VP-internal Quantification in Old Chinese
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1. Introduction

Archaic Chinese of the Warring States period had a type of *wh*-movement, in which VP-internal *wh*-phrases were required to move to a position between the verb and the subject. In (1a), the object *wh*-word appears between the subject and the VP, while the non-*wh* object in the following clause remains in post-verbal position.

(1) a. 吾 誰 欺？ 欺 天 乎？
   *Wu shei qi？ Qi Tian hu？*
   I who deceive deceive Heaven Q
   ‘Who do I deceive? Do I deceive Heaven?’ (論語・子罕)

b. 天下 之 父 歸 之，其 子 焉 往？
   *Tianxia zhi fu gui zhi qi zi yan wang？*
   world GEN father settle here 3:GEN son where go
   ‘If the fathers of the world settled here, where would their sons go?’ (孟子・離婁上)

The fact that Archaic Chinese had *wh*-movement is particularly interesting, given that modern Chinese is a *wh*-in situ language. Object *wh*-phrases remain in their base positions inside the VP.

(2)  Zhangsan [VP mai-le shenme]?
   *Zhangsan buy-ASP what*
   ‘What did Zhangsan buy?’

This paper proposes an analysis of *wh*-movement in Archaic Chinese, focusing on the landing site and motivation for the movement. I propose that Archaic Chinese *wh*-movement was a type of quantificational A’-movement, which targeted not [Spec, CP] but rather a clause-internal focus position. The motivation for the movement was a general ban in the language on the overt appearance of quantificational material inside the VP.
2. Against a Prosodic Approach to $Wh$-movement

Before entering the syntactic analysis of $wh$-movement, I first argue against an alternative account based on prosodic factors. Feng (1996) takes the position that Archaic Chinese $wh$-movement, together with pronoun fronting under negation, was the result of cliticization. Looking first at negation, object pronouns were generally required to raise out of VP to a position right-adjacent to the marker of negation.

(3)a. 驕而 不 亡 者，未 之 有 也。
   jiao er bu wang zhe, wei zhi you ye.
   arrogant and not lose ASP not:yet 3:OBJ exist DECL
   ‘There has not yet been one who is arrogant and does not lose everything.’
   (左傳・定公十三年)

b. 不 患 人 之 不 與 己 知。
   bu huan ren zhi bu ji zhi.
   NEG worry others GEN NEG self understand
   ‘Do not worry that others do not understand you.’ (論語・學而)

Feng proposes the following analysis, in which the pronouns right-adjoin to the negator.

(4)         NegP
            /     \    (Feng 1996:343)
     Neg      VP
       /     \  Neg
      /  Cl_i  V
     e_i

As for $wh$-movement, this is a two-step process. VP-internal $wh$-words first front to a VPPeripheral focus position. Following this, the $wh$-word is lowered onto the verb and cliticized to it.
The crucial shortcoming of Feng’s analysis of *wh*-movement is that it predicts the wrong landing site, especially in the case of *wh*-movement in the context of negation. Feng’s analysis predicts that *wh*-words follow the negator, since focus movement does not leave the VP and therefore targets a lower position than negation. This prediction runs counter to fact, since *wh*-phrases actually precede markers of negation.

Feng admits that examples such as these are potential counterexamples. He accounts for the position of the *wh*-word to the left of the negator by claiming that negation blocks cliticization of the *wh*-word to the verb. However, given his
analysis of focus fronting in (5), this should not happen, since focus fronting targets a position internal to VP. The negator would always be in a higher position and should not block cliticization of the *wh*-word to the verb.

(7) *NegP
    Neg       VP
    何       V’
    V        t_{wh}

There is also a weakness in the cliticization analysis of pronoun fronting. The crucial evidence against the cliticization analysis comes from the fact that pronoun fronting did not always take place, even in the context of negation. As Djamouri (2000) shows, pronouns remain inside VP in many embedded contexts, including conditional clauses and sentential subjects.

