Questions or No Questions of Chinese Wh-Phrases
Based on Generative Grammar

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Abstract. The paper draws syntax trees to demonstrate the differences of three relative clauses with Chinese Wh-phrases when they are the complements of “zhidao (to know)”, “wen (to ask)”, and “xiangxin (to believe)”. The corresponding relationship exists in English visible Wh-movements and Chinese invisible logic Wh-raising sentences. Questions or no questions of Chinese Wh-phrase in relative clauses can be figured out according to generative grammar and referring to the movement of Wh-phrases in English questions.

1. Introduction

It seems all the time to be a debatable issue on whether Chinese Wh-phrases in relative clauses are entailed question function or not, especially when relative clauses with Wh-phrases are analyzed as the complements of matrix verbs (i.e., the verbs as predicate verbs in main sentences). Wh-phrases in English are interrogative words such as “what”, “who”, “where”, “when”, “which” etc., and accordingly Chinese Wh-phrases include “shenme 什么 (what)”, “shui 谁 (who), “nali 哪里 (where)” etc. Linguistic scholars notice that Chinese Wh-phrases in questions are not needed to move to the beginning of the sentences, which are quite different from English questions. Some scholars (Cheng 2009; Lin 2014) claim that Chinese is a Wh-in-situ language, in which Wh-phrases in questions must stay in original situations and need not to be moved to the beginning of the sentences. Huang (1982) is the first scholar who comprehensively studied Chinese Wh-phrases in the perspective of generative grammar. His classical corpora are “(a) ‘Zhangsan wen shui mai-le shu 张三问谁买了书’ (John asked who bought books)”, “(b) ‘Zhangsan zhidao shui mai-le shu 张三知道谁买了书’ (John knows who bought books)” and “(c) ‘Zhangsan xiangxin shui mai-le shu 张三相信谁买了书’ (Who does John believe bought books?)”. Perhaps considering different name cultures between English and Chinese, the English names “John”, “Mary” in Huang’s examples are just Chinese names Zhangsan and Lisi respectively. Undoubtedly Huang raised a creative proposal that testifies the quantification scope of a Chinese Wh-phrase should cover the whole sentence when it is considered as a question.

However, for a long time Huang’s view received few feedback attributed to lack of subsistent native corpus (Chen 2008). One of the outputs related to Huang is the discussion on the different question degrees of Huang’s sentences: some scholars speculated upon the blocking effects of matrix verbs “wen 问 (to ask)”, “zhidao 知道 (to know)”, “xiangxin 相信 (to believe)” as the barriers which keep the question away (Chen 2008; Lin 2014); and meanwhile some scholars assumed that constrained conditions might be put on the matrix verbs when Wh-phrases are the constituents of complement clauses (Xu 1999). But unfortunately the studies like these don’t go further.

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In Chinese traditional linguistic fields, Lü Shuxiang (1985:152) divides Chinese Wh-phrases into two functions which are Wh-phrases in inquiry and existential Wh-phrases, and the former demands an answer and the latter doesn’t. And Lü also refers to two kinds of interim forms (indirect question; matrix verb “bu zhi 不知 (not know)”) that respectively exist between the two polar functions of Wh-phrases. Based on Lü’s assumption the latter scholars tried to study the interim forms of Chinese questions, some consider the interim forms as non-prototypical interrogatives (Chen 2008, 2009) and some name them as bridge connections (Wang 2015).
The purpose of this paper is to demonstrate questions or no questions properties of Chinese Wh-phrases in relative clauses as effective as possible, and explore the approach of questions or no questions interpretation in perspective of generative grammar.

2. Logic Wh-Raising of Chinese Wh-Phrases

In English we generally define the sentence that can initiate a question as a direct question and the sentence that cannot expect an answer as an indirect question or statement (Huang 1982, 1998; Lin 2014). The examples are illustrated as follows:

(1) a. [CP What, does (IP Mary dislike t1)]?
   b. [IP John has found out (CP what,[Mary dislike t1])].

The above (1) a is undoubtedly regarded as a direct question while b is as an indirect question or statement. The judgement can be very easy to make by observing the syntactic distribution of the Wh-phrase in the sentence. When the Wh-phrase moves to the beginning of the sentence, it will be interpreted as a direct question, and when the Wh-phrase distributes the other place of the sentence, an indirect question or the statement will be denoted such as in (1) b.

According to the generative grammar, a Wh-phrase is essentially a quantifier of a sentence, and it has its quantifier scope. The Wh-movement (i.e., the movement of Wh-phrases, and it is also called as A'-movement because their arriving destinations are non-argument position) mainly takes place in the context of question sentence or relative clause, and whether question of a Wh-phrase or not is directly related to its quantification scope. That is to say, as long as the Wh-phrase moves to the position [Spec, CP] in the matrix sentence where it holds the complete sentence into its quantification scope, the wide scope formed by “operator (i.e., Wh-phrase)-variables” can contribute to the question interpretation of the sentence, whereas the operator which moves to the position [Spec, CP] within the embedded clause such as (1) b only ranges the embedded clause as its quantification scope, and the fact that the narrow scope formed by “operator - variables” only involves the embedded clause results in the interpretation of statement (no - question).

