowed for neg-whQ *meiyou-shei* in (33). So this makes the unique feature of overt QR in Cantonese the fact that neg-whQ is a strong quantifier. Resembling Hungarian and other Germanic languages, the overt quantifier raising is obligatory in Cantonese. QR with any object non-existential quantifiers or neg-whQ distinguishes Cantonese from Mandarin Chinese, although the two are grammatically the same.

Besides, recent work on the syntax of LF has suggested that QR is required for the *antecedent-contained deletion* (ACD) (May, 1985; Kennedy, 2010) construction as a condition for grammaticality. Kennedy (2010) suggests that “the principles that force LF movement of lexical material are essentially the same as those that force overt (PF) movement”. Data on ACD in Cantonese in the following support the claim and support my previous claim about the overt QR in Cantonese.

- (34) (a) I read every book that you did. (Diesing 1992: 70, example 25a)
 (b) Max put everything he could in his pockets. (Diesing 1992: 70, example 25d)

VP-ellipsis is marked by the verb *do* in English and the deletion can be recovered by copying the elided VP to replace *do* as in (34a). Also, it is marked by the modal *could* and can be recovered by copying the elided VP after *could* in (34b).

VP-deletion in Cantonese appears in a similar pattern, but it is marked by modal verbs like *jau* ‘have’, *hoji* ‘can’ and in infinitival. This patterns with Mandarin Chinese that “ACD constructions involving a relative clause in MC requires the presence of a modal such as *neng* ‘can’ or *gan* ‘dare to’” (Soh 2005: 10). Overt QR of Neg-whQ as a kind of strong quantifier in Cantonese survives in ACD.

- (35) Ngo [mou-matje]_i maai-zo t_i (ji) nei dou jau ge.
 I no what buy-PVF (that) you also have GE
 (a) ‘I bought nothing that you did.’
 (b) ‘I don’t buy anything that you did.’


- (36) John [mou-matje]_i jung t_i ngo jiukou kui ge.

- John no what use I request him GE
 (a) 'John uses nothing I ask him to.'
 (b) 'John does not use anything I ask him to.'

In both (35) and (36), the deletion of VP is contained within the NP as a consequence of overt QR. Even if the deletion is recovered by copying its antecedent, the grammaticality of the sentences is maintained without producing infinite regress.

3.4. Left Dislocation of *Mou+wh-phrases*

The above sections present the general observation that the obligatory raising of the neg-whQ to a preverbal position in Cantonese is a consequence of the overt QR, and suggest the idea that *mou+wh-phrases* move along as a whole constituent. In this section, I will present data regarding optional movement² of the neg-whQ after the obligatory QR and suggest the resemblance of neg-whQs to any ordinary DPs in Cantonese for left dislocations.

- (37) $\overline{\text{Mary}}$ $\overline{\text{waa}}$ $\overline{\text{nei}}$ [mou-matje]_i zungji sik t_i

 Mary say you no what like eat
 (a) 'Mary says you like to eat nothing.'
 (b) 'Mary says you don't like to eat anything.'

As illustrated in (37), the neg-whQ can further be raised to any pre-subject and preverbal positions after the obligatory QR. (37) indicates the possible landing sites for this optional successive movement.

Left dislocation of neg-whQs not only adds focus to the raised neg-whQ, but also cancels weak crossover (WCO). In accordance with Mahajan's (1990) proposal regarding the difference between internal and long distance scrambling, I argue that the neg-whQ undergoes 'clause-internal' A-movement as well as optional 'long-distance' A'-movement.

- (38) *Kui_i aamaa mou-bingo_i toujim t_i
 His mother no who hate
 '*His_i mother hates nobody_i.'

The ungrammaticality of (38) illustrates that WCO is observed where the pronoun appears within the subject NP and the neg-whQ appears as the object and they are coindexed. The anaphor *kui* 'his' in a DP in the subject position cannot be bound where it is not c-commanded by the neg-whQ *mou-bingo* 'nobody' after the overt QR.

- (39) [Mou-bingo]_i, [kui_i aama] t_i toujim t_i
 No who his mother hate
 'Nobody_i, his_i mother hates.'
 = 'There is nobody such that his mother hates him.'
 (40) Ngo [mou-bingo]_i waa t_i [kui_i aama] t_i toujim t_i /(kui_i)
 I nobody say his mother hate him
 'Nobody, I said that his mother hates him.'