(8)a. [其 未 得 之 也], 患 得 之。
[Qi wei de zhi ye], huan de zhi.
‘(Before) he has obtained it (=the position), he worried about how to obtain it.’

b. 無為謂 不 應 我，非 不 我 應，
[Wuweiwei bu ying wo], fei bu wo ying.
Not:acting:discourse NEG reply me be:not NEG me reply
不 知 應 我 也。
bu zhi ying wo ye.
not know reply me DECL
‘(The fact that) Not-acting-discourse did not reply to me is not because he (does not want to) reply to me, but because he does not know how to reply to me.’

Fronting also does not take place in clauses containing a *wh*-word.

(9) 夫子 何 不 譚 我 于 王?  (莊子・則陽)
Fuzi he bu tan wo yu wang?
you why NEG praise me to king
‘Why don’t you speak in my favor to the king?’
This leads Djamouri to suggest that pronoun fronting may have been syntactic movement, related to focalization and not prosody. Therefore, pronoun fronting does not take place in embedded clauses which are presupposed, such as (8). It is also blocked in the presence of another focused constituent, such as a \textit{wh}-phrase.

\section{The Landing Site of \textit{Wh}-movement}

The analysis of Archaic Chinese \textit{wh}-movement which I defend in this paper is given below. I propose that this movement does not target [Spec, CP] for the purpose of checking an interrogative feature. Rather, this is short, clause-internal movement to a focus position between the subject and VP. I label this position FP for ‘functional projection’ in order to distinguish it from the more familiar focus projection posited in the C domain (cf Rizzi 1997).

(10) 
\[
\begin{array}{c}
\text{CP} \\
\text{C'} \\
\text{C}_{[+Q]} \\
\text{TP} \\
\text{NP}_{\text{Subj}} \\
\text{T'} \\
\text{T} \\
\text{FP} \\
\text{XP}_{\text{wh}} \\
\text{F'} \\
\text{F} \\
\text{vP} \\
\ldots \text{l}_{\text{wh}} \ldots
\end{array}
\]

This analysis is parallel to others proposed for other languages with clause-internal \textit{wh}-movement, such as Hungarian (Kiss 1987, 1995; Farkas 1986), Malayalam (Jayaseelan 2001), Chadic (Tuller 1992), and Atayalic languages (Aldridge 2004). The following Hungarian examples in (11) show movement of a focused object in (11a); movement of a \textit{wh}-word in (11b); and movement of a quantified object in (11c). (11a) and (11c) clearly show that this movement targets a position above VP but below the subject. (11b) further shows that this position is located to the left of negation. The fact that quantified objects, as in
(11c), behave like *wh*-phrases and other focused material is particularly interesting. I show in section 4 that quantifiers in Archaic Chinese also had to be located outside VP.

Hungarian

(11) a. János Évát [VP várt $e_i$ a mozi előtt].

John Eve:ACC waited the cinema in:front:of

‘John waited for Eve in front of the cinema.’ (Kiss 1995:212)

b. KIT nem tudsz [hogy MIKOR érkezik $e_i$ ]?

whom not know:you that when arrives

‘Whom don’t you know when will arrive?’ (Kiss 1995:224)

c. János [mindendíjakot], [VP szeretne [ha meghíván $e_i$]].

John every student would:like if invited:we

‘John would like if we invited every student.’ (Kiss 1995:226)

I begin by showing that *wh*-movement targets a position below the subject and not [Spec, CP]. Specifically, I argue against a possible alternative account in which the subject is located in a topic position, allowing *wh*-phrases to move to a focus position between the topic and TP, as per the expanded CP structure proposed by Rizzi (1997).

