

Journal of East Asian Linguistics

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1. Theoretically oriented work on any aspect of the syntax, semantics, pragmatics, phonology, and morphology of an East Asian language. 2. Comparative work among East Asian languages and/or between an East Asian language and any language that contributes to the parametric theory of universal grammar. 3. Formal analysis of any aspect of the grammar at any historical stage of a language or the historical development of any language providing it has a bearing on East Asian languages. 4. Interdisciplinary contributions from psycholinguistics, neurolinguistics, and computational linguistics that have a particular bearing on the study of East Asian languages. 5. Remarks on, or replies to, any recent theoretical work related to East Asian linguistics. 6. Shorter notes with original observations that raise questions of analysis and explanation with significant theoretical implications.

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SHENGLI FENG

PROSODICALLY CONSTRAINED SYNTACTIC CHANGES IN EARLY ARCHAIC CHINESE*

In diachronic studies of Chinese syntax, an interesting question is why the two SOV structures, [wh-object V] and [Neg Pro-object V] in Early Archaic Chinese (EAC, 1000–500 B.C.), disappeared after the Han Dynasty (206 B.C.). This paper proposes that these two notable OV orders in EAC are structurally distinct and that the structure of [wh V] is also different from that of [wh Neg/Aux V]. Furthermore, it is argued that Proto-Chinese is an SOV language and that the change from SOV (Proto-Chinese) to SVO (EAC) caused a stress shift from preverbal to postverbal position. According to the theory developed here, some problems that have remained in the syntax of Classical Chinese cease to exist, including the following: Why did the two OV structures remain in EAC? Why did the [wh-object V] order disappear later than the [Neg Pro-object V] order? Why did monosyllabic *wh*-words (e.g., *he* 'what') but not disyllabic *wh*-expressions (e.g., *he-shi* 'what thing') immediately precede the verb? And why was the disappearance of the [wh-object V] structure followed by a development of disyllabic *wh*-words (e.g., *he wu* 'what thing' > *hewu* 'what')? Each of these questions is answered in terms of prosody. The arguments made here claim that prosody is very important in resolving questions of how syntactic changes take place.

1. INTRODUCTION

Many works on Chinese historical syntactic changes in the last twenty years focus on word order change, in particular, the question whether Chinese has changed from an SVO (or head-initial) to an SOV (or head final) language (Tai (1973), Li and Thompson (1974), Mei (1979), Huang (1978), Light (1979), Travis (1984), Sun and Givon (1985), Li (1990) and many others). In this paper I examine a word order change from Proto-Archaic Chinese (before 1000 B.C.) to Archaic Chinese (500 B.C.–100 A.D.). Following Yu (1981), I argue that Proto-Archaic Chinese was an SOV language and that it changed into an SVO language in Archaic Chinese. The change from SOV to SVO is captured by the existence of a prosodic structural change in the history of the Chinese language. The hypothesis made here claims that the principles of rhythm shape the output of the grammar by filtering out prosodically ill-formed sentences.

This paper is organized as follows: Section 2 provides background for two types of SOV word orders in Early Archaic Chinese (1000 B.C.–500 B.C.), involving (i) a pronominal object in a negative sentence ([Neg Pro V]) and (ii) a *wh*-object in an interrogative sentence ([wh V]). Section 3 argues that these two types of SOV structures are not only syntactically

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distinct from each other but also each different from Modern SOV structures. Following the Remnant Hypothesis (Yu (1981)), I argue that Proto-Archaic Chinese is an SOV language, as evidenced by the SOV word order retained in interrogative and negative sentences in Archaic Chinese. Based on the change from SOV to SVO, it is argued in section 4 that a stress shift from preverbal position to postverbal position is expected and that some prosodically related syntactic phenomena can therefore be accounted for under the present analysis. Section 5 provides a summary of this study.

2. BACKGROUND

It has been commonly observed (Dobson (1959), Chou (1962), Wang (1980) and many others) that the canonical word order of Early Archaic Chinese (EAC) is SVO. However, in contrast to the basic SVO word order, there existed two remarkable SOV structures which exhibited the so-called Object-Verb Inversion (OVI, for short): (i) a pronominal object in a negative sentence (i.e., [Neg Pro V]) and (ii) a *wh*-object in an interrogative sentence (i.e., [*wh* V]). These phenomena were formally identified in Ma (1898) (translated by S.-L. Feng):

"It is normal (in EAC) for the object to appear after the verb. Only if the verb is negated by a negator and if the object of the verb is a pronoun may the pronominal object appear before the verb." (*Mashi Wentong*, Vol. 4)

"It is a strict rule that interrogative pronouns (*wh*-words) must appear before the verb if one is the object of the verb. They rarely appear after the verb." (*Mashi Wentong*, Vol. 2)

Since Ma's generalization, linguistics such as Wang (1980), Chou (1962), Yu (1981), Shi (1986), Wei (1990) and many others have investigated and generalized the conditions for the unusual cases of OVI. Even if there are different explanations for the OVI phenomena, a common agreement on the data has emerged among all historical linguists, as shown below:

- (i) Conditions for the two SOV orders:
 - a) if there is an object pronoun in a negative sentence, the object pronoun must occur before the verb;
 - b) if the object is a *wh*-word, it must occur before the verb.
- (ii) Before the Han dynasty (206 B.C.), *wh*-objects were strictly preverbal. Postposing of the *wh*-object only started after the Han Dynasty. For example:

- (1) Pre-Han Dynasty (-206 B.C.)
 - a. 子何言? <書·益稷>
Zi he yan? (Shu. Yiji. ca. 1000 B.C.)
you what say
'What did you say?'
 - b. 人而無止, 不死何俟? <詩·相鼠>
Ren er wu zhi, bu si he si.
human but no etiquette, not die what wait
(Shi.Xiangshu. ca. 1000 B.C.)
'Being human but having no etiquette, (in this case) if you do not die, what are you waiting for?'
 - c. 吾誰欺? 欺天乎? <論語·子罕>
Wu shei qi? Qi tian hu?
I who cheat cheat God prt
(Lunyu.Zihan. ca. 550 B.C.)
'Who do I cheat? Do I cheat God?'
- (2) Post-Han Dynasty (206 B.C.-)
 - a. ...是獨遵何哉? <論衡·禍虛>
... shi du zun he zai?
... this especially follow what prt.
(Lunheng.Huoxu. ca. 100 B.C.)
'What does this especially follow?'
 - b. 武帝問: "言何?" <漢書·酷吏傳>
Wudi wen: "yan he"? (Hanshu.Kulizhuan. (ca. 100 B.C.)
Wudi ask say what
'The emperor Wu asked: "What did (he) say?"'
- (iii) Before the Han Dynasty, although pronominal objects in negative sentences often occurred preverbally, examples exhibiting the opposite order are not unusual:
- (3) Preverbal:
 - a. 無我怨。 <書·多士>
Wu wo yuan. (Shu.Duoshi. ca. 1000 B.C.)
no me complain
'Don't complain about me.'

- b. 未之有也。《論語·學而》
Wei zhi you ye. (Lunyu.Xue'er. ca. 550 B.C.)
no it have prt

'Have never had it.'

(4) Postverbal:

- a. 爾不許我，我乃屏壁與圭。《書·金縢》
Er bu xu wo. . . . (Shu.Jinteng. ca. 1000 B.C.)
you no allow me

'If you don't allow me. . . .'

- b. 有事而不告我。《左·襄18》
You shi er bu gao wo. (Zuo.Xiang.18. 300 B.C.)
have thing but no tell me

'You have something but do not tell me.'

(iv) Pronouns not in the scope of negative environment rarely occur in the preverbal position. It is even more rare for a content NP (full NP) to occur in the preverbal context. The rare cases are cited below.

- (5) a. 民賢有十夫余翼。《書·大誥》
Men xian you shi fu yu yi.
among worthy-person have ten people I help
(Shu.Dagao)

'There are ten worthy people to help me.'

- b. 爲天子之諸御，不爪剪，不穿耳。《莊子·德充符》
Wei tianzi zhi zhuyu, bu zhao jian, bu chuan er.
be king's driver, no nail cut, no pierce ear
(Zhuangzi.Dechongfu. 300? B.C.)

'Being the king's driver, do not cut your nails and do not pierce your ears.'

- c. 諺所謂室於怒，市於色者。《左·昭19》
Yan suowei shi yu nu, shi yu se zhe.
proverb said home at angry, market at face Comp
(Zuo.Zhao.19)

'This is what the proverb said: Be angry at home and you will show your long face at the market.'

The examples given in (5b) show that objects which appear before the

verb are not strictly pronouns, and example (5c) shows that the SOV order may not be limited strictly to VP structures but is also involved in PP structures.

- (v) After the Wei-Jin Period (237 A.D.) the two types of SOV structures cited in (1) and (3) completely disappeared, and the chronological order of the disappearance of the two SOV structures is that [Neg Pro V] disappeared earlier than [wh V]. Early documents show that [Neg Pro V] was starting to disappear before the Han Dynasty (206 B.C.) and that [wh V] was beginning to disappear only after the Han.
- (vi) Although the [Neg Pro V] and the [wh V] constructions have disappeared completely from Modern Chinese, preverbal objects can still be found today. For example:

- (6) a. Ta shenme dou chi.
he what all eat
'He eats anything.'

- b. Ta fan ye bu chi, shui ye bu he.
he food also not eat, water also not drink
'He won't eat or drink.'

(6a) shows that *wh*-words can be preposed to a preverbal position, and (6b) demonstrates that the object of a verb can also be preposed to a preverbal position.

Given the common agreement stated above, many questions arise. First, why are these two SOV word orders allowed in an SVO language? Second, are the *wh*-objects and the Pro-objects moved into the preverbal position or base-generated in that position? If they are moved into that position, what is the syntactic motivation for the movement? If they are base-generated in that position, what is the syntactic principle that allows them to do so? Third, why did these two SOV structures drop out of the language at a later stage? Fourth, why did these two SOV structures disappear in the chronological order they did: [Neg Pro V] vanishing earlier than [wh V]? Finally, what are the differences between SOV structures in EAC and those in Modern Chinese?

The first two questions are raised in the context of recent GB theory, which holds that the word order of a language is fixed according to the direction of the head-complement parameter. If the head-complement order is set to be head-initial, then the head-complement order of that language cannot be head-final. A language can be either head-final or head-initial, but it cannot be both, unless there are independent reasons. Thus, the

following two forms in (7) cannot co-exist in the same language as its underlying phrase structure:¹

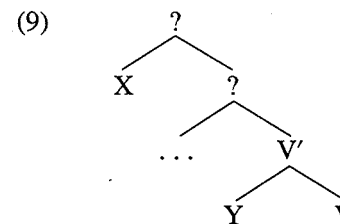
- (7) a. ... V O
b. ... O V
- (8) a. I definitely love him.
b. *I definitely him hate.

However in EAC, both OV and VO orders were permitted, entailing that either the parameter theory must be modified or the phenomena must be explained in a way that the theory permits.

In this paper, I will first argue that these two types of Object Verb Inversion (OVI) in EAC are syntactically different from one another and that the preverbal object in Modern Chinese is syntactically different from the two kinds of OVI in EAC. The differences between the two kinds of OVI in EAC and the differences between the old OVI and the modern OVI require distinct syntactic treatments. Second, I will argue that the Remnant Hypothesis proposed by Yu (1981) is the best method to understanding why some OVIs exist in EAC. Third, I will propose that, in order to answer all the questions we asked above, prosody must be taken into account.

3. TWO DIFFERENT OV STRUCTURES IN EAC

In the traditional study of Chinese grammar the two types of SOV order have been treated as a single phenomenon under the rubric of Object Verb Inversion. Although it has been observed that, in the structure of [wh V], nothing can be inserted between the *wh*-object and the verb (Hong and Liao (1980), Xu (1980)), no claim has been made about which syntactic position the *wh*-object and the pronominal object should appear in. I would like to suggest that, although the objects of the two types of OVIs appear to the left of the verb, the syntactic positions they occupy are different. The position of a pronominal object in a negative sentence is canonically outside the core VP on the left periphery of a larger constituent, while a *wh*-object can be located only inside the VP. This is to say that, within the following structure given in (9), X is the canonical position of pronominal object in a negative sentence, and Y is the position of *wh*-object in an interrogative sentence.