² This optional movement is subject to an island effect. Long distance movement is not allowed when the embedded clause is marked finite with aspect such as *-guo* and *-zo* in Cantonese.

e.g. * Mary [mou-matje]_i waa [CP nei maai-zo t_i]
 Mary no what say you buy-PFV
 'Mary says you bought nothing.'

(41) Someone_i is likely [_{IP} *t_i* to win the race] (Saito, 1992: 89, example 45)

However, the WCO effect is repaired in the case where the object neg-whQ *mou-bingo* undergoes successive optional movements after the obligatory overt QR and lands in the sentential initial position in (39). Besides, grammaticality is maintained remedying the WCO effect with long distance optional movement even without the resumptive pronoun in the object position in (40). The neg-whQ *mou-bingo* moves out of the embedded clause binding the anaphor *kui* within the subject DP, and successfully cancels WCO as well. This could well explain the successive cyclic movements that neg-whQs undergo. The clause-internal A-movement of *mou-bingo* in (40) cancels WCO. Then the neg-whQ undergoes A'-movement and takes wide scope with respect to the matrix verb. Unlike (41) in English, *someone* moving within CP may take either wide or narrow scope with respect to the word *likely*.

(42) ??Ngo [mou-bingo]_i gotdak *t_i* nei *t_i* gin-guo *(kui)
 I no who think you meet-PFV him
 'Nobody, I think that you met him.'

Strong islandhood (Chomsky 1986; Ross 1967) is observed when the embedded clause is marked finite with the past tense marker *-guo* or *-zo*. The optional further raising from the embedded clause is forbidden unless a resumptive pronoun is present (Aoun, Choueiri, & Hornstein, 2001) and the ungrammaticality is loosened in (42).

This section summarises the possible optional movements that a neg-whQ undergoes to any preverbal and pre-subject positions after the obligatory QR, and suggests that such left dislocation of a neg-whQ in overt syntax actually cancels the WCO effect. In addition, long-distance movements are subject to an island effect, but can be rescued by a resumptive pronoun.

4. ACCOUNTING FOR THE DATA

In this section, I will include data on NPI licensing and WCO cancellation in dative and infinitival constructions.

4.1. Licensing NPI in dative constructions

Several scholars (Li 1992, Cheng 1994, 1995, Lin 1996, Cheng & Rooryck 2000) discuss the licensing of wh-phrases as polarity items in Mandarin Chinese, and Cantonese wh-phrases are licensed by negations as NPI as in MC.

(43) Koei mou fatjin matje
 He no discover what
 'He doesn't discover anything.'

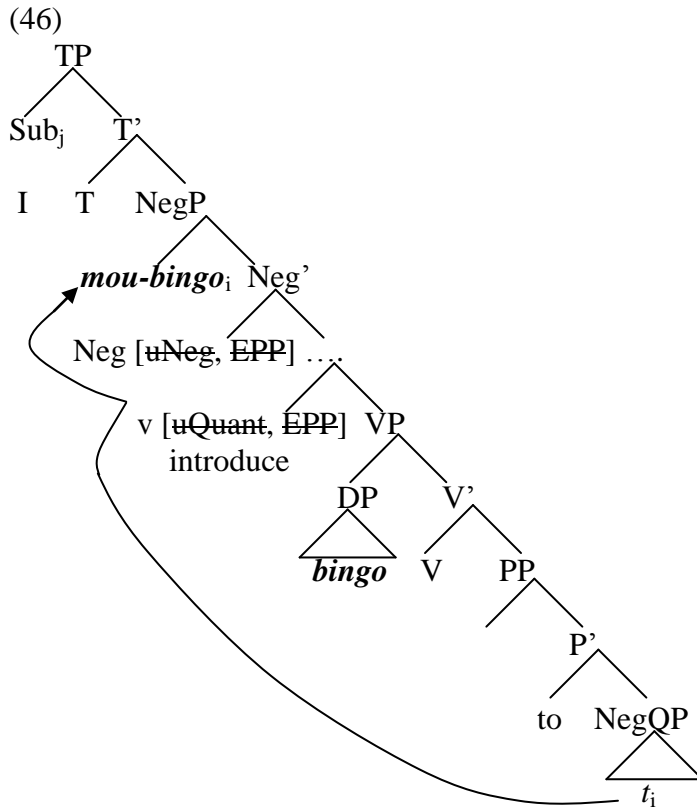
Example (43) illustrates how *mou* licenses wh-phrase *matje* as NPI in Cantonese.