(12) [TopP Wu [FocP shei [TP twu [vP qì t_{shei} ]]]]? I who deceive

This would allow Archaic Chinese *wh*-fronting to be given the traditional analysis of *wh*-movement into the C domain. However, there is strong evidence against such an analysis. *Wh*-phases are located not only lower than the subject but also lower than modals, such as *jiang* ’will’, as shown in (13a). These modals in turn occupy a position below the relative operator *suo*, as in (13b). *Suo* itself appears to the right of the subject of the relative clause it heads\(^1\), which is shown in (13c).

(13) a. 我 將 何 求？

Wo jiang he qiu?

I will what ask:for

‘What will I ask for?’

\(^1\) Note that the subject must be located inside the embedded clause and cannot be a genitive phrase in the specifier of DP. As Ma (1962) points out, only one genitive phrase was permitted in a DP in archaic Chinese. In (13c), the entire clause modifying *shi* ‘house’ occupies [Spec, DP] and receives genitive case.
b. 其 所 將 爲 (莊子·則陽)
\[
[\text{DP} \left[ \text{CP} \right. \text{qi} \text{ suo} \text{ jiang} \text{ wei} \ e] \text{]} \text{3:SUBJ REL will do}
\]
‘what they will do’

c. 仲子 所 居 之 室 (孟子·滕文公下)
\[
[\text{DP}[\text{CP} \text{Zhongzi} \text{ suo} \text{ ju}] \text{zh} \text{ shi} ]
\]
Zhongzi REL live GEN house
‘the house in which Zhongzi lives’

The facts in (13) allow the following analysis of positions in the C domain. The highest available position for the subject of a suo relative clause is the embedded topic position, with the relative operator following it in the focus position headed by suo. There is no other focus or wh-projection below this in the C domain for wh-phrases, so we are forced to conclude that the wh-landing site is within TP, below the non-topicalized subject position, as posited in (10).

(14) \[
[\text{TopP } \text{XP}_{\text{Top}} \left[ \text{FocP OP} \right. \text{Foc' SUO} \text{TP DP}\text{Subj} \left[ \text{T' Mod} \left[ \text{FP YP}_{\text{wh}} \right. \text{vP} \ldots \right] \right] \right] ]
\]

Another aspect of the analysis in (10) is that movement of wh-phrases is not driven by a [wh] feature on C, since the movement does not target this projection. Therefore, feature-checking between interrogative C and the wh-phrase must be covert. In the following, I present evidence for this indirect relation between C and wh-phrases. For example, wh-phrases inside relative clauses can receive a matrix interpretation. Note also that short movement has taken place inside embedded domains in (15). Since the interpretation is not obtained at the landing site of movement but rather in the matrix clause, it is clear that it is not the movement which is responsible for checking the interrogative feature on matrix C.

(15) a. 子 悉 爲 者 邪? (莊子·天地)
\[
[[\text{Zi} \left[ \text{xii} \text{ wei} \ e; \text{zhe} \right] \text{ye}]?
\]
you what do REL Q
‘You are [one who does what]?’

b. 天 何 欲 何 惡 者 也? (墨子·法儀)
\[
\text{Tian} \left[ \text{he} \text{ yu} \text{ he} \text{ wu zhe} \right] \text{ye}?
\]
Heaven what desire what despise REL PRED
‘Heaven is one who desires what and despises what?’

\(^2\) I assume that the feature-checking can take place via an Agree relation, in the sense of Chomsky (2001) and need not necessarily involve further movement.
In terms of linear order, the *wh*-word is positioned between the matrix subject and embedded verb. However, movement of the *wh*-word is clearly internal to the relative clause, since movement into the matrix clause would invoke a subjacency violation.

(16) \*\[\text{CP} \ [\text{TP} \ zi [\text{FP} \ xi [\text{vP} \ [\text{DP} \ [\text{CP Op} \ [\text{TP tOp} \ [\text{vP we} \ t]\]] zhe ]]\]] ye ]

The examples in (15) provide additional evidence for the clause-internal landing site of the *wh*-phrase. Assuming that the operator associated with the gap inside the relative clause occupies the embedded [Spec, CP] position, it is reasonable to conclude that the *wh*-word does not target this position.