Note that, if the predicate of a sentence is formed by only two elements, a Pro-object with a verb or a *wh*-object with a verb (with a linear order of [X V] or [Y V]), then there is no way to differentiate the preverbal positions that X and Y would occupy. Because both X and Y are verbal objects and because each object attaches to the verb, X and Y are positionally indistinguishable. In order to argue for a different syntactic position for X and Y, two factors, (i) the grammatical distribution of X and Y and (ii) the distribution of X and Y co-occurring with other syntactic elements, must be taken into account. The clearest evidence for a positional distinction between X and Y is the placement of adverbs within the VP. As shown below, adverbs often appear between [X V] but not between [Y V].

3.1. Syntactic Position of Object Pronoun in Negative Sentences

Let us first look at the [Neg Pro V] structure. According to historical documents from the Pre-Qin period (200 B.C.), there are at least four types of syntactic environment in which a pronominal object can appear before the verb. They are (i) [Neg Pro V], (ii) [Neg Pro Adv V], (iii) [Fu V], and (iv) [Neg Adv Pro V], as exemplified in (10).

- (10) Type I [Neg Pro V]
- a. 無我怨。《書·多士》
Wu wo yuan. (Shu.Duoshi)
no me complain
'Don't complain about me.'
- b. 若不吾勝。《莊子·齊物論》
Ruo bu wu sheng... (Zhuangzi, Qiwulun)
you not me win
'You cannot beat me...'
- c. 不我活兮。《詩·擊鼓》
Bu wo huo xi. (Shi.Jigu)
not me alive prt.
'It cannot make me alive.'

Type II [Neg Pro Adv V]

- a. 越予冲人，不印自恤。《尚書·大誥》
 bu ang zi xu.² (Shu.Dagao)
 not me self concern
 'I don't make myself concerned.'
- b. 我未之前聞也。《禮記·檀弓上》
 Wo wei zhi qian wen ye. (Liji.Tan'gong.Shang)
 I not it before heart prt
 'I didn't hear it before.'
- c. 莫之能禦也。《孟子·梁惠王》
 Mo zhi neng yu ye. (Mengzi.Lianghuiwang)
 not it can resist prt
 '(You) cannot resist it.'
- d. 未之敢忘。《左·僖28》
 Wei zhi gan wang ye. (Zuo.Xi.28)
 not it dare forget prt
 'Not dare to forget it.'
- e. 福輕乎羽，莫之知載；禍重乎地，莫之知避。《莊子·人間世》
 Fu ching hu yu, mo zhi zhi zai.
 luck light than feather not it know carry
 huo zhong hu di, mo zhi zhi bi.
 misfortune heavy than earth not it know avoid
 (Zhuangzi.Renjianshi)
 'Even though good fortune is lighter than a feather, they don't know how to take it; even though disaster is heavier than the earth, they don't know how to avoid it.'

Type III [Fu V]

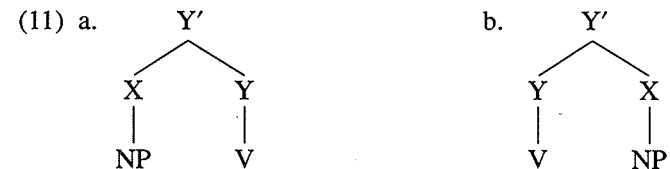
- a. 雖有佳肴，弗食不知其味也。《禮記·學記》
 Sui you jia yao, fu shi, bu zhi qi wei
 though have good foot not-it eat not know its test
 ye. (Liji.Xueji)
 prt
 'Even though you may have good food, if you don't eat it you won't know its taste.'

Type IV [Neg Adv Pro V]

- a. 自古及今，未嘗之有也。《墨子·節葬下》
 Zi gu ji jin, wei chang zhi you ye.
 from ancient till now not ever it have prt
 (Mozi.Jiezangxia)
 'From the ancient time until now, (we) did not ever have it.'
- b. ...而未始吾非也。《莊子·徐無鬼》
 ...er wei shi wu fei ye.³ (Zhuangzi.Xuwugui)
 ...but not ever me criticize prt
 '... but (they) did not ever criticized me.'

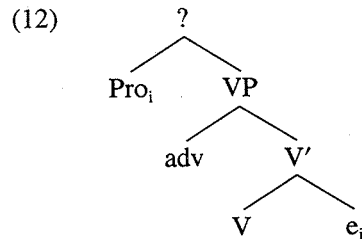
In type (I) a pronoun appears between the verb and the negative element. In type (II) an adverb can be inserted between the verb and the pronoun, yielding a surface order of [Neg Pro Adv V]. In type (III) the pronoun (usually *zhi* 'it') and the negative element (*bu* 'not') are phonologically fused together, yielding a fusion form *fu* (see Ding (1933)). In Type (IV) an adverb appears between the negative element and the pronoun, producing the surface order [Neg Adv Pro V].

Sentences of Type (I) exhibit the simple structure [Neg Pro V]. In this type there is not enough syntactic information to judge whether the pronoun occurs inside or outside the VP. Sentences of Type (II) provide strong evidence that the preverbal pronominal objects must be located outside of the core VP. In X'-theoretic terms, a complement (X) must be a sister of its head (Y) in D-structure. This requirement is sketched below:



Since the object is the internal argument of the verb, it must be generated in a position directly governed by the verb. Given the X' schema and the Adjacency Condition for Case Assignment in GB Theory, the object must occupy a position adjacent to the verb. In a Head-Initial language, a VP must have (11b) as its D-structure representation. If the language is Head-Final, then (11a) will represent the D-structure relations. Given this, if an object is not a sister to its head, then the structure cannot be base-generated but must be derived by syntactic operation. Since EAC is an SVO language, (11b) best represents the D-structure of the language; and since

adverbs can be inserted between the preverbal complement (the pronoun object) and the head of VP in the examples given in Type (II), we can conclude that the Type (II) structure is derived at S-structure, as in (12) below:



In this structure, the sister of the verb is empty since the Pro object is moved to a position higher than the core VP.

Now let us look at sentences of Type (III). It has been argued that *fu* is a fusion form of [bu+zhi] 'not+it' (see Ding (1933), Huang (1988)). This analysis is based on the fact that *fu* may only be followed by a transitive verb without an overt object whereas the form *bu* (not) may be followed only by a transitive verb with an overt object. The semantics of the sentence with *fu* indicates that the missing object must be covert *zhi* 'it'. Given the fact that pronoun objects occur preverbally in negative contexts, *fu* must be the fused result of [not+it]. On the constituency of the fusion form, Huang (1988) suggests that the fusion form is a result of encliticization of *zhi*, rather than procliticization, following the linear order of [Neg Pro V].

Observe that English allows enclitics like *want+to > wanna* in (13a), but not in (13b):

- (13) a. I *want+to* (*wanna*) win the prize.
 b. I *want+to* (**wanna*) flagellate oneself in public to become standard practice in this monastery.

If we assume that the reduced *to* in (13a) is attached syntactically to the preceding verb, then we would account for why the second *to* in (13b) may not be phonologically reduced – there is no host for encliticization. However, the question is how speakers know when to treat *to* as syntactically attaching to *want* given the linear order of [want to V]. As pointed out by Aoun and Lightfoot (1984) and Lightfoot (1991), *to* can be analyzed as an enclitic in some contexts and not in others. The decision of how to interpret it depends on how *to* is syntactically governed. That is, clitics occur only where they are governed. Given the notion of government,⁴ Aoun

and Lightfoot (1984, 46f) argue that if we take *to* to be the Infl (the head of S and/or S'), then we see that *want* does not govern *to* in (13b):

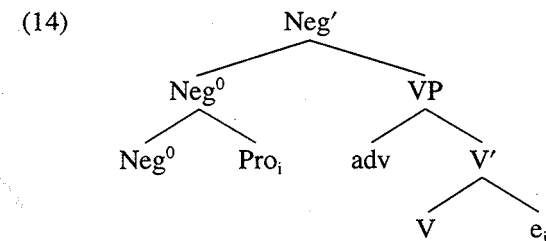
- (13b) *want* [[[[[PRO to flagellate . . .]_S]]]]_{NP} to become standard practice]_S'

In this example, *to* is not analyzed as an enclitic because there are maximal projections that dominate *to* and its maximal projection but do not also dominate *want* (i.e., the higher S' and the NP dominating the lower clause). On the other hand, *want* does govern the *to* in (13a):

- (13a) *want* [Comp [NP to_{infl} VP]_S]_S'

In (13a) *to* may be analyzed as an enclitic because there are no maximal projections which dominate the projection of Infl that do not also dominate *want*. This distinction suggests that *to* may adjoin to *want* only when governed by *want*.

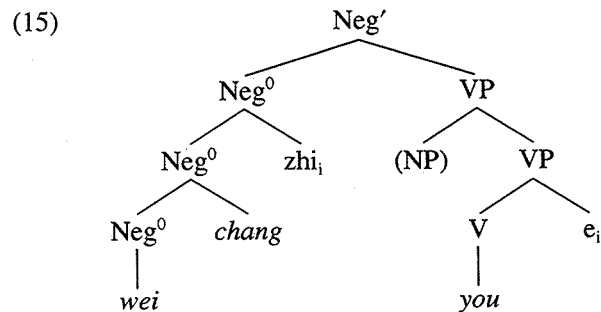
If the analysis for English enclitics given above is accurate and reflects a principle of Universal Grammar, then the negative element in Archaic Chinese must be considered the governor of the pronoun *zhi* 'it' in a fusion environment, and the pronoun object is not governed by the verb in a typical head-complement fashion. If this is correct, it naturally follows that the preverbal pronoun object must be outside of the governing domain of the verb, that is, outside of the V'. On the other hand, it should be located within the government domain of the negator. Following Aoun (1985), because the position of a clitic is always a non-argument position (an A'-position), we have the following structure:



The pronoun object adjoins to the Neg⁰ node in this structure. As a result, the Type (III) sentences would give further evidence for the pronoun objects occurring outside of VP.

The analysis in (14) obviously covers sentences of Types (I)–(III), but Type IV is problematic since the pronoun does not appear adjacent to the negator. For these cases I propose that the adverb 'ever' (*cháng* or *shǐ*) forms a complex head with 'not' (*wèi*) respectively in [*wèi-cháng*]_{Neg} and

[*wèi-shì*]_{Neg} (compare the derivation of English 'never' from 'not-ever').⁵ Then, the pronoun cliticizes onto the complex head, yielding the following structure:



This analysis receives support from the fact that the Type IV [Neg Adv Pro V] sentences I have found so far are all formed by a complex head [Neg+Adv].⁶ Given the complex head treatment for Type IV sentences, we are able to say that pronoun objects in EAC are systematically moved to the left of the verb and cliticized onto the head of Neg'.

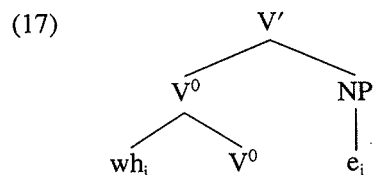
3.2. Syntactic Position of the Wh-Objects

Now let us consider the *wh*-object. It seems clear that, as many linguists have pointed out, nothing can be inserted between the *wh*-object and its verb. For example (translated by S.-L. Feng):

- (16) "Being an object of a verb or a preposition, *wh*-words always immediately precede the verb or the preposition. This phenomenon is regular." – Hong and Liao (1980)

"Although those (*wh*) objects are preposed, they closely attach to the verb on the left. They are never separated from the verb." – Xu (1980)

Given adjacency and the SVO word order of Archaic Chinese, the surface position of the *wh*-object would be as follows:



The *wh*-object is moved to the left of the V° and adjoins to the V° node forming a part of a verb compound. The motivation for this movement

will be given in 4.3.1 below, but it is clear that under this structure the moved *wh*-object will never be separated from the verb.⁷

The inseparability of the *wh*-object from its verb is supported by textual evidence. In searching several ancient documents (*Shangshu*, *Confucius*, *Mencius*, *Zuozhuan*, *Shiji*, etc.), I have found that *wh*-objects always appear in immediately preverbal position:

- (18) a. 聖王有百，吾孰法焉？《荀子·非相》
 Sheng wang you bai, wu shu fa yan?
 emperor king have hundred I who follow prt
 (Xunzi.Feixiang)
 'There are a hundred wise kings, who should I follow?'
- b. 寡人有子，未知其誰立焉。《左·閔2》
 Guaren you zi, wei zhi qi shei li yan.
 I have son not know prt who stand prt
 (Zuo.Min.2)
 'I have sons, but I don't know which I should pronounce the next king.'