Different from English, the inquiry on some information in Chinese doesn’t need to depend on the movement of Wh-phrase. No matter what the Wh-phrase in the sentence indicates (question or not), the Chinese Wh-phrase doesn’t change its original place, as illustrated below.

(2) a. Lisi bu xihuan shenme?
   李四 不 喜欢 什么 ？
   Lisi not like what?
   b. Zhangsan qingchu Lisi bu xihuan shenme.
   张三 清楚 李 四 不 喜欢 什么 。
   Zhangsan figure out Lisi not like what.

Thus, we cannot directly infer the question connotation of the Wh-phrase only according to the surface structure, and the shift process from D-structure to S-structure should be utilized to unveil the bewildering situation. The following fundamental issues should be to try to find out the rules how the D-structure of the non-movement language such as Chinese can be transferred to the S-structure, making sure the corresponding relation between Chinese inherent logic Wh-raising and English visible syntactic movement. Wh-raising handle the operational process that the Wh-phrases not moved in S-structures will be changed their positions in abstract logic forms according to generative grammar theory.

Although Wh-movements don’t take place in Chinese question sentences, the logic connotation of the Wh-phrase as logic quantifiers must be carried out by invisible Wh-raising similar to the function of English Wh-phrases. The logic formula of the Chinese questions shown in (3) (4) (5) ultimately correspond with what English S-structures indicate in (6) (7) (8), and this is why the generative grammar claims it makes efforts to explore the general rules of the different languages and make it play in a general role. Compare (3) with (6), (4) with (7), (5) with (8).

Group A:

(3) Zhangsan zhidao Lisi mai-le shenme.?
张三 知道 李四 买了 什么 。/
Q: John knows Mary bought something.
NQ: Does John know what Mary bought?
(4) Zhangsan wen Lisi mai-le shenme.

张三 问 李四 买了 什么 。
NQ: John asked Mary bought something.
(5) Zhangsan xiangxin Lisi mai-le shenme?

张三 相信 李四 买了 什么 ?
Q: Does John believe what Mary bought?

Group B:
(6) D: John knows Mary bought what
S1: [CP1[IP1John[t1[t1 [VP know [CP2what, [IP2Mary bought t1]`${1}`]]]]]]
S2: [CP1What, [C es [IP1John [t1 [VP know [CP2t1 [IP2Mary bought t1]`${1}`]]]]]
(7) D: John asked Mary bought what
S: [CP1[IP1John [t1 [VP ask [NP [CP2what, [IP2Mary bought t1]`${1}`]]]]]]
(8) D: John believes Mary bought what
S: [CP1What, [C es [IP1John [t1 [VP believe [CP2 (*t1 OP] [IPMary bought t1, t1]`${1}`]]]]]]

Example (6) - (8) is respectively construed from D-structure to S-structure according to the GB theory (Government and Binding theory). The syntax tree, which is consistent with the above brackets analysis in Group B, is drawn as the following:

![Figure 1. Syntax Tree of “Know” and “Believe” as Matrix Verbs.](image-url)

The Chinese sentences in Group A, which no Wh-movement occur, but the final interpretations (Q: question; NQ: no question) just are those that the surface structures in Group B are decoded. Namely, Chinese Wh-phrases have engaged in a sort of invisible logic semantic raising before ultimate interpretations formulate. We can say by means of a visible formalized tactic the generative syntactic analysis in Group B facilitates the understanding of Chinese Wh-phrase in Group A. The corresponding syntax of two different language illustrates why and how Chinese Wh-relative clauses are interpreted as questions or not.

As demonstrated in the above syntax tree of (6) and (8), (6) can alternatively be interpreted as S1 (statement / indirect question) or S2 (question / direct question) because “what” can be moved to any one of two [Spec, CP] positions. One of the most basic and inviolable rules of Wh-movement is the space of Wh-movement destination must be available just as in syntax tree (6), but in the
D-structure of (8) we find that the space of [Spec, CP2] has been early occupied by OP (i.e., the complement of “bought”, OP is the short name of empty operator, which is an invisible constituent and has same qualities as a Wh-phrase). Due to the preemption of OP, thus Wh-phrase in syntax tree (8) is obliged to continue moving forward to the next position of [Spec, CP1], and that’s why example (8) can only be construed as a question.

Example (7) demonstrates another syntax tree in which an extra NP node is added between IP1 and CP2, thus the added NP, node CP2 and IP2 constitute “complex NP island”. According to the Wh-movement theory of “complex NP constraint”, the Wh-phrase in “complex NP island” is forbidden to move away from the island. Namely, the Wh-phrase blocked by IP1 and NP cannot be allowed simultaneously overcome two successive nodes such as shown in syntax tree (7), and have a forced stop at the position of [Spec, CP2] on its moving way, thus (7) is only interpreted as a statement/no question.

![Syntax Tree of “Ask” as Matrix Verbs.](image)

3. Concluding Remarks

Chinese Wh-phrases in relative clauses don’t visibly move regardless of questions or no questions they take on. The perplexing situation can be solved by comparing with the visible English Wh-movement. Based on Chomsky’s Government and Binding theory, the generated S-structures from D-structures where Wh-movements take place illustrate the approaches to Chinese questions or no questions interpretation.

References