(17) [\text{DP} \ [\text{CP Op} \ [\text{TP tOp} \ [\text{FP} \ xi [\text{vP we} \ t]\]] zhe ]]

Similar evidence for the proposal that *wh*-movement does not target the projection of C determining interrogative force of the clause comes from examples of fronting within nonfinite embedded clauses. Note that the object *wh*-words in (18a) and (18b) clearly move to the left of the embedded verb. However, movement does not continue into the matrix clause. This is clear from the fact that the landing site follows the matrix verb.

(18) a. 莞非屬趙君，當誰任哉?
    Zhen fei shu Zhao Jun, [dang [shei ren]] zai?
    ‘If I do not rely on Mr. Zhao, then who should I use?’
    (史記・李斯列傳)

b. 子欲何之?
    [Zi yu [he zhi]?
    you want where go
    ‘Where do you want to go?’
    (戰國策・秦策一)

Since the interrogative scope is the matrix clause, then we must assume that this interpretation is obtained covertly, without overt movement to matrix [Spec, CP].

It is important to note that *wh*-movement inside embedded clauses is found only from the Han period, after certain structural innovations had taken place in

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3 Huang (1982) shows for modern Chinese that *wh*-in situ in a relative clause is grammatical and can receive a matrix interpretation, but overt movement out of a relative clause does violate subjacency and result in ungrammaticality.
Chinese. In the Archaic period, wh-movement from an embedded VP targeted the focus position in the matrix clause.

(19) a. 公誰欲與?  (莊子・徐無鬼)
   Gong shéi yù [yu e₁]?
   you who want give
   ‘Who do you want to give (it) to?’

b. 吾誰敢怨?  (左傳・昭公二七年)
   Wu shéi gǎn [yuan e₁]?
   I who dare resent
   ‘Who do I dare to resent?’

There is compelling evidence that pre-Han embedded clauses had a simpler structure than post-Han embedded clauses. This can be seen in changes in the use of 3rd person pronouns in embedded subject position. Archaic Chinese 3rd person pronouns were distinguished for case. Zhi appeared in object position in both embedded and root contexts. Qi appeared in embedded subject position, except when the embedded clause was nonfinite and governed by the matrix verb. In this case, the pronoun had to be zhi and not qi.

(20) a. 上賢使之為三公。 (荀子・君道)
   Shang xian [VP shi [VP zhi wei sangong]]
   most able make 3:OBJ be sangong
   ‘The most capable, make them into sangong (the highest official rank).’

b. 將命者出戶，取瑟而歌，
   Jiangmingzhe chu hu, qu se er ge,
   messenger exit door take zither and sing
   使之聞之。  (論語・陽貨)
   [VP shi [VP zhi wen zhi]]
   make 3:OBJ hear 3:OBJ
   ‘As the messenger was leaving, (Confucius) took up his zither and sang, making him (the messenger) hear it.’

Use of the object pronoun in (20) can be accounted for if we posit that the embedded clause is simply the verbal projection vP. The embedded subject, residing in the specifier of vP can be assigned case by the matrix verb or v without crossing a barrier or violating any island constraints, such as the Phase Impenetrability Condition of Chomsky (2001).
Subsequent changes in the Han and post-Han periods show that embedded subject position was not necessarily assigned case by matrix \( v \). The examples in (21) show the subject pronoun in the embedded clause. The fact that exceptional case-marking does not take place from the matrix \( v \) indicates that a CP phase boundary intervenes between matrix \( v \) and the embedded subject.

(21) a. 全趙令其止。

\( Quan \ Zhao \ ling [CP [TP qi zhi]] \)

protect Zhao make 3:SUBJ stop

‘(You) protect Zhao and make them stop.’