We never found examples like the following:

- (19) a. *汝何獨知？
 *Ru he du zhi (Ru du he zhi?)
 you what only know
 'What do only you know?'
- b. *汝何知在？
 *Ru he zhi zai (Ru zhi he zai?)
 you where know exist
 'Do you know where it is?'

Interestingly, the lexical item *he* can be found in the position given in (19a), but when it is, it is always interpreted as a *wh*-adjunct. This is because *he* is ambiguously interpreted as a complement (what, where, etc.) and an adjunct (why, how, etc.). When an adverb is inserted between the *wh*-word *he* and the matrix verb, *he* must be interpreted as 'why' or 'how', rather than 'what' or 'where.' For example:

- (20) a. 吾獨何好焉？《左·昭15》
 Wu du he hao yan. (Zuo.Zhao.15)
 I just what like prt
 'What do I especially like?'

- b. 何獨弗欲? <左·襄28>
 he du fu yu? (Zuo.Xiang.28)
 why just not want
 'Why don't you just get it?'

Note that the adverbs in both cases are the same lexical item, *du* 'just, unexpectedly.' However, *he* in (20a) can only be interpreted as 'what', and in (20b) it can only be interpreted as 'why' (see He (1988)). This restriction further confirms our hypothesis that the *wh*-object must be directly attached to the V^0 . An adjunct *wh*-word like 'why' or 'how' can be base-generated preverbally outside of VP and hence need not be adjacent to the verb.

Another piece of supporting evidence for our analysis is the appearance of lexical compounds later in the history of Chinese, as seen in (21):

- (21) a. 何以知其然? <韓非子·備內17>
 He-yi zhi qi ran? (Hanfeizi.Beinei.17)
 what use know it so
 'By what (How) do you know it is so?'
- b. Nüer he-yi dui zhege da haigui ruci gan xingqu?
 daughter why to this big turtle such have interest
 'Why is his daughter so much interested in this big turtle?'
 (Green Turtle by Zhang Kangkang)

(21a) is a Classical example, and the surface structure *he yi* is theoretically derived from the syntactic operation given in (17). In Modern Chinese *he-yi* is a single compound word used to mean 'why', as illustrated in (21b). There are also other [wh V] compounds in Modern Chinese such as *he-zai* (where exist) 'where'; *he-wei* (what mean) 'what is the meaning of'; *he-ru* (what like) 'how about', etc.⁸ As argued by Huang (1984), Feng (1994b), and many others, compounds are formed from phrases. Since *he-yi* has become a compound, the two elements *he* and *yi* must have originally formed a minimal phrase. The fact that syntactic movement of a *wh*-object results in a compound word indicates that, in the position to which it moved, it formed a immediate constituent with the verb. In this way, the *wh*-object would never have been separated from its verb, providing the necessary conditions for the *wh*-word to be frozen to the verb and form a compound (see Feng (1995)).

To sum up, the different varieties of the so-called VOIs are actually syntactically distinct. Pronoun objects undergo clitic movement in order

to appear under Neg' in EAC, while the *wh*-object must move to a position inside V' . This syntactic difference, as we will see in section 4, is reflected in a systematic way in the syntactic and the prosodic changes in the language.

3.3. Archaic and Modern OVI's

Since the canonical word order of Early Archaic Chinese is SVO, linguists such as Wang (1980) and Yu (1981) have developed an explanation for the exceptional SOV structures. They claim that the SOV structures are remnants of a change from SOV (Proto-Chinese) to SVO (Archaic Chinese). I will adopt the Remnant Hypothesis because, first, as Qiu (1979) points out, all of the occurrences of the pronoun *shi* in the oracle bone inscriptions from the Shang Dynasty (14th–11th cent. B.C.) and in the bronze inscriptions from the West Zhou Dynasty (ca. 11th cent. B.C.) appear before the verb without an obligatory negative context. For example:

- (22) a. 子孫是保。 <陳逆簋>
 Zi sun shi bao (Chennigui)
 son grandson it have
 'Descendants have it.'
- b. 是用壽老。 <毛公鼎>
 Shi yong shoulao (Maogongding)
 this use longevity
 'Use this for longevity.'

Second, there were also NP-P structures in EAC:

- (23) 野於飲食。 <墨子·非樂上>
 Ye yu yin-shi. (Mozi.Feile.Shang)
 field at drink-eat
 'Drink and eat in the field.'

Given these facts, I argue that the best explanation of the SOV phenomena is the Remnant Hypothesis, which leads us to the conclusion that Proto-Chinese is an SOV language.

However, Archaic and Modern Chinese both have OVI's. Are they the same? Of course, some OVI's are the same in both Modern and Archaic Chinese. For example ('AC' stands for Archaic Chinese; 'MnC' for Modern Chinese):

(24) a. AC: 其子而食之，且誰不食？《韓非子·說林上》
 Qi zi er shi zhi, qie **shei bu** shi?
 its son prt eat it then **who not** eat
 (Hanfeizi.Shuolin.Shang)

'(They) even eat their son; then, who don't they eat?'

MnC: Qing ni gaosu wo, women **nar** bu keyi
 please you tell me we **where not** can
 qu?
 go

'Please tell me, where can't we go?'

b. AC: 將何能保？《左·文15》
 Jiang **he neng** bao? (Zuo.Wen.15)
 will **what can** protect

'What can we protect?'

MnC: Zai ni kanlai, women **shei/shenme yang.de**
 at you see we **who/what type**
ren keyi baohu ne?
person can protect prt

'According to you, who/what kind of people can we protect?'

Examples in (24a) show that, in both Archaic Chinese and Modern Chinese a *wh*-object can appear before the negator *bu*; examples in (24b) show that a *wh*-object can immediately precede an auxiliary verb in both Archaic and Modern Chinese. However, consider the examples in (25)

(25) AC: a. 吾誰欺？《論語·子罕》
 Wu shei qi? (Lunyu.Zixhan)
 I who cheat
 'Who do I cheat?'

MnC: a. *Wo **shei** qipian?
 I **who** cheat
 'Who do I cheat?'

b. *Qing ni gaosu wo, women **nar** qu?
 please you tell me we **where** go
 'Please tell me, where do we go?'

c. *Zai ni kanlai, women **shei** baohu ne?
 at you see we **who** protect prt

'According to you, who do we protect?'

(25) demonstrates that the [wh V] structure exists only in Classical Chinese, not in Modern Chinese. Given the contrast between (24) and (25), I argue that (24) and (25) must be syntactically different; otherwise there is no way to explain why sentences in (25) are acceptable in Classical Chinese but not in Modern Chinese. The structural difference between (24) and (25) can be characterized in terms of movement inside or outside the (lowest) VP domain: If the *wh*-object is preposed out of the VP domain, as in (24), it is acceptable in both Modern and Archaic Chinese; if it is moved to a preverbal position under V', as in (25), it is acceptable only in Archaic Chinese but not in Modern Chinese. The question, then, is why Modern Chinese allows only *wh*-object to occur outside but not inside the VP and how the *wh*-object in Archaic Chinese could be moved into a preverbal position under V'. Actually, object preposing to a position outside VP in Modern (and Classical) Chinese is a familiar syntactic operation. For example, topicalization of an object to a pre-VP position is very common throughout Chinese history (see (6b)). However, no topicalization is allowed under the V' in Modern Chinese. Therefore, grammatical sentences like the ones in (25) must be produced by an independent syntactic operation which is different from the ones generating (24). In section 4 we will see that the derivation of (25) in Archaic Chinese is triggered independently by the prosody of the language. This operation, together with the preverbal pronoun object in negative context, was lost in Modern Chinese. If these two processes have completely disappeared in Modern Chinese, the modern SOV structures given in (24) are syntactically different from (25) in EAC.

I have adopted the Remnant Hypothesis and argued that Proto-Chinese was an SOV language. However, in EAC, although the OV forms are remnants of an SOV language, the SVO system of Early Archaic Chinese would prevent the remnants from keeping their old OV underlying structure. The Remnant Hypothesis is correct in the sense that the OV remnants used to be an underlying word order, and hence the OV word order in EAC reflects an earlier grammar of Proto-Chinese. However, when the language changed its underlying word order from SOV to SVO, remnant OV structures had to be reanalyzed in the new SVO system.⁹ That is, in order to retain the old OV forms, the language had to introduce a new analysis, permitted by the new SVO grammar. The old OV forms must be

treated as outputs of a new syntactic operation in the later stage. Therefore, although there were OV structures in EAC, they did not represent an underlying OV structure. Hence all [Neg Pro V] and [wh V] cases must be derived from an underlying SVO structure.

Given the above analysis, when word order changes take place, a language can either replace the old forms with new forms entirely or retain the old OV forms by introducing a new analysis. This can be seen cross-linguistically from historical development of Romance languages. It is well known that Latin was an SOV language and French – a language developed from Latin – is an SVO language. What we see, however, is that object pronouns appear preverbally in Modern French. This can also be observed in Italian and Spanish. Obviously, the preverbal object in modern Romance languages is a remnant of a change from SOV to SVO, and the OV orders in the modern languages must be reanalyzed by operations of the modern SVO system. Parallel to Romance languages, the remnant [Neg Pro V] forms in EAC provide (indirect) evidence that Proto-Chinese, like Latin, is an SOV language. However, Modern French cannot be treated as an SOV language based on a few OV orders retained in the language. The same can be said of Archaic Chinese; the remnants of OV forms would not motivate an analysis for an SOV underlying structure in this language. This analysis also entails that the [Neg Pro V] forms can be retained only if the system provides a new analysis for them. Since the [Neg Pro V] used to yield a fusion form *fu* (from *bu+zhi* 'not+it'), the new system cannot simply change *fu* to a postverbal position: *fu* V > *V *fu*, so it must introduce a new analysis for [*fu* V] and [Neg Pro V]. The clitic movement process of [Neg Pro V] is, therefore, introduced in order to retain the old word order. For the same reason, the [wh V] structures were also retained by an operation of focus-movement, as we will see below. As a result, both [Neg Pro V] and [wh V] OV structures are analyzed in terms of movement permitted in the SVO system.

4. SYNTACTIC CHANGE AND STRESS SHIFT

We have seen that, in addition to the evidence given by the Remnants Account, the existence of preverbal *wh*-object and the clitic movement of object pronouns onto the negative element can also serve as independent evidence for the hypothesis that Proto-Chinese was an SOV language. Under this analysis, the preverbal objects are vestiges of an earlier stage of the language. However, it is not clear under the remnant analysis why only [Neg Pro V] and [wh V] were retained during the change from SOV to SVO and what syntactic operations allow them to co-occur with SVO

canonical order. Also it does not answer the question of why the relative chronology of object postposing took the following order, as observed in the literature (here, '>' means 'earlier than'):

- (26) Full NPs > Pronouns > Neg Pronouns > *wh*-objects

Obviously, the factors that determine the chronological order of the changes are not provided by the Remnant Account. However, there must be reasons why some items changed first and some later. In this section, I will propose two different syntactic operations for [Pro V] and [wh V], respectively, and argue that the determining factor for the chronological order of object postposing is the prosody of the language.

4.1. Word Order Change and Stress Shift

First I adopt the Nuclear Stress Rule (NSR) proposed by Liberman and Prince (1977) and argue that the NSR can be considered a general principle of stress assignment for SVO languages.

- (27) **Nuclear Stress Rule** (Liberman and Prince (1977))
In a configuration [_c A B _c]
NSR: If C is a phrasal category, B is strong.

If we compare SVO languages with SOV languages, an even more general principle can be formulated as follows (the upper case constituent here, on the right of the arrow, stands for the stress target):

- (28) **Normal Stress Principle** (NSP)
VP → {v, YP}

(28) states that as long as the parameter of complement-head direction is set, the formula given in (28) will generate schemata for well-formed prosodic structures for both SVO and SOV languages, as shown below (see also Duanmu (1991) and Cinque (1993)):

- (29) Head-initial VP → v XP (English and Mandarin)
Head-final VP → XP v (German and Japanese)

According to the NSP, it is easy to see that, if Proto-Chinese is an SOV language, the normal stress target must be located to the left of the verb. If the language has changed from an SOV to an SVO language, the stress target will also have changed from the left of the verb to the right of the verb. Therefore, the process of a syntactic change from SOV to SVO entails a process of stress shift.

Under the hypothesis that stress accompanies word order change, it is

4.3. *Wh-Objects*

Now let us look at the *wh*-object. The question we are considering here is why *wh*-objects moved to the left of the verb and why they remained in preverbal position longer than pronoun objects (the [wh V] structure remained until the Han Dynasty). For the first question I propose that the preverbal *wh*-object is derived by a type of focus movement.¹¹ The reasons why *wh*-objects remained longer on the left of the verb than pronoun objects can be attributed to the prosodic structure of the [wh V] construction itself, as I will show directly.

