1. Introduction

In this paper, I examine what is referred to as the ‘pivotal’ (jianyu 兼語) construction in Late Archaic Chinese of the Warring States period (5th – 3rd centuries BCE) and employ a generative syntactic analysis in order to disambiguate the traditional contradictory account of this construction. In traditional parlance, the pivotal construction involves a nominal argument which appears between two verbs and seems to serve simultaneously as the object of the first verb and subject of the second (Wang 1958, Ohta 1958, Chao 1968, Zhang 1987, Yang & He 1992, Pulleyblank 1995, Yue 1999).

Examples of pivotal constructions are given in (1). The ren ‘person’ in (2a) appears on the surface to be simultaneously the object of the preceding verb shi and the subject of the following predicate wen ji ‘ask illness’. Likewise, in (1b), guaren ‘me’ is semantically the object of jiao ‘teach’ and the subject of the following embedded embedded predicate.

(1)  a. 王使人問疾。  (Mencius 4)
   Wang shi ren [wen ji].
   king SHI person ask illness
   ‘The king sent someone to ask about his illness.’

   b. 今子教寡人法天合德。  (Guanzi 66)
   Jin zi jiao guaren [fa tian he de].
   now you teach me imitate Heaven spread virtue
   ‘Now you teach me to imitate Heaven spreading virtue.’

The dilemma posed by the pivotal construction is the apparent sharing of the nominal argument by the two verbs. Traditional Chinese linguists have either merely accepted the existence of pivotal constructions as such or they have tried to reconcile the seemingly contradictory syntactic behavior of the pivot argument by analyzing it either as the matrix object or as the embedded subject.

In the theory of Generative Grammar, beginning with the Government and Binding Theory proposed by Chomsky (1981), to say that a nominal can be the argument of two verbs amounts to allowing two theta-roles to be assigned to a single argument, which is a violation of the Theta-Criterion. Analyzing pivotal constructions as object control circumvents such a violation. In this case, the DP in question is base generated as the object of the matrix verb and assigned its theta-role by this verb. This DP is coindexed with a null PRO subject in the embedded clause. PRO receives its theta-role from the embedded predicate. In this way, there is no violation of the Theta Criterion, since the DP and PRO each receive exactly one theta-role.

In this paper, I argue that this is the correct analysis of 教 jiao ‘teach’. As shown in (1b), jiao selects the following DP as its object. It also selects the embedded nonfinite clause with PRO as
its subject. PRO in the embedded clause is controlled by the matrix object. In contrast, I argue that the causative verb 使 shi ‘make’ in (1a) selects only an embedded clause, which is a TP. The DP following shi is not the object of shi but rather the embedded subject. Given that the embedded clause is only a TP and is consequently nonfinite, this DP must be case-licensed exceptionally by accusative case from matrix v.

(2) a. \[ vP \]
\[ v' \]
\[ shi+v \]
\[ VP \]
\[ t_{shi} \]
\[ TP \]
\[ DP \]
\[ ... \]

b. \[ vP \]
\[ v' \]
\[ jiao+v \]
\[ VP \]
\[ DP_1 \]
\[ V' \]
\[ CP \]
\[ C \]
\[ TP \]
\[ PRO_i \]
\[ ... \]

I present arguments for these two structures based on a combination of standard diagnostics and language specific characteristics of Late Archaic Chinese. I begin, in sections 2 and 3, with a summary and rejection of two alternative approaches to pivotal constructions in Chinese historical linguistics. In section 4, I lay out cross linguistically established diagnostics distinguishing exceptional case marking (ECM) from control and show that jiao patterns with object control verbs, while shi has the characteristics of an ECM verb. I add language specific diagnostics to this argumentation in section 5. The primary conclusion of this discussion is that the DP following jiao has the properties of an object in Archaic Chinese, while the DP following shi behaves like a subject.

2. Pivots as Matrix Objects?

In this and the next section, I consider two previous approaches to pivotal constructions. Both attempt to reconcile the apparent conflict in grammatical relations assumed by the pivot by claiming either that this nominal unambiguously assumes only one role or that the pivot is the matrix object and a covert category functions as the embedded subject. In this section, I examine first the claim, i.e. that the pivot is the matrix object. I then show that this argumentation is inadequate and cannot distinguish between ECM and control.