(戰國策 ‧ 西周策)

b. 欲使其生於階庭耳。

\( Yu \ shi [CP [TP qi sheng yu jieting]] \)

want make 3:SUBJ grow in courtyard PART

‘(You) want to make them grow in a courtyard.’

(世說新語 ‧ 言語)

The expanded embedded clause structure allows projection of FP, thereby providing a landing site for \( wh \)-movement\(^4\).

(22) 子欲何之?

\( Zi_j \ yu [CP [TP PRO_j [FP he_i [vP zhi e_i]]]] \)

you want where go

‘Where do you want to go?’

(戰國策 ‧ 秦策一)

4. \( Wh \)-movement As Quantificational

Examining a similar range of facts as those analyzed in the current paper, Wei (1999) also argues that there was a position between subject and the VP in Archaic Chinese for \( wh \)-phrases, the relative operator \( suo \), and quantifiers. He generalizes this class of constituents under the term ‘operator’.

\(^4\) As pointed out by an anonymous reviewer, both the long and short \( wh \)-movement constructions (illustrated respectively in (19) and (18)) were in use in the Han period. I take this to be an instance of variation due to historical change in progress. The simpler embedded clause structure of (20) also coexisted with the more complex structure of (21). What is important for the purposes of this paper is that the emergence of the short movement option coincides with the appearance of more complex embedded clauses such as (21).
The problem with this approach, however, is that there was no single position in Archaic Chinese for operators. We have already seen in section 3 that wh-words do not occupy the same position as suo. In this section, I will show additionally that quantifiers occupied yet a third position, which is lower still than wh-words.

The lack of a uniform position for operators outside VP does not, however, preclude a unified analysis of their behavior. A generalization can still be made if we consider not the position targeted by movement but rather the location from which movement takes place: operators, or more generally, quantificational material, cannot be located in the VP prior to Spell-Out.

This generalization can be framed within the Mapping Hypothesis of Diesing (1992). Diesing’s proposal is that a clause is divided into two domains at LF. Material within VP is mapped to the nuclear scope and material outside of this domain is mapped to the restrictive clause. At LF, presuppositional and quantificational material cannot be contained within the nuclear scope. In languages without overt wh-movement or quantifier raising, these elements can raise to their scope positions covertly. What seems to be the case in Archaic Chinese is that overt placement is required prior to Spell-Out. In effect, Archaic Chinese represents a case in which LF mapping of quantificational material takes place directly from surface positions.

Naturally, this proposal depends on the assumption that Archaic Chinese wh-words were in fact quantificational. However, this is not an obvious assumption. This is because wh-in situ in modern Chinese is not quantificational. As is well-

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5 Wei also admits that there is no single position but offers no explanation.
known (Huang 1982, Cheng 1991, Tsai 1994, Lin 1998, among many others) wh-phrases in modern Chinese exhibit the behavior of variables, not quantificational operators. The examples in (25) show that wh-words carry no quantificational force of their own. Their interpretation varies, depending on some other element in the sentence. In the scope of a yes/no question particle, they are interpreted as indefinite pronouns. When bound by a marker of negation, they function as negative polarity items.

Modern Chinese (Cheng 1991:124)

(25) a. Jialuo mai-le sheme ma?
   Jialuo buy-ASP what Q
   ‘Did Jialuo buy anything?’
b. Jialuo mei-you mai sheme.
   Jialuo not-have buy what
   ‘Jialuo did not buy anything.’

However, this is not typical behavior for Archaic Chinese wh-words. Meanings like those in (25) were instead generally expressed by means of existential constructions. (26a) shows an indefinite example, in which a relative clause expressing the indefinite is merged as complement of an existential verb. Negative polarity is expressed by merging the relative clause with a negative existential verb, as in (26b).