4.3.1. *Wh-Focus*

As argued in Rochemont (1986), focus can be divided minimally into the following four categories: lexical focus as marked by *only*, *even*, etc.; structural focal constructions like 'It is JOHN who likes linguistics' (the uppercase letters stand for focal accent); wide scope focus, which is given in (33b) of the following dialogue:

- (33) a: What happened?
b: John gave him a BOOK.

and, finally, narrow scope focus, which is shown in (34) and (35) below:

- (34) a: Who bought the book?
b: The PROFESSOR bought the book.
- (35) a: To whom did the professor give a book?
b: The professor gave the book to MARY.

It is argued (Rochemont (1986) and Ladd (1980)) that the foci of 'question and answer' type sentences (Q-A sentences) are independent focal structures which differentiate them from other focal structures. As argued in Rochemont (1986), the *wh*-word in a question always functions as a focus, and the focus in a sentence that answers a question must correspond to the *wh*-word. For example:

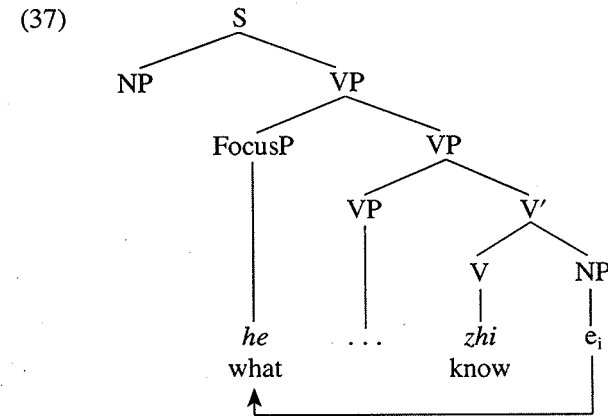
- (36) a. Ni xihuan SHEI?
you like who
'Who do you like?'
- a' Wo xihuan ZHANGSAN.
I like Zhangsan
'I like Zhangsan.'

- b. SHEI xihuan ta?
who like him
'Who likes him?'

- b' ZHANGSAN xihuan ta.
Zhangsan like him
'Zhangsan likes him.'

The nature of focus in Q-A sentences is independent of other types of focus, especially from ordinary declarative sentences with wide scope focus.

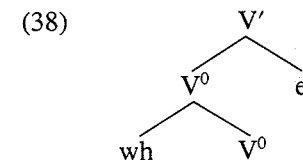
If the Q-A sentences function as a special type of focal structure, then the leftward movement of *wh*-objects can be characterized in terms of a discourse analysis, as a type of focus movement within the following structure:



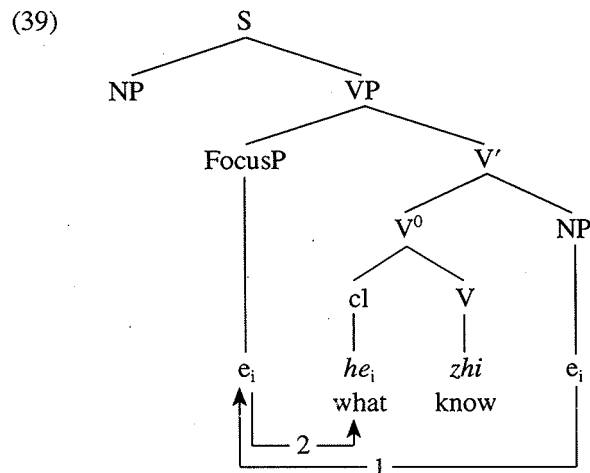
The FocusP stands for a Focus Phrase in a focus position which is adjoined to the left periphery of a VP node. The *wh*-word is moved to that position in order to fulfill its focusing function.

4.3.2. *Wh-Clitics*

As shown before, *wh*-objects can never be separated from their verbs. To capture this syntactic property structurally, I have proposed that the *wh*-object must be adjoined to V under V':



If the [wh V] structure is functionally motivated by focus-movement, as assumed before, and if the *wh*-objects must also appear inside V', as evidenced by examples given in 3.2, a natural conclusion for the syntactic operation of *wh*-objects would be that the *wh*-objects first move to the Focus position in the periphery of VP and then cliticize with the verb, as shown in the following tree structure:



The position under V⁰ for *wh*-objects is analyzed as a clitic position and the [wh V] form a clitic+verb complex. This would entail that, if the VP is formed by more than one verb (i.e., [Aux V]_{VP}, [Neg V]_{VP}, or [Neg Aux V]_{VP}) no cliticization of the *wh*-word onto the verb is possible. Cliticization happens only if the VP is formed by a single verb.¹² Syntactically, nothing would prevent clitic movement although there must be independent motivations for it to occur. In fact, there are two possible reasons why *wh*-words must cliticize onto the verb. First, as will be shown in section 4.2.4, *wh*-words are prosodically weak forms in Archaic Chinese. Second, the pressure of prosodic foot formation forces two monosyllabic forms to combine together as a disyllabic unit (see also section 4.2.4). In other words, since *wh*-words and verbs are all monosyllabic in Archaic Chinese, when a *wh*-word is adjacent to the verb, they are forced to form a disyllabic foot at the end of the sentence. Furthermore, since *wh*-words are weak forms and the verbs occupy the prosodically strong position (the rightmost element in a sentence), it is natural for a *wh*-word (a weak form) to cliticize onto its prosodic head within the foot. Given this, the cliticization is almost inevitable because weak forms always attach to a prominent element within the same prosodic domain. As a result, even though the *wh*-objects are moved into a focus position in the periphery of VP by focus movement, they must cliticize onto the verb, forming a clitic+verb complex.

Under this analysis, the inseparability of [wh V] is therefore attributed to the prosodically motivated cliticization of *wh*-object onto the verb. This analysis also entails that, if there is no such prosodic motivation (i.e., a monosyllabic *wh*-object adjacent to a monosyllabic verb), there will be no trigger for the cliticization. If there is no clitic movement, the *wh*-object must stay under the focus position – a position outside VP. This is borne out by the following examples:¹³

- (40) a. 且誰不食? 《韓非子·說林上》
 Qie shei bu shi? (Hanfeizi.Shuolin.Shang)
 then who not eat
 'Then who don't (they) eat?'
 b. 將何能保? 《左·文 15》
 Jiang he neng bao? (Zuo.Wen.15)
 will what can protect
 'What can (we) protect?'

Since the verb with a negator or an auxiliary verb forms an independent foot, cliticization of the *wh*-word onto the verb is not required. The *wh*-objects can, therefore, attach to other elements. As argued in section 3.3, [wh Aux/Neg V] sentences in (40) are structurally different from [wh V] sentences. Given the structure in (39) and footnote (12), and according to the prosodically motivated cliticization of *wh*-object onto the verb, the difference between [wh Aux/Neg V] and [wh V] can be characterized as follows. Both structures in Archaic Chinese are derived from focus movement: All *wh*-objects move to the focus position adjoining to the left of the VP. If cliticization of the *wh*-object onto the verb is blocked by a negator or an auxiliary verb, then sentences like those given in (40) emerge. If, on the other hand, the *wh*-object is adjacent to a verb, then cliticization must take place, yielding [wh V] sentences. Given this analysis, the difference between [wh Aux/Neg V] and [wh V] reduces to a single prosodic factor: whether cliticization is allowed or not. This would also entail that [wh V] structures are generally not allowed in Archaic Chinese, which is the same as they are in Modern Chinese. The so-called [wh V] forms in Archaic Chinese are actually clitic+verb complexes derived by cliticization of *wh*-object onto the verb.

This analysis implies further that, although *wh*-words are focus elements, focus elements may not necessarily correspond to stress. *wh*-focus in languages like English, for example, does not correspond to stress, as seen below:

- (41) What do you KNOW?

The *wh*-word 'what' does not carry *wh*-focal stress, but instead the stress falls on the verb. The English example provides evidence for my analysis of non-stressed *wh*-words in Archaic Chinese. Note that, although the *wh*-words do not correspond to stress, the focal prominence falls on the verb, as seen in (41). The same may be said of the *wh*-questions in Archaic Chinese. Since *wh*-words are weak forms in Archaic Chinese, they do not carry stress, despite the fact that they are focus elements. Instead of falling on the *wh*-words, stress falls on the verb in Archaic Chinese, as in Modern English. However, a monosyllabic form (here the monosyllabic verb) cannot realize stress by itself (see Feng (1995)). What happens, then, is that the *wh*-word cliticizes onto the verb so that the clitic+verb complex (i.e., the [wh V], which always forms a disyllabic unit) is able to realize the focal prominence. This would also entail that the cliticization of a *wh*-word onto the verb is required by the need to realize the focal prominence on the verb.

However, why is cliticization not allowed after the Han Dynasty or in Modern Chinese? The reason may be this: *wh*-words became strong forms after the word order change from [wh V] to [V wh], and cliticization does not apply to strong forms. That is to say, before the change from [wh V] to [V wh], *wh*-words were weak forms, as they are in English (see (41)). After the change, *wh*-words were strong forms as they are in Modern Chinese (see (36)). The change in prosodic properties of *wh*-words is evidenced by the fact that disyllabic *wh*-words can only be dated during the change from [wh V] to [V wh] (see section 4.4.3). That is, prosodically strong *wh*-forms occur only after the change. And also, within the new structure [V wh], all *wh*-words must be stressed in order to meet the requirement of NSP given in (28). It can also be seen from examples in (36); *wh*-object in Modern Chinese is always stressed, regardless of whether it is a monosyllabic or disyllabic form.¹⁴ If *wh*-words became (lexically) strong forms in the language, no cliticization is allowed. If cliticization of a *wh*-object onto the verb is no longer allowed within the [wh V] structure, [wh V] forms must be ruled out because no [wh V] surface structure is generally allowed in the language. If this is so, in order to avoid the [wh V] surface structure after the loss of the cliticization, *wh*-objects must be located outside the VP, and their positions must be structurally identifiable. As a result, a negator or an auxiliary verb before the verb is therefore required for this purpose, as seen in the following Mandarin examples:

- (42) a. Gaosu wo, women *nar qu?
tell me, we where go
'Tell me, where do we go?'
- b. Gaosu wo, women daodi nar bu neng qu?
tell me we indeed where not can go
'Tell me, where can't we go indeed?'
- c. Gaosu wo, women jiuqing naxie difang keyi qu?
tell me we exactly which place can go
'Tell me where can we go exactly?'

In (42a), the final VP is formed by a [wh V] structure, hence it must be ruled out. In (42b-c), however, the *wh*-objects are identifiably located outside the lowest VP, hence they are all grammatical.

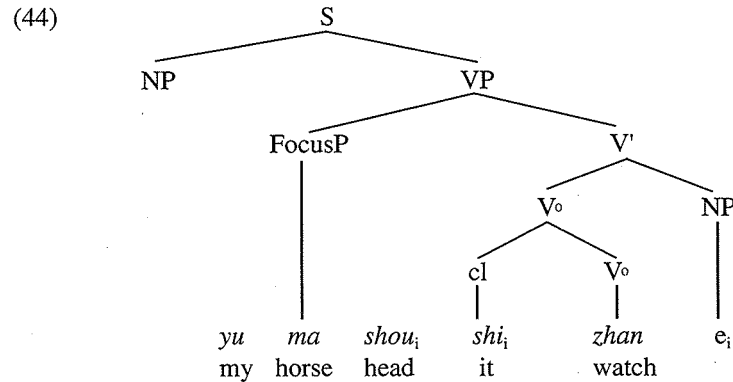
4.3.3. Grammatical Evidence for Focus Movement

The analysis of left-focus movement for *wh*-objects receives support from a similar syntactic operation of clitic doubling observed in other types of focus-movement, as shown below:

- (43) a. 惟余馬首是瞻。《左·襄14》
Wei yu ma shou shi zhan. (Zuo.Xiang.14)
prt my horse head it look
'(You) will watch only the direction of my horse's head (It is the direction that my horse goes that you should follow)'
- b. 將唯命是從。《左·昭12》
Jiang wei ming shi cong. (Zuo.Zhao.12)
will prt order it follow
'It is only your order that I will follow to.'