The proposed overt QR of the NegQP licenses another wh-phrase as NPI in dative constructions, where the neg-whQ is the indirect object undergone raising to preverbal position and the licensed wh-phrase as NPI is the direct object.

(44) *Ngo gaaisiu bingo bei [mou-bingo]
 I introduce who to no who
 ?'Who do I introduce to nobody?'
 (45) Ngo [mou-bingo] gaaisiu bingo bei *t_i*

- I no who introduce who to
 (a) ‘Nobody, I introduce anyone to.’
 (b) ‘I do not introduce anyone to anyone.’

The overt QR not only saves (44) syntactically since *mou-bingo* cannot stay in-situ, but also semantically as (45) gives the possible reading where the direct object *bingo* is licensed as NPI. The structure in (46) explains how the licensor-licensee relationship is preserved by overt QR.



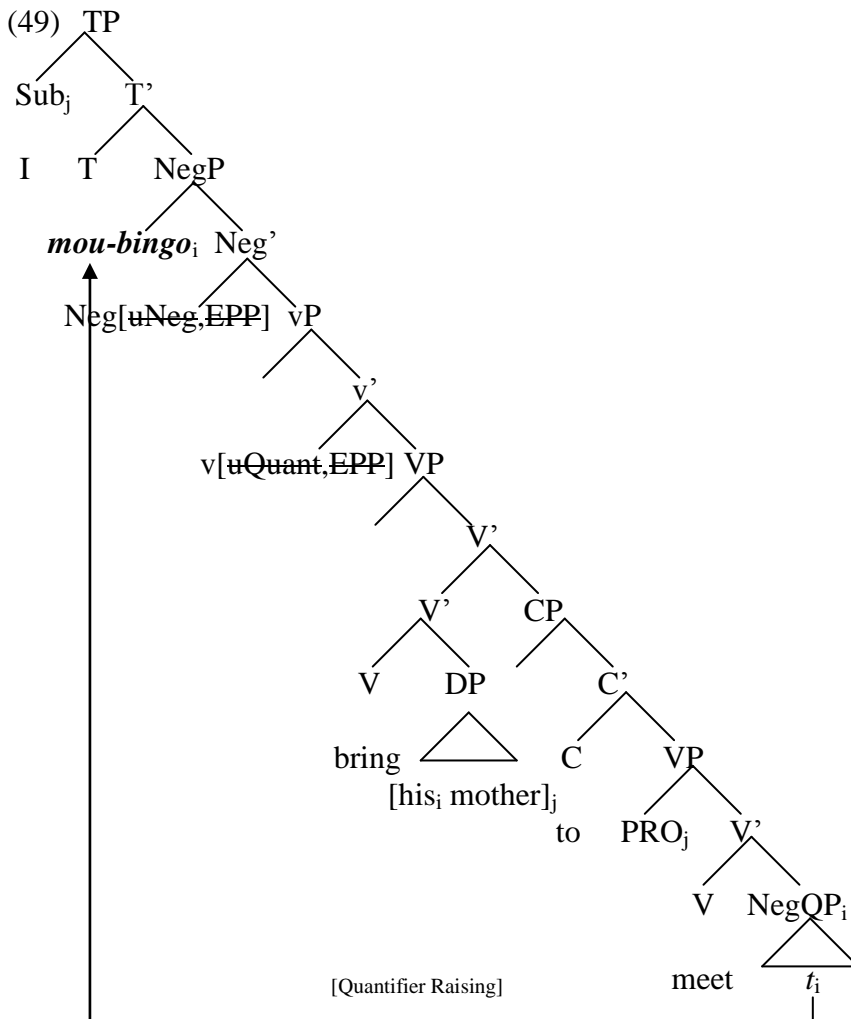
The neg-whQ which originally stays inside the PP does not c-command the wh-phrase in DP, and (44) has an interrogative interpretation which makes no sense. In the representation (46), the raised NegQP *mou-bingo* not only satisfies the [uQuant], [uNeg] and EPP features and provides grammaticality, but also creates the c-commanding relationship with the direct object wh-phrase *bingo* and licenses it as NPI “anything” giving rise to the possible interpretations in (45a-b).