(26) a. 力 有 所 不 能 舉。 (韓非子・觀行)
   li you [suo bu neng ju]
   strength exist REL not able lift
   ‘Strength cannot lift some things.’
   (lit. ‘There are some things which strength cannot lift.’)
b. 予 無 所 用 天下 爲。 (莊子・逍遙遊)
   Yu wu [suo yong tianxia wei].
   I not:exist REL use world do
   ‘I can not do anything with the world.’
   (lit. ‘There is nothing I could do with the world.’)

It is also suggestive that Archaic Chinese wh-words could appear in the scope of an interrogative particle, without changing their quantificational force. Examples appear above in (6b) and (15a). These are still wh-questions, even with the presence of the particles hu and ye. This contrasts clearly with modern Chinese,
in which the presence of the interrogative particle forces the wh-word to be interpreted as an indefinite pronoun, as just shown in (25a).

Given the hypothesis that wh-movement in Archaic Chinese was the result of a general prohibition on quantificational material in VP, we expect that quantified NPs also did not appear inside VP. This prediction is indeed borne out. Quantification of VP-internal material was expressed by means of quantificational adverbs adjoined to the left of VP. Note also that the position for VP quantifiers has to be lower than for object wh-phrases. This is clear from (27b), in which the quantifier follows a marker of negation. Recall from (6) that wh-phrases precede markers of negation.

(27) a. 不如 多 與之邑。
   Buru duo [VP yu zhi yi]
   be:better more give 3:OBJ village
   ‘It would be better to give them more villages.’ (左傳・成公三年)

   b. 不盡收則不盡御。
   Bu jin [VP shou] ze bu jin [VP yu]
   not all harvest then not all use (墨子・七患)
   ‘If (the grain) is not all harvested, then it cannot all be used.’

As an extension of the Mapping Hypothesis, we might expect that movement is obviated when the quantified constituent is not contained within the VP but rather is itself the predicate. This is indeed the case, as shown in (28). Both matrix and embedded predicative wh-phrases do not undergo fronting. In (28a), the matrix predicate is a wh-word. The wh-word is the predicate VP and is not contained within it. The wh-word in (28b) is the embedded predicate. Assuming (following Tsai 1994) that mapping takes place cyclically, the embedded wh-word escapes Existential Closure on the first cycle.

(28) a. 君與我此何也？
   Jun yu wo ci [VP he] ye?
   lord give me this what DECL
   ‘Why is it that my lord gives me these things?’

   b. 國謂君何？
   Guo [VP wei [jun [VP he]]]
   nation say lord what
   ‘What does the nation say (will come of) our lord?’
5. Conclusion and Changes from the Han Period

Given the proposal that the motivation for *wh*-movement in Archaic Chinese was a ban on quantificational material appearing overtly in VP, we expect that the emergence of *wh*-in situ in Chinese should correlate with the appearance of quantified phrases inside VP. Again, this prediction is borne out. (29) shows early examples of *wh*-in situ from the Han dynasty. (29a) shows a *wh*-word which is the object of a preposition, remaining to the right of that preposition; (29b) shows an object *wh*-phrase in VP.

(29) a. 陛下 與 誰 取 天下 乎？（史記·留侯世家）
   *Bixia yu shei qu tianxia hu?*
   ‘Sire, with whom will you conquer the world?’

   b. 此 女 常 有 何 病？（佛說奈女祇域因緣經）
   *Ci nu chang you he bing?*
   ‘What illness does this woman always have?’

(30) shows that VP-internal QPs also began to emerge from the Han dynasty. The example in (30b) is taken from a later text, a Buddhist scripture translated into Chinese in the late 5th century AD. However, (30a) shows that the change was already in place three or more centuries earlier, in the latter Han dynasty.

(30) a. 歡喜 廣 度 一切。 （雜譬喻經）
   *Huanxi guang du yiqie.*
   ‘(He) gladly led (them) all across.’

   b. 殺 汝 之 子，取 血 祀 天，
   *Sha ru zhi zi, qu xue si Tian,*
   ‘If you kill your son, take his blood and offer (it) to Heaven, then you will surely have many sons.’
References