All the sentences given above are remnants of SOV forms, which have been considered as structural focus constructions. The structure of these sentences should be analyzed in terms of Clitic Doubling, as illustrated below:

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Note that these are two constituents that co-index with each other and appear at the left of the verb. A syntactic analysis of these two co-indexed constituents must accommodate the fact that *yu ma shou* 'my horse's head' and *shi* 'it' occupy two syntactic positions, yet both serve as the single complement of the verb.¹⁵ The special situation of 'two positions serve as one complement' can be explained in terms of Clitic Doubling, as in languages like Spanish.¹⁶ That is, *yu ma shou* 'my horse's head' occupies the focus position while *shi* 'it' is cliticized onto the verb. Obviously, it is the Clitic Doubling operation that licenses the pronoun *shi* to co-index with the NP *yu ma shou*, and both the pronoun and the NP function as the complement of the verb. Furthermore, it is the focus position that licenses the NP *yu ma shou* to appear to the left of verb. If this is so, the structure (44) provides strong evidence for our hypothesis that there must be a focus position to the left of the verb. It also confirms the assumption that the preverbal object may cliticize with the verb if it is a weak element (i.e., a pronoun). The analysis for (44) coincides with whatever analysis is responsible for Clitic Doubling in other languages. This is because there is otherwise no other position for the pronoun-object *shi* 'it' to appear in. It occurs because there is an ideal clitic environment (pronouns are weak forms, as seen before, and the verb occupies the prosodically strong position, as I will show later).

The following example of *wh*-focus movement provides further evidence for our analysis:

- (45) 宋何罪之有? <墨子·公輸>
 Song he zui zhi you. (Mozi.Gongshu)
 Song what guilt it have
 'What guilt does Song have?'

This time the *wh*-phrase *he zui* still occupies the focus position because strong forms (i.e., the disyllabic *wh*-phrase *he zui*) cannot cliticize onto the verb. Instead, a weak form, *zhi*, is cliticized onto the verb to fill the prosodic weak position – the Left-V position.¹⁷ The structure of (45) clearly parallels (44), and (45) shows that *wh*-focus movement can also result in a structure of clitic doubling.

Given this analysis, it is natural to assume that a monosyllabic *wh*-object, like weak pronouns, can also be cliticized onto the verb using the structure given in (44) because there is a legitimate clitic position. The only question remaining to be answered is whether *wh*-words are weak forms or not. This will be addressed in the next section.

4.3.4. Prosodic Evidence for *wh*-Words as Weak Forms

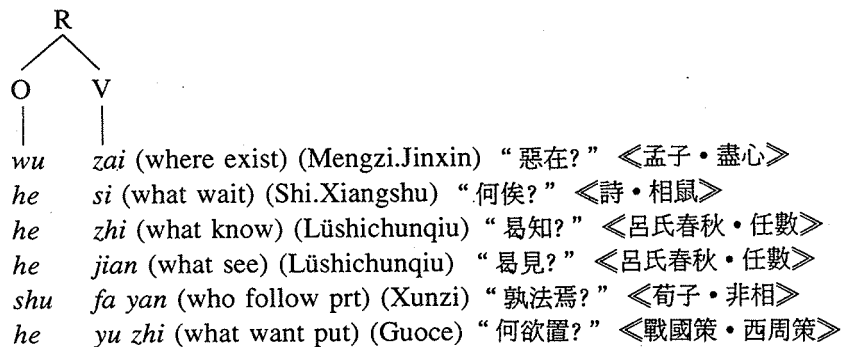
There are several pieces of evidence showing that *wh*-words are prosodically weak forms in Archaic Chinese. First, as shown above, according to the NSP, which is repeated below, the prosodic target is to the left of the verb in an SOV language and to the right of the verb in an SVO language:

- (28) **Normal Stress Principle (NSP)**
 VP → {v, YP}

If the language changes from an SOV to SVO structure, the newly established prosodic target of a sentence must be located to the right of the verb. Since Early Archaic Chinese was originally an SOV language, the prosodically strong position of a sentence in EAC shifted to the right of the verb. Hence, if a sentence ends with a verb, this verb must serve as the prosodic target, and the *wh*-words must be in a prosodically weak position.

Second, given the right-strong prosody of the language, the [*wh* V] units are required to be in a [*w s*] relationship at the end of a sentence. On the other hand, if the [*wh* V] forms were indeed prosodically weak on the left of the verb, the OV order may survive with the new SVO prosody. The following examples show that the *wh*-words are indeed light when they appear to the left of the verb.

(46)



These examples illustrate that *wh*-words in [wh V] structures are always monosyllabic forms while the verbs can be either a monosyllabic word or a disyllabic unit (an auxiliary verb with a verb, as in the last case). In other words, *wh*-words (or *wh*-phrases) cannot have a syllabic form longer than the verb (see (47) below). This fact strongly suggests that the *wh*-form in this context is prosodically weaker than the verb. Therefore, it is consistent with the new prosodic requirement of an SVO language according to which stress must be located at the end of the sentence.

This hypothesis can also be seen from the analysis of the following examples.

- (47) *宋何罪有?
 *Song he zui you?
 Song what guilt have
 ‘What guilt does Song have?’

(47) demonstrates that a [wh N] object (what guilt) with a monosyllabic verb (have) (i.e., a structure of [[what N] V]) cannot be found in Archaic Chinese unless (i) the verb is supported by some extra elements which will yield a structure of [wh N Pro V] as in (48a), or (ii) the verb contains a two-syllable phrase, as in (48b). Otherwise the [wh N] has to appear at the right of the verb, forming a [V [wh N]] pattern, as in (48c). For example:

- (48) a. [wh N Pro V]
 宋何罪之有? <墨子·公輸>
 Song he zui zhi you. (Mozi.Gongshu)
 Song what guilt it have
 ‘What guilt does Song have?’

b. [wh N Aux/Neg V]¹⁸

- 何事能治? <國語·晉語一>
 He shi neng zhi. (Guoyu.Jinyu.1)
 what thing can control
 ‘What kind of things can you control?’
 何城不克? <左·僖4>
 He cheng bu ke? (Zuo.Xi.4)
 what city not defeat
 ‘Which cities do you not defeat?’

c. [V wh N]

- 有何舊怨? <國語晉語·章昭注>
 ... you he jiu yan? (Guoyu.Jinyu.Wei Zhao Zhu)
 ... have what old complain
 ‘... What old grievance do (you) have?’

Either the pronoun *zhi* ‘it’ is used to fill the prosodic weak position in earlier documents, or an auxiliary verb occurs with the verb forming a two-syllable verb unit, or the heavy *wh*-expression appears to the right of the verb (after the Han Dynasty). The unlicensed prosodic structure *[he zui you] ‘what guilt have,’ indicates that no strong prosodic forms are allowed to occur in the Left-V position. It follows that elements that are allowed to occupy the Left-V position are prosodically weak forms. Consequently, monosyllabic *wh*-words must be considered weak forms in EAC since only monosyllabic *wh*-words can take that position.

Third, in early stages of *wh*-word postposing, as indicated by example (48c), heavy *wh*-objects (rather than monosyllabic *wh*-words) first appear in a postverbal position. This occurs during the earlier part of the Han Dynasty, as pointed out by Wei (1990) and exemplified in (49):

- (49) 今欲返國·由何道也? <康僧會 152:6>
 Jin yu fan guo, you he dao ye?
 now want back country follow what way prt
 ‘If you want to go back to the country now, which way will you go?’

According to Wei (1990), *you* in the Pre-Qin period (200 B.C.) was a verb meaning ‘follow,’ ‘walk from,’ or ‘go from,’ and specified the action of ‘moving from a road.’ Therefore, it would be enough to say *he you* ‘which road follow’ meaning ‘follow which road’. It is semantically redundant to

say *you he dao* 'follow which road'. The question here is why, when *he* appears after the verb, is an extra element added to *he* to yield *he dao*? The answer is that *he dao* is a disyllabic strong form, so it is preferred by the postverbal position [V ____]. The preference for disyllabic *wh*-phrases to the right of the verb also indicates that monosyllabic *wh*-words in EAC are prosodically weak forms (all *wh*-words in EAC are monosyllabic forms). Therefore, *wh*-words do not appear in prosodically strong positions to the right of the verb during the beginning of the historical change from [wh V] to [V wh]. Given this analysis, we have the following structural contrast:



The position to the right of the V is a prosodically strong position while the position to the left is weak. Monosyllabic *wh*-words remain in the left position, and when they shift to the right of the verb, only disyllabic forms are licensed at the beginning of the change.

Fourth, it has been widely recognized that the form *he* 'why not' in EAC is a fusion form [*he+bu*] (why+not). For example:

- (51) 盍各言爾志? 《論語·公冶長》
 He ge yan er zhi? (Lunyu.Gongyechang)
 why-not each say your ideal
 'Why don't each of you tell me your own ideal?'

Phonetically, the *wh*-word *he* and the negator *bu* must have gone through a process of phonological reduction in order to become a fusion form. Obviously, the fact that *wh*-words like *he* occur in a fusion form strongly supports the hypothesis that *wh*-words in EAC are prosodically weak.

Finally, the prosodic weakness of *wh*-words in EAC can also be seen from the fact that disyllabic *wh*-words like *he-wu* 'what thing' → 'what' were developed only after the late Han Dynasty (see section 4.4.3); that is, prosodically strong forms of *wh*-words appear in the language only after the predominant word order changes from [wh V] to [V wh]. This would be an additional indication that before [wh V] changed into [V wh], there were no prosodically strong *wh*-forms in the language.

Given all the arguments above, it should be clear that all *wh*-words in EAC are prosodically weak forms. If this is so, it is not surprising that *wh*-words can be cliticized onto the verb.

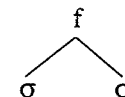
4.3.5. The Stability of [wh V] Structures

Under the prosodic analysis given above, it becomes possible to see why [wh V] structures are more stable than [Neg Pro V] structures during the change from SOV to SVO word order. We have already seen that *wh*-words in EAC are all monosyllabic forms and there were no strong (disyllabic) *wh*-forms before the Han Dynasty. As shown in the examples in (46), the combination of a *wh*-object with its verb in EAC always results in a disyllabic unit. As shown by Cheng (1982, 1985), Wei (1990), Feng (1994b), disyllabic forms start to appear and to play an important role in the language during the Late Spring and Autumn Period (ca. 500 B.C.), and disyllabic foot formation was fully established by the Han Dynasty (206 B.C.). Given these facts, it follows that the disyllabic [wh V] combination would typically be reanalyzed as a Prosodic Word (PrWd) under the new prosodic system. The examples given in (21), repeated here as (52), provide evidence for this analysis:

- (52) a. 何以知其然? 《韓非子·備內 17》
 He yi zhi qi ran? (Hanfeizi.Beinei.17)
 what use know it so
 'By what (how) do you know it is so?'
 b. (汝)何爲爲我擒? 《史記·淮陰侯列傳》
 (Ru) he wei wei wo qin. (Shiji.Huai'yinhou Liezhuan)
 (you) what do by me arrest
 'Why were you arrested by me?'

he-yi (what use) and *he-wei* (what do) were originally formed as two-word phrases (through focus movement), but they are used (through idiomatization, see Feng (1995)) as disyllabic units in (52).¹⁹ If monosyllabic *wh*-forms are prosodically weak, and if the [wh V] structures are always formed by disyllabic units under the prosodic pressure of the Foot Formation Rule (FFR), given in (53), then these *wh*-words are forced to cliticize with the verbs to form an independent foot. Furthermore they result in PrWds²⁰ and give rise to [wh V] compounds, as seen in (21b).

(53) Foot Formation Rule (FFR) in Chinese



A standard foot must be formed by at least two syllables.

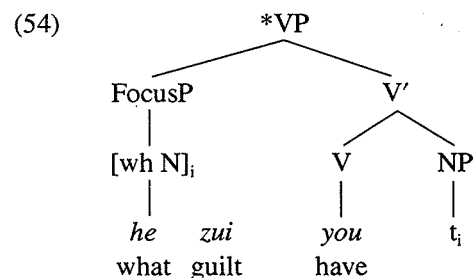
If [wh V] is reanalyzed as a PrWd in the language, the structure of [wh V] would be protected by the new prosodic morphological system, and its stability would be expected. This analysis entails also that the change from [wh V] to [V wh] could not easily take place unless some new prosodic factors developed a role in the language (i.e., the disyllabic *wh*-words). This, as we will see in section 4.4.3, is exactly what happened. If this is so, we have not only explained why [wh V] is more stable than [Neg-Pro V] structures, but we can also predict the need for a prosodic factor to motivate the change from [wh V] to [V wh].