4.2. Cancelling WCO in infinitival constructions

The proposed overt QR of NegQP also cancels the WCO effect, where a neg-whQ is the complement of the verb within the infinitival and the anaphor is within the direct object of the main verb.

- (47) *Ngo daai [kui_i aa ma] hui gin [mou-bingo]_i
 I bring his mother to meet no who
 ‘I bring his_{*i/j} mother to meet nobody_i.’
- (48) Ngo [mou-bingo]_i daai [kui_i aa ma] hui gin t_i
 I no who bring his mother to meet
 ‘Nobody_i, I bring his_{i/j} mother to meet.’

The construction in (47) is ungrammatical with the neg-whQ in-situ. Also, it observes the WCO effect when *mou-bingo* is co-indexed with the anaphor *kui*. However, the overt QR provides grammaticality in (48) cancelling WCO where *mou-bingo* now successfully binds the anaphor *kui* as illustrated by the representation (49).



The neg-whQ *mou-bingo* as the object in the infinitival undergoes overt QR, first raising to [spec, vP] to value [uQuant] and satisfy the EPP feature, then raising successively to [spec, NegP] to satisfy both [uNeg] and EPP features. As long as it c-commands the anaphor *kui* within the DP as the object of the matrix verb, the WCO effect is cancelled, rendering (48) grammatical.

4.3. Licensing wh-phrase as NPI in infinitival constructions

Again, the proposed overt QR to neg-whQ licenses the object wh-phrase of the matrix verb as NPI and accounts for the declarative interpretation.

(50) *Ngo daai bingo hui gin [mou-bingo]
 I bring who to meet no who
 ?'Who do I bring to meet nobody?'

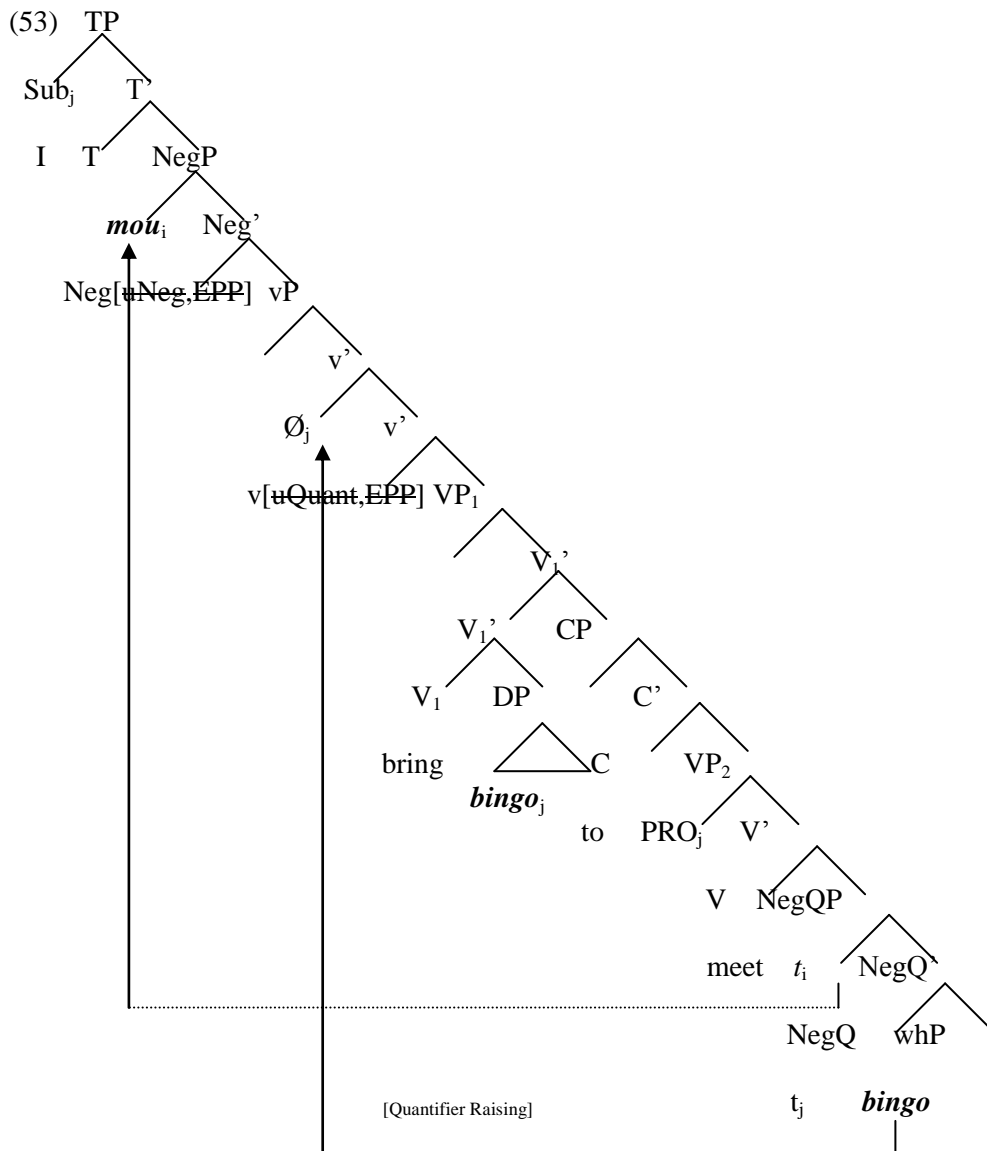
(51) Ngo [mou-bingo]_i daai bingo hui gin t_i
 I no who bring who to meet