4.4. Empirical Consequences and Theoretical Implications

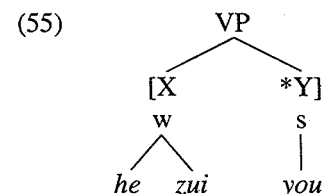
Given the prosodic analysis developed so far, we are able to further explore some prosodically related syntactic phenomena. As shown below, the theory presented here explains not only the change of word order from [wh V] to [V wh], but also some otherwise unrelated syntactic phenomena.

4.4.1. The Non-existence of *[wh N] V

In the theory given above, the non-existent structure *[wh N] V, given in (47), is treated as an ill-formed prosodic structure. However, we might ask why disyllabic *wh*-phrases are unable to remain in the focus position, as in the structure given in (39). That is, why are *[wh N] V structures ill-formed when cliticization does not take place?



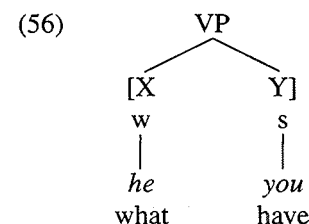
As seen in section 4.3.2, the *wh*-forms do not carry stress, and the *wh*-focal stress must fall on the verb. Given this analysis, the nonexistence of (47) is accounted for by the fact that the monosyllabic word *you* (have) is not heavy enough to realize the *wh*-focal prominence in the following structure (irrelevant nodes are omitted):



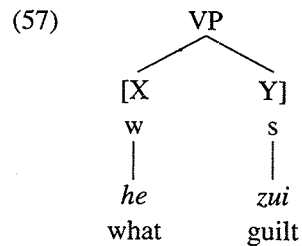
That is, within the prosodic domain of [X Y]_{vp}, X consists of a branching node while Y consists of only a non-branching node. According to Zec and Inkelas (1990, 373), a prosodic constituent is heavy iff it branches. Thus X must be heavier than Y. As a result, Y cannot realize the final stress.

Why can the stress [s] not be shifted from the Y node to the X node? The answer is that the change from SOV to SVO requires that the stress target be located at the end of the sentence. If we look at the sentence structure in terms of the head with its complements, on the one hand, and the head with its adjuncts, on the other, what was changed from the SOV of Proto-Chinese to the SVO of EAC was essentially the change from OV to VO. The position of the subject and the position of adverbs are the same in Proto-Chinese (S Adv O (Adv) V) and in EAC (S Adv V O). Therefore, it is crucial for OV (i.e., [wh V]) structures in EAC to meet the new prosodic requirement because the left-strong [O V] pattern is a typological representation of SOV prosody. As a result, it does not matter whether the [O V] sequence in an SVO language is base-generated or derived: the left strong pattern of an [O V] phrasal order is disallowed by an SVO language. This may be why there is a strict right-strong constraint on both VO and OV structures in Archaic, as well as Modern, Chinese.

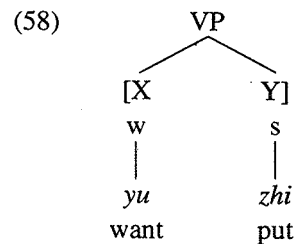
Given the above analysis, [*he you*] 'what have' must be grammatical. Because [*he you*] forms an independent foot within the last phrase (the VO structure), the final stress can be assigned to the right element *you*, as in (56) below:



[*you he zui*] 'have what guilt' given in (57) is also grammatical because [*he zui*] is the last phrase (NP), and these two words form an independent foot with the stress on the rightmost element, thus satisfying NSP given in (28):



Similarly, the last example in (46) [*he yu zhi*] 'what want put' is also acceptable because the final stress falls on the last element of the last two syllable foot, the auxiliary verb *yu* with the verb *zhi* as shown in (58):



Depending on contexts, the weak *wh*-word *he* may either attach to the verbal-foot, yielding a trisyllabic super-foot *he yu zhi*, or attach to preceding elements. All of the above examples indicate that, as long as the last foot (headed by the verb) is right-strong, the sentence is grammatical. Given this, we are able to predict the following: Sentences such as [*he shi neng zhi*] 'what thing can control' and [*he cheng bu ke*] 'which city not defeat' in (48b) must be grammatical because the [Aux V] and [Neg V] each form a foot in exactly the same way that *yu zhi* 'want put' in (58) and the disyllabic phrases *he shi* 'what thing' and *he cheng* 'which city' form independent feet. As seen before, all the examples given above are grammatical, as we expect.

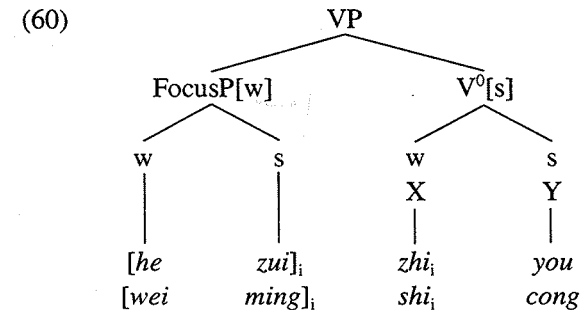
4.4.2. [*wh N Pro V*] and [*wei N Pro V*]

Next, let us consider why the structures in (43) and (45), repeated here as (59a–b), are acceptable.

- (59) a. 將唯命是從。《左·昭12》
 Jiang wei ming shi cong. (Zuo.Zhao.12)
 will prt order it follow
 'I will only follow to your order.'
 'It is only your order that I will follow to.'

- b. 宋何罪之有? 《墨子·公輸》
 Song he zui zhi you. (Mozi.Gongshu)
 Song what guilt it have
 'What guilt does Song have?'

These sentences are grammatical because, after the pronoun is cliticized with the verb, [*zhi you*] or [*shi cong*], each forms a clitic-verb complex at the end of the sentence while [*he zui*] or [*wei ming*] co-index with the pronoun *zhi* or *shi*. Therefore, [*zhi you*] and [*shi cong*] satisfy the stress realization within a single foot. The result is illustrated in (60).



Since the stress can be realized on the verb (*you* within *zhi-YOU* or *cong* within *shi-CONG*), both structures are grammatical.

According to the theory presented here, the pronoun *zhi* in (60) functions as a foot-filler to license the final stress on the verb. Accordingly, if the verb is formed by a disyllabic unit, there would be no need for the use of *zhi*. However *zhi* does co-exist with a disyllabic verb unit, as seen in (61):²¹

- (61) a. 何俗之不可變? 《戰國策·趙策》
 He su zhi bu ke bian? (Zhanguoce.Zhaoce)
 what custom zhi not can change
 'What custom can't you change?'
- b. 其何土之能得? 《左·莊31》
 Qi he tu zhi neng de? (Zuo.Zhuang.31)
 then what land zhi can get
 'Then what land can you get?'

In (61a) a negator and an auxiliary verb are adjacent to the verb, forming a trisyllabic foot; in (61b), an auxiliary verb and the matrix verb form a disyllabic foot. However *zhi* is still used. What is the function of *zhi* in these two cases? I would like to suggest that, although all of the [*wh N Pro*

... V] sentences are instances of clitic doubling, the prosodic functions of *zhi* in [wh N Pro V] are different from those in [wh N Pro Neg/Aux V]. In the structure [wh N Pro V], *zhi* functions as a foot-licenser, and its primary duty is to fill the prosodic weak position (i.e., [__ V]) in order to realize the stress on the verb. This is why the pronoun *zhi* or *shi* is obligatory in the structure [wh N Pro V], as evidenced by the grammatical contract between (55) and (60). However, in the structure [wh N *zhi* Neg/Aux V], the [__ V] position is filled by other elements, and therefore *zhi* functions merely as a pause-filler.²² This is because the *wh*-phrases in (61) are forced by the negator and the auxiliary verb to appear outside of the VP, and between the *wh*-phrases and the VP there can be a pause. It is well known in Chinese grammar that a pause can occur between the VP and the constituent(s) to the left of the VP in a sentence. Therefore, between the [wh N]_{NP} and the [Neg Aux V]_{VP}, *zhi* functions as a place-filler. Since a pause can either be filled or be left empty in different syntactic environments and different speeds of speech, this analysis can be maintained if *zhi* is optional in [wh Neg/Aux V] contexts. This, as we can see from the contrast between (61) and (48b), is exactly the case in EAC, as illustrated in (62):

- (62) a. 何事[]能治? <國語·晉語一>
 He shi [] neng zhi. (Guoyu.Jinyu.1)
 what thing [] can control
 'What kind of things can you control?'
 b. 其何土之能得? <左·莊31>
 Qi he tu zhi neng de? (Zuo.Zhuang.31)
 then what land zhi can get
 'Then what land can (you) get?'

Given the different prosodic functions of foot-licenser and pause-filler for the pronoun *zhi*, the obligatory and optional usages of *zhi* in different syntactic environments are therefore systematically predicted by the theory.

Similar to the non-existent structure *[[*he zui*] you], we never find structures like *[[*wei ming*] ting]. The predicted ungrammaticality of *[[*he zui*] you] and *[[*wei ming*] ting] further confirms the analysis given above.²³ Note that if *he-you* is grammatical, there is no reason to rule out *he zui you*, either syntactically or semantically. The only significant difference between these two structures is their prosodic structure.

4.4.3. The Development of Disyllabic Wh-Words

We have seen that disyllabic *wh*-phrases cannot appear in the position to the left of V. We have also seen that, when a disyllabic *wh*-phrase occurs with a bare verb to its left, an ill-formed prosodic structure will result. It follows that disyllabic expressions can only appear in one of the following three structures:

- (63) i. [wh N Pro V]
 ii. [wh N Neg/Aux V]
 iii. [V wh N]

However, following the word order change from SOV to SVO and the ensuing stress shift from the left to the right of the verb, disyllabic *wh*-phrases preferred to appear at the right of the verb. For example,

- (64) 有何舊怨? <國語晉語·韋昭注>
 You [he jiu yuan]_{NP} (Guoyu.Jinyu.Wei Zhao Zhu)
 have what old resentment
 'What old resentment do you have?'

As Wei (1990) has pointed out, monosyllabic *wh*-objects remained in the preverbal position until the Han Dynasty, and when *wh*-objects began to appear in the postverbal position, disyllabic rather than monosyllabic *wh*-forms were favored. This can be seen from the examples given in (49), repeated here as (65):

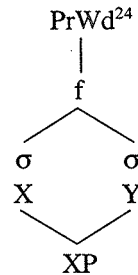
- (65) 今欲返國·由何道也? <康僧會 152:6 >
 Jin yu fan guo, you he dao ye?
 now want back country follow what way prt
 'If you want to go back to the country now, which way will you go?'

This example demonstrates that, when a monosyllabic *wh*-word (*he* 'what') appears to the right of the verb, a semantically redundant element (*dao* 'road') is used to strengthen the prosodic weight of what would otherwise be a weak monosyllabic form, strongly indicating that, during the transition from [wh V] to [V wh] structure, the newly developed heavy stress position favored strong forms. Given this analysis, I would like to suggest that the change from [wh V] to [V wh] was motivated by the rise of postverbal strong *wh*-forms, i.e., disyllabic expressions.

How could disyllabic *wh*-forms such as [wh N] 'what guilt' cause the change from [wh V] to [V wh]? I argue that, given the Word Formation

Rule proposed in Feng (1994b), cited here as (66), and according to the notion of Prosodic Word (PrWd) (McCarthy and Prince (1993), Feng (1995)), if each node (X and Y) in the following structure contains one syllable, then (66) forms a PrWd.

(66) Word Formation Rule (Feng (1994b))



When the PrWd is repeatedly used in the language, the two elements X and Y will be fixed and form an Idiomatized PrWd, which can easily be further lexicalized as a compound. Given (66), once the FFR in (53) was fully established, disyllabic [wh N] phrases were automatically reanalyzed as PrWds and then idiomatized and further lexicalized during the Han Dynasty.

Since disyllabic *wh*-phrases are prosodically strong; they are favored after the verb, according to SVO prosody. This entails that disyllabic *wh*-phrases become disyllabic *wh*-words in the postverbal position.²⁵ If more and more disyllabic *wh*-idioms (cf. *he wu* 'what thing') are lexicalized as *wh*-compound words appearing after the verb (i.e., *hewu* 'what'), a new rule will arise to compete with the old rule (namely, monosyllabic *wh*-words move to the left of the verb, and disyllabic *wh*-words remain postverbal). In other words, when disyllabic *wh*-phrases are realized as PrWds and lexicalized as compounds to the right of verb, the old rule to move *wh*-words preverbally conflicts with the new rule. Two factors led to the resolution of this rule conflict. Since (i) disyllabic *wh*-words are reinforced by the new prosodic structure of the language (that is, the requirement of disyllabicity with its results of the developments of Idiomatized PrWds and compounding), and (ii) the SVO order was a newly established word order at that time, the conflict between the new rule and the old rule was finally resolved by replacing the old rule with the new within the new system.

In brief, (i) the prosodic structure of Chinese requires the disyllabic *wh*-forms to appear after the verb, (ii) at the same time the FFR reanalyzed these disyllabic forms into PrWds, and (iii) when this happened, a new rule for *wh*-objects was created and eventually replaced the old

movement rule. The correctness of this analysis is supported by the fact that disyllabic *wh*-words indeed developed from disyllabic *wh*-phrases, and their development can only be dated to the Han Dynasty, where the disyllabic Foot Formation Rule was established (Feng (1994b)).

As Lü (1985) has pointed out, the disyllabic expression *he wu* developed from a [wh N] phrase meaning 'what thing', and during the Weijin Period (237 A.D.) it was used as a single word to mean 'what', as exemplified in (67):

- (67) a. 是卿何物? <世說新語·言語>
 ... Shi qing **he-wu** (Shishuo Xinyu.Yanyu)
 ... is you what-thing
 '... Is this your what?'
- b. 所牧何物? <世說新語·輕詆>
 Suo mu **he-wu**? (Shishuo Xinyu.Qingdi)
 that herd what-thing
 'What are those things that you herd?'

Other types of disyllabic *wh*-words can also be found from the Weijin Period or later, as illustrated in (68) (see Lü (1985), Wei (1990)):

- (68) a.

Gloss	A.C.		WeiJin	
	500 B.C.		200 A.D.	
who	<i>shei</i>	誰	<i>a-shei</i> (prt -who, who)	阿誰
when	<i>he</i>	何	<i>he-deng</i> (what-kind, what)	何等
where	<i>na</i>	那	<i>na-li</i> (which-place, where)	那里
why	<i>he</i>	何	<i>he-yi</i> (by-what, why)	何以
- b. 一旦緩急語阿誰? <晉書 114·符堅載記>
 Yidan huangji yu **a-shei**. (Jinshu.114.FujianZaiji)
 once emergence say who
 'Once there is an emergency, who do you tell?'
- c. 余生何等來? (王羲之: <友君書記>)
 Yusheng **he-deng** lai? (Wang Xizhi: *Youjun Shuji*)
 Yusheng when come
 'When does Yusheng come?'

These examples demonstrate that the Han language created another type

of *wh*-word motivated by the disyllabic foot formation rule. Semantically, these disyllabic *wh*-words function exactly as the corresponding monosyllabic *wh*-words. The fact is, disyllabic foot formation is well established by the Han Dynasty, the change of word order from [wh V] to [V wh] also started in the Han Dynasty. The chronological order of these changes provides strong evidence for the argument proposed here.

As the change progressed, monosyllabic *wh*-words finally appeared freely after the verb (becoming lexically stressed, as they are in Modern Chinese). The fact that monosyllabic *wh*-forms were accepted after the verb indicates that the change from SOV to SVO was completed. Thus, the complete change from [wh V] to [V wh] would be an important indicator of the completion of the whole process of word order change in Archaic Chinese.

5. SUMMARY

In this paper, I have argued, first, that the [Neg Pro V] structure differs syntactically from the [wh V] structure in EAC. Second, the clitic movement of pronoun objects and the focus movement of *wh*-objects provide support for the conclusion that Proto-Chinese must have been an SOV language. During the transition from SOV to SVO word order, the forms [wh V] and [Neg Pro V] and many other OV forms, remained as residues of the earlier structure.²⁶

If the language has changed from SOV to SVO, then according to the NSP the normal stress has also shifted from the preverbal position to the postverbal position. This is to say that the stress shift was motivated by the syntactic change, hence prosody is determined by the syntax. However, once the prosodic structure is established, it also constrains syntax. Therefore, (i) the maintenance of the SOV phenomena and (ii) the chronological order of their disappearance (i.e., (i) full NPs postpose first, object pronouns follow, and pronouns in negative contexts shift last, and (ii) the change from [wh V] to [V wh] did not take place until the Han Dynasty) are all governed by prosody. The word order change from [wh V] to [V wh] which was motivated by the appearance of disyllabic *wh*-words shows even more clearly that prosody constrains the dichronic syntactic changes.

From the analysis presented here we can also see that the structures that have a special focal pragmatic function may not be immediately affected by word order changes. This is why [wh V] structures are changed later than [Pro V] structures, even though *wh*-words and pronouns both are weak forms in EAC. In fact, some focus structures (i.e., (43) [*wei* N *shi* V]) are retained for a long time. However, a crucial factor in determining whether certain

structures will be changed or retained is their prosody. If this is correct, the present study offers an insight to understanding why aberrant word orders can co-exist with canonical ones within a language, and it further provides an independent assessment of Adams's (1987) proposal that prosody can be important in resolving questions of how word order change takes place. If this is so, the current theories of grammar must be constructed so that prosodic structure is properly represented and its interaction with syntax accounted for. This poses a challenge to traditional syntactic theories, which argue that syntax functions independently of prosody. Instead, this paper gives a picture of how prosody and syntax interact bi-directionally: Syntax governs prosody (the stress shift) and prosody also constrains syntax (the change from *wh*-V to V-*wh*). Finally, it adds to the mounting evidence that diachronic research can provide crucial insights into the theory of grammar.

NOTES

* This paper is based on part of my 1995 University of Pennsylvania Ph.D. dissertation and is a revised version of a paper read at the Second International Conference on Chinese Linguistics, published in *Yuyan Yanjiu* (1994a). I would like to especially thank my thesis supervisor Anthony Kroch for discussing every analysis in this paper, on the basis of which the syntactic analysis of the SOV phenomena in the earlier version of this paper has been substantially revised. I would also like to thank the anonymous reviewers not only for their important comments but also for providing invaluable data and suggestions. For valuable comments and discussions, either at the ICCL-2 conference or elsewhere, I would like to thank Josep Fontana, Andrew Moody, Shih Chi-lin, Tang Haitao, Wang Ning and Zhang Zhiqiang. Special thanks also go to James Huang for carefully reading the whole manuscript and making invaluable suggestions on some of the important questions involved in this paper. All remaining errors are mine.

¹ The head directional parameters can be set at different categorical levels in a language. For example, English employs a head-initial complement rule and a head-final specified rule (Huang (1992)).

² The first person pronoun *ang* is not the subject of the sentence because subjects can never occur after the negator *bu* in EAC.

³ Although *wu* (written as *yu* 'fish') in Jiaguwen (oracle bone inscriptions 14th–11th centuries B.C.) was strictly a subjective pronoun, in Archaic Chinese (ca. 500 B.C. on), *wu* can be used in either subjective, possessive, or objective case. (See Yang and He (1992, 94)).

⁴ A government relation holds if two elements share all maximal projections in Lightfoot's definition; more technically, he wrote (1991, 27):

- a (X^0 , or head) governs b , if
- (i) all maximal projections dominating a also dominate b , and
 - (ii) a is dominated either by (a) all maximal projections dominating b , or by (b) all maximal projections dominating the maximal projection of b .

⁵ I am grateful to the anonymous reviewers for pointing out to me that *wei-shi* 'not-ever' occurs only as a fixed form in Classical Chinese. Here I will treat both *wei-chang* 'not ever' and *wei-shi* 'not ever' as a complex head [not-ever]_{neg}, even though *wei-chang* is not fixed:

- (i) 未之嘗言。〈莊子·徐無鬼〉
wei zhi chang yan. (Zhuangzi.Xuwugui)
not it ever say
'Never say it.'

The difference between *wei-chang* and *wei-shi* is that the reanalysis of the adverb *shi* with its negator *wei* is obligatory, but it is optional for *chang*. This would explain the different syntactic behaviors of *chang* and *shi* in (10) (type-IV) and *chang* in (i) above. The question then is why *chang* is optionally, not obligatorily, reanalyzed with a negator. I have no insightful explanation for this at this point.

⁶ The [Neg+Adv] complex may be triggered by a more general principle that Neg must be attached to, and lexically realized with, an X⁰ element (i.e., the Principle P proposed by Huang (1988)). If this is so, we may expect that the complex [Neg+Adv] may not be triggered only by adverbs such as *chang* but also by other immediately following elements such as auxiliary verbs, yielding a [Neg+Aux], or more generally a [Neg+X⁰] complex. Consider the following example:

- (i) 天下莫敢之危。〈呂氏春秋·分職〉
Taianxia mo gan zhi wei. (Lüshichunqiu.Fenshi)
the world not dare it threaten
'The whole world does not dare to threaten it.'

The negator is adjacent to an auxiliary verb, and the Pro-object occurs between the auxiliary and the matrix verb. This, I argue, is the type of examples which are predicted by the Principle P and the present analysis: The Aux attaches to the Neg forming a complex head, and then the pronoun object adjoins to the complex [Neg Aux]. Evidence for this treatment comes from the fact that auxiliary verbs such as *huang* 'have (time)' and *ren* 'bear' in Archaic Chinese are fixed with a negator in usage: *bu-huang* 'have no time', *bu-ren* 'not bear' (see Yang and He (1992, 215–221)). For example:

- (ii) 不忍見其死。〈孟子·梁惠王上〉
... bu ren jian qi si. (Mengzi.Lianghuiwang.shang)
... not bear see its death
'... cannot bear to see its death.'
- (iii) 不遑居處。〈國語·晉語四〉
... bu huang qi chu. (Guoyu.Jinyu.4)
... not have (time) start dwell
'... have no time to relax.'

Fusion forms of Mandarin Chinese resulted from the [Neg+Aux] complex provide more support for the intimate relationship between the Neg and the Aux:

- (iv) bu + yao = bie not should = don't
bu + yong = beng not need = needn't

⁷ I would like to thank an anonymous reviewer for pointing out some counter-examples to the generalization of inseparability between the *wh*-word and the verb:

- (i) 且誰不食? 〈韓非子·說林上〉
jie shei bu shi. (Hanfeizi.Shuoling.Shang)
and who not eat
'and who do (they) not eat.'

- (ii) 有誰敢言? 〈左·成3〉
you shei gan yuan? (Zuo.Cheng.3)
again who dare complain
'and to whom do I dare to complain?'

The [wh V] is separated by a negative element in (i) and by an auxiliary verb in (ii). However, as we will see in section 3.3, the [wh V] structure totally disappeared in Modern Chinese, but [wh Neg V] and [wh Aux V] structures still exist in Modern Chinese. This indicates that the [wh V] and the [wh Neg/Aux V] are two different structures. If this is so, examples like (i) and (ii) above will not be considered as counter-examples to the inseparability of [wh V].

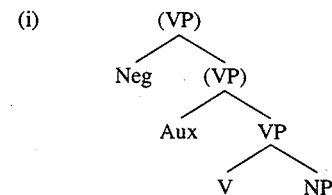
⁸ This does not necessarily mean that the modern [wh V] compound were also compound words in Classical Chinese. On the contrary, they were originally disyllabic-phrases which were reanalyzed as Prosodic Words (see below). Being a Prosodic Word, *he yi* 'what use' (*Han Feizi*) and *yi he* 'use what' (*Shiji*) are both allowed, just as *tu shu* 'picture and book' and *shu tu* 'book and picture' are both formed in the *Han Feizi*. However, only *he-yi*, 'why' was later lexicalized as a compound, just as *tu-shu* 'publication', rather than *shu tu*, is lexicalized in Modern Chinese.

⁹ This is the major departure from my early analysis (Feng (1994a)).

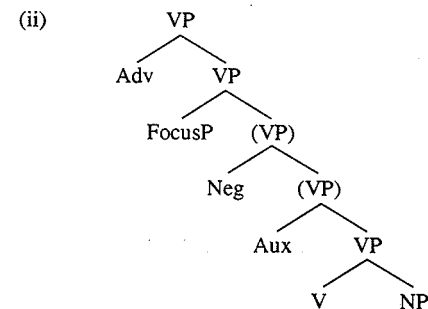
¹⁰ In Old Chinese, *ai* 'love' and *wei* 'yearning' both belong to the rhyme category of HUI.