- (a) ?‘Who do I bring to meet nobody?’
- (b) ‘Nobody, I bring anyone to meet.’

Example (50) is ungrammatical with the neg-whQ in-situ at the object position in the infinitival and allows only an interrogative interpretation where the wh-phrase is not licensed as NPI, whereas in (51) the interrogative reading is suppressed and the direct object *bingo* is now licensed as NPI giving the reading in (b). The structure for (51) is similar to the one in (48) and it is not repeated again.

- (52) Ngo mou_i daai bingo hui gin [t_i bingo]
- I no bring who to meet who
- (a) ‘I don’t bring anyone to meet anyone’
- (b) ‘Who do I not bring anyone to meet?’
- (c) ‘Who do I not bring to meet anyone?’

As I proposed, the structure could account for the case where only the negator *mou* raises to preverbal position in (52). The representation (53) explains the ambiguity of (52) due to the overt raising of *mou* from NegQP.



With only the negator *mou* raising out of the NegQP, it satisfies [uNeg] and the EPP feature at [spec, NegP]. The quantifier operator \emptyset raises to [spec, vP] and satisfies [uQuant] and the EPP feature, and licenses the wh-phrase *bingo* in-situ inside NegQP as NPI. In the representation (53), the negator *mou* c-commands both wh-phrases *bingo* in VP₁ and in NegQP. This gives rise to the declarative interpretation that both *bingo* phrases are licensed as NPIs, and the interrogative interpretations that either *bingo* is licensed as NPI while the other remains to be interrogative.

4.4. Summary

Under the proposed structure, a neg-whQ undergoing obligatory and overt QR cancels WCO in dative constructions, and also licenses another wh-phrase as NPI in dative constructions and infinitival constructions. This is observed when the neg-whQ *mou-bingo* is the indirect object binding the direct object *bingo* in the former construction, and it is the object in the infinitival binding the object *bingo* in the matrix clause after the overt QR.

5. CONCLUSION

To conclude, this study illustrates the overt quantifier raising phenomenon of object quantifiers in Cantonese, in particular the negative-wh-quantifiers (Neg-whQ). The proposed structure NegQP is a composition of the specifier *mou* carrying the [neg] feature, the head of an unpronounced quantifier operator \emptyset carrying the [quant] feature and the wh-phrase. This study follows Chomsky's idea that QR is driven by [uQuant] at [spec, vP] and by satisfying EPP features. The proposed NegQP accounts for constructions where the whole phrase NegQP moves to a preverbal position giving an SOV order and constructions where only the negator *mou* moves to a preverbal position licensing the wh-phrase in situ as NPI. It can be extended to account for all strong quantifiers in Cantonese in future research.