¹¹ Xu and Li (1993) also propose that the [wh V] structure in Classical Chinese is a type of focus movement. Here I will adopt their basic hypothesis and give a more detailed analysis below.

¹² We may tentatively suggest a basic structure (or an Initial Tree in the Tree Adjoining Grammar, see Kroch (1989)) for the VP in Classical Chinese as follows:



Nodes with '()' are optional, and any category that adjoins to the top VP is considered an adjunct to the periphery VP. Since the focus movement is a movement of the object in the basic VP structure, the FocusP has the priority to adjoin to the periphery VP before the addition of any other adjuncts (adverbs, for example). Therefore we have:



(ii) will generate all the grammatical sentences, as we will see below.

¹³ I would like to thank one of the anonymous reviewers for providing these examples.

¹⁴ When *wh*-objects are used as indefinite pronouns (see Chao (1968, 652–657)), they do not carry stress. For example (taken from Chao (1968)):

- (i) Zar.men zoucuo le lu, dei wen.wen **shei** cai xing.
we walk-wrong asp road should ask.ask **who** then will-do
'We have taken the wrong road, we'll have to ask **somebody**.'
- (ii) Wo xiang chi.dianr **shen.me**.
I want eat a little **what**
'I want to eat a little **something**.'

¹⁵ Note that this type of sentences can be found naturally in earliest documents. Later they became more and more idiosyncratic and still exist today.

¹⁶ For example:

Lo_i lei' el preiodico,
it read.I.pst the newspaper
'I read the newspaper.'

¹⁷ Without the weak form *zhi*, *he-zui* will be adjacent to the verb, thus violating the [_ V] requirement of being weak and yielding an ill-formed prosodic structure, as seen in section 4.4.1.

¹⁸ I would like to thank the anonymous reviewer for providing this type of examples.

¹⁹ The disyllabic units could be either words or idioms, but neither solution would affect the argument given here. However, it is worthwhile to point out that idiomatization is different from lexicalization; lexicalized phrases must strictly follow the Lexical Integrity Hypothesis, but idiomatized phrases do not (see Huang (1982), (1984)).

²⁰ In recent developments of Prosodic Morphological Theory (see McCarthy and Prince (1993) and references cited there), any instance of the category Prosodic Word (PrWd) must contain at least one foot. According to the Foot Binariness Principle, every foot must be bimoraic or disyllabic. Thus a PrWd in Chinese must contain at least two syllables, given the hypothesis that the basic constituents of a foot in Chinese are syllables (Chen (1979), Shih (1986), Feng (1994b)). Accordingly, if the disyllabic foot formation is newly established by the Han Dynasty, as argued in Feng (1994b), two-syllable (or word) combinations in classical Chinese will easily be analyzed as PrWds in the prosodic morphological system.

²¹ I would like to thank one of the anonymous reviewers for pointing out this problem.

²² *zhi* used as a pause-filler can also be seen from examples like the following:

- (i) 子曰：“吾斯之未能信。” <論語·公治長>
Zi yue: "Wu si zhi wei neng xin." (Lunyu.Gongyechang)
master said I it **zhi** not can believe
'The master said: "I can't believe it."'

The pronoun *si* is the topicalized object, and *zhi* functions as a pause-filler between the VP (*wei neng xin* 'cannot believe') and the topicalized object *si* 'it'. See also Feng (1993) for the grammatical pause between topic and comment in Classical Chinese.

²³ Note that in AC we can find parallel grammatical structures such as *he-zui zhi-you* 'what-guilt it have' and *wei-ming shi-ting* 'prt-order it listen'. However, we could not find parallel well-formed structures between *he you* 'what have' and *ming ting* 'order listen'. This is because *wh*-words are weak forms, but full NPs are not. Therefore, only *wh*-words can cliticize onto the verb after the focus movement, yielding [wh V] structures.

²⁴ Disyllabic Foot Formation (53) will motivate disyllabic phrases in the language, and disyllabic phrases will be analyzed as PrWd according to (66), further yielding, though not by necessity, idiomatized PrWds and finally compound words.

²⁵ Definitely, not all disyllabic *wh*-words are necessarily developed from the postverbal positions.

²⁶ Two questions may be asked: (1) What motivated the change of the parametric setting (i.e., from SOV to SVO)? (2) When should the *wh*-objects in EAC be reanalyzed as a result of movement? These questions require separate studies, and I am not able to discuss them here.

REFERENCES

- Aoun, Joseph (1985) *The Logical Structure of Anaphoric Relations*, MIT Press, Cambridge
- Aoun, Joseph and David W. Lightfoot (1984) "Government and Contraction," *Linguistic Inquiry* 15, 465–473.
- Chao, Yuen-Ren (1968) *A Grammar of Spoken Chinese*, University of California Press, Berkeley.
- Chen, Matthew Y. (1979) "Metrical Structure: Evidence from Chinese Poetry," *Linguistics Inquiry* 10, 371–420.
- Cheng, Xiangqing (1982) "Xianqin Shuangyinci Yanjiu" [A Study of Disyllabic Words in Pre-Qin], in X. Cheng (ed.), *Xianqin Hanyu Yanjiu* [Studies of Pre-Qin Chinese], Shandong Jiaoyu Chubanshe, Shangdong.
- Cheng, Xiangqing (1985) "Lunheng Fuyinci Yanjiu [A Study of Polysyllabic Words in Lunheng]," X. Cheng (ed.), *Liang Han Hanyu Yanjiu* [Studies of the Han Chinese], Shandong Jiaoyu Chubanshe, Shangdong.
- Chou, Fa-kao (1962) *A Historical Grammar of Ancient Chinese, Part II: Morphology*, The Institute of History and Philology, Academia Sinica. Special Publications No. 39, Taipei.
- Cinque, Guglielmo (1993) "A Null Theory of Phrase and Compound Stress," *Linguistic Inquiry* 24, 239–297.
- Ding, Shengshu (1993) "Shi foudingci 'fu', 'bu' [An Account of Negative 'fu' and 'bu']," *Papers in honor of Professor Tsai Yuan-Pei on his 65th birthday*, Academia Sinica, Taipei, pp. 967–996.
- Dobson, W. A. C. H. (1959) *Late Archaic Chinese*, University of Toronto Press, Toronto.
- Duanmu, San (1991) *A Formal Study of Syllable, Tone, Stress and Domain in Chinese Languages*, PhD Dissertation, MIT.
- Feng, Shengli (1993) "The Copula in Classical Chinese Declarative Sentences," *Journal of Chinese Linguistics* 21, 277–311.
- Feng, Shengli (1994a) "Stress Shift and Object Post-posing in Early Archaic Chinese," *Yuyan Yanjiu* 26, 79–93.
- Feng, Shengli (1994b) "Prosodic Structure and Compound Words in Classical Chinese," to appear in J. Packard (ed.), *Word Formation in Chinese*. Mouton de Gruyter, Berlin.
- Feng, Shengli (1995) *Prosodic Structure and Prosodically Constrained Syntax in Chinese*, PhD Dissertation, University of Pennsylvania.
- He, Leshi (1988) "The Question Word 'he' in Zuozhuan," *Gu Hanyu Lunji*, Beijing Press, Beijing.
- Hong, Chengyu and Liao Zugui (1980) "The Sentential Final 'wei' Should be a Particle," *Zhongguo Yuwen* 5, 379–382.
- Huang, S.-F. (1978) "Historical Change of Prepositions and Emergence of SOV Order," *Journal of Chinese Linguistics* 6, 212–242.
- Huang, C.-T. James (1982) *Logical Relations in Chinese and the Theory of Grammar*, PhD Dissertation, MIT.
- Huang, C.-T. James (1984) "Phrase Structure, Lexical Integrity, and Chinese Compounds," *Journal of the Chinese Language Teachers Association* 19, 53–78.
- Huang, C.-T. James (1988) "'Wo pao de kuai' and Chinese Phrase Structure," *Language* 64, 274–311.

- Huang, C.-T. James (1992) "More on Mandarin Word Order and The X'-Theory," invited paper presented at the First International Conference on Chinese Linguistics, National University of Singapore.
- Kennedy, George A (1940) "A Study of the Particle *yen*," *Journal of the American Oriental Society* 60, 193-207.
- Kroch, Anthony (1989) "Asymmetries in Long Distance Extraction in a TAG Grammar," in M. Baltin and A. Kroch (eds.), *Alternative Conceptions of Phrase Structure*, University of Chicago Press, Chicago.
- Ladd, D. Robert, Jr. (1980) *The Structure of Intonational Meaning*, Indiana University Press, Bloomington.
- Li, Charles N. and Sandra A. Thompson (1974) "An Explanation of Word Order Change SVO > SOV," *Foundation of Language* 12, 201-214.
- Li, Yen-Hui, Audrey (1990) *Order and Constituency in Mandarin Chinese*, Kluwer Academic Publishers, Dordrecht.
- Lieberman, Mark and Alan Prince (1977) "On Stress and Linguistic Rhythm," *Linguistics Inquiry* 8, 249-336.
- Light, Timothy (1979) "Word Order and Word Order Change in Mandarin Chinese," *Journal of Chinese Linguistics* 7, 149-179.
- Lightfoot, David (1991) *How to Set Parameters: Arguments from Language Change*, MIT Press, Cambridge.
- Lü, Shuxiang (1985) *Jindai Hanyu Zhidaici* [Anaphoric Words in Early Mandarin], Xuelin Chubanshe, Shanghai.
- Ma, Jianzhong (1889) *Mashi Wen Tong* [A Grammar by Ma], Shangwu Yinchuguan, Beijing.
- McCarthy, John and Alan Prince (1991) "Prosodic Minimality," lecture presented at Conference on the Organization of Phonology, University of Illinois, Urbana-Champaign.
- McCarthy, John and Alan Prince (1993) *Prosodic Morphology I*, ms., University of Massachusetts and Rutgers University.
- Mei, Kuang (1979) "Is Modern Chinese Really a SOV Language?," in T. Tang, F. Tsao, and I. Li (eds.), *Papers from the 1979 Asian and Pacific Conference on Linguistics and Language Teaching*, Student Books Co., Taipei, pp. 273-497.
- Qiu, Xigui (1979) "The Importance of Archaic Characters for the Research of Classical Chinese," *Zhongguo Yuwen* 6, 437-442.
- Rochemont, Michael (1986) *Focus in Generative Grammar*, John Benjamins, Amsterdam.
- Shih, Chi-lin (1986) *The Prosodic Domain of Tone Sandhi in Chinese*, PhD Dissertation, University of California, San Diego.
- Shi, Cunzhi (1986) *Hanyu Yufa Shi Gangyao* [An Introduction to Classical Chinese], Huadong Normal University Press, Shanghai.
- Sun, Chao-Fen and Talmy Givon (1985) "On the So-Called SOV Word Order in Mandarin Chinese: A Quantified Text Study and Its Implications," *Language* 61, 329-351.
- Tai, H.-Y. James (1973) "Chinese as a SOV language," in *Papers from the Ninth Regional Meeting, Chicago Linguistic Society*, Chicago, Illinois, pp. 659-671.
- Travis, Lisa (1984) *Parameters and Effects of Word Order Variation*, PhD Dissertation, MIT.
- Wang, Li (1980) *Hanyu Shigao* [A Historical Grammar of Chinese], Zhonghua Shuju, Beijing.
- Wei, Peiquan (1990) *Han Wei Liuchao Zhidaici Yanjiu* [Research on Pronouns of the Han, the Wei and the Six-Dynasty Periods], PhD Dissertation, Taiwan University.
- Xu, Futing (1980) "An Analysis of 'heyi...wei'," *Zhongguo Yuwen* 5, 386-387.
- Xu, Jie and Ying-Che Li (1993) "Focus and Two Non-Linear Grammatical Categories: Negation and Question," *Zhongguo Yuwen* 3, 81-92.
- Yang, Bojun and He Leshi (1992) *Guhangyu Yufa jiqi Fazhan* [Classical Chinese Grammar and its Development], Yuwen Chubanshe, Beijing.
- Yu, Min (1989 [1981]) "The Origins of Verb-Object Inversion," in *Yumin Yuyanxue Lunwenji*

[Collection of Linguistic Works by Yu Min], Heilongjiang Renmin Chubanshe, Ha'erbin, 288-294; appeared originally in *Yuyan Yanjiu* 1, (1981).

Zec, Draga and Sharon Inkelas (1990) "Prosodically Constrained Syntax," in S. Inkelas and D. Zec (eds.) *The Phonology-Syntax Connection*, University of Chicago Press, Chicago, pp. 365-378.

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