REFERENCES

- Aoun, Joseph, Choueiri, Lina and Hornstein, Norbert (2001) Resumption, movement, and derivational economy. *Linguistic Inquiry* 32: 371-403.
- Aldridge, Edith (2006) VP-internal Quantification in Old Chinese. In R. Djamouri & R. Sybesma (eds.) *Chinese Linguistics in Budapest*. Paris: CRLAO, pp. 1-15.
- Cheng, Lisa Lai-Shen (1994) Wh-words as Polarity Items. *Chinese Languages and Linguistics II*, Symposium Series of Institute of History and Philology. Academia Sinica, Taiwan, pp. 615-640.
- Cheng, Lisa Lai-Shen (1995) On Dou-quantification. *Journal of East Asian Linguistics* 4: 197-234.
- Cheng, Lisa Lai-Shen and Rooryck, John (2000) Licensing Wh-in-situ. *Syntax* 3: 1-19. <http://www.lisacheng.nl/pdf/Wh-Polarity.pdf>.
- Christensen, Ken Ramshøj (2004) Quantifier Movement and Derivation by Phase-Now You See It, Now You Don't. Paper presented at the Workshop on Comparative and Theoretical Linguistics: "When and why do constituents move?", Dept. of English, University of Aarhus.
- Chomsky, Noam (1986) *Barriers*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam (1995) *The minimalist program*. Cambridge, Mass.: MIT Press.
- Chomsky, Noam (2000) Minimalist Inquiries: the framework. In Roger Martin, David Michaels and Juan Uriagereka (eds.) *Step by Step: Essays in Minimalist Syntax in Honor of Howard Lasnik*. Cambridge, Mass.: MIT Press, pp. 89-156.
- Chomsky, Noam (2001) Derivation by phase. In Michael Kenstowicz (ed.) *Ken Hale: a life in language*. Cambridge, Mass.: MIT Press, pp. 1-52.

- Diesing, Molly (1992) *Indefinites*. Cambridge, Mass.: MIT Press.
- Haegeman, Liliane (1995) *The Syntax of Negation*. Cambridge: Cambridge University Press.
- Kayne, Richard S. (1998) Overt vs. Covert Movement. *Syntax* 1: 128-191.
- Kiss, Katalin É. (1995) NP Movement, Operator Movement, and Scrambling in Hungarian. In K. Kiss (ed.) *Discourse Configurational Languages*. Oxford: Oxford University Press, pp.207-243.
- Kratzer, Angelika (1995) Stage-level and individual-level predicates. In G. Carlson & F. J. Pelletier (eds.) *The generic book*. Chicago: University of Chicago Press, pp. 125-175.
- Li, Yen-Hui Audrey (1992) Indefinite Wh in Mandarin Chinese. *Journal of East Asian Linguistics* 1: 125-155.
- Lin, Jo-Wang (1996) *Polarity Licensing and Wh-Phrase Quantification in Chinese*. Ph.D. dissertation. University of Massachusetts at Amherst.
- Mahajan, Anoop Kumar (1990) *The A/A-Bar Distinction and Movement Theory*. Ph.D. dissertation. MIT.
- Rizzi, Luigi (1990) *Relativized Minimality*, Cambridge, Mass.: MIT Press.
- Ross, John R. (1967) *Constraints on variables in syntax*. Ph.D. dissertation. MIT.
- Rögnvaldsson, Eiríkur (1987) OV Word Order in Icelandic. In R. D. S. Allan & M. P. Barnes (eds.) *Proceedings of the Seventh Biennial Conference of Teachers of Scandinavian Studies in Great Britain and Northern Ireland*. London: University College, pp. 33-49.
- Penka, Doris and von Stechow, Arnim (2001) Negativen Indefinita unter Modalverben. In Reimar Muller & Marga Reis (eds.) *Modalität und Modalverben im Deutschen*. Hamburg: Buske, pp. 263-286.
- Potts, Christopher (2000) When even no's neg is splitsville. <http://ling.ucsc.edu/Jorge/potts.html>.
- Saito, Mamoru (1992) Long Distance Scrambling in Japanese. *Journal of East Asian Languages* 1: 69-118.
- Soh, Hooi Ling (2005) Wh-in-situ in Mandarin Chinese. *Linguistic Inquiry* 36: 143-155.

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