2.1. Matrix object approach

Zhang (1987) argues against the traditional view that a nominal argument can simultaneously have two grammatical functions and proposes instead that the pivot should be analyzed as either the object of the preceding verb or the subject of the following predicate on the basis of two diagnostics for objecthood. His first diagnostic is case marking. Third person pronouns in Archaic Chinese showed a distinction for accusative and genitive case. An accusative pronoun,
unsurprisingly, is used as the object of a transitive verb, as in (3a). This pronoun is also found as the pivot argument following a causative verb, as in (3b). On this basis, Zhang proposes that the pivot nominal in these cases should be analyzed as the object of the matrix verb and not as the subject of the embedded verb.

(3)  

a. 學而時習之。  
   Xue er shi [xi zhi] 
   study Conj time practice 3.Obj 
   ‘To study and periodically practice something....’

b. 上賢使之為三公。  
   Shang xian shi zhi wei sangong. 
   Most able SHI 3.Obj be sangong 
   ‘The most capable, make them into sangong (the highest official rank).’

If the argument following the matrix verb is genitive, Zhang analyzes it as the embedded subject. (4a) shows an example using wen ‘hear’ as the matrix verb. (4b) shows a third person genitive pronoun as the pivotal argument, indicating that this nominal should be analyzed as the embedded subject and not the matrix object.

(4) 

a. 吾聞未君無道。  
   Wu wen Song jun wu dao. 
   I hear Song lord not have way 
   ‘I hear that the Song ruler is unjust.’

b. 公聞其入郛也，將救之。  
   Gong wen qi ru fu ye, jiang jiu zhi. 
   lord hear 3.Gen enter wall Nmlz Mod save 3.Obj 
   ‘When the lord heard that they had penetrated the outer wall, he determined to save them.’

Zhang also claims that the pivot argument is an object if it undergoes *wh*-movement. *Wh*-constituents were required to raise out of VP in Archaic Chinese, as shown in (5a). (5b) shows that the pivotal argument following shi ‘make’ also undergoes *wh*-fronting. There are no examples of *wh*-movement from subject position of a verb of perception.

(5) 

a. 我將何求？  
   Wo jiang he [VP qiu t_he]? 
   I will what ask for 
   ‘What will I ask for?’

b. 若子死，將誰使代子？  
   Ruo zi si, jiang shei shi [t_shei dai zi]? 
   if 2 die Mod who SHI replace 2 
   ‘If you die, then who shall (I) make replace you?’

Zhang’s conclusion at first glance seems to contradict my proposal that the nominal following shi ‘make’ is the subject of the embedded clause. I show in the next subsection,
however, that his tests do not succeed in distinguishing between the two type of pivotal construction I argue for in this paper, i.e. ECM and control.

Before entering that discussion, let me first point out that the genitive subject in a nominalized embedded clause is not a candidate for either ECM or control. Zhang (1987) is correct in distinguishing verbs of perception from the traditional class of pivotal verbs. Complements of perception verbs were nominalized in Archaic Chinese. (6a) shows the third person genitive pronoun as the subject of the clause embedded by zhi ‘know’. (6b) shows a full NP embedded subject which likewise has genitive case.

(6)  a. 周公知其將畔而使之與？ (Mencius 4)
    Zhou gong zhi qi jiang pan er shi zhi yu?  
    ‘Did the duke of Zhou send him, knowing [that he would rebel]’

b. 臣固知王之不忍也。 (Mencius, Liang Hui 1)
    Chen gu zhi wang zhi bu ren ye.  
    ‘I already knew that you would not be able to bear it.’

Given that complements of perception verbs were nominalized, it is not surprising that the subject of these embedded clauses surfaces with genitive case. The lack of wh-movement from these complements is also expected, since the nominal constituent would be an island to extraction.

What is surprising is that Zhang (1987) classes perception verbs with pivotal constructions in the first place. Admittedly, there is disagreement on what verbs belong to the pivotal class and what types of pivotal constructions should be posited for Archaic Chinese. For example, Ohta (1958) restricts the pivotal class to causative verbs like shi ‘make’, ling ‘order’, and qian ‘send’. Wang (1958) adds the existential verb you to this list. Yue (1999) focuses on causative verbs (to which class she assigns shi ‘make’ and qian ‘send’ but not ling ‘order’) and verbs of command, including ling ‘order’, jiao ‘teach’, qing ‘ask’, qiu ‘beseech’, ming ‘order’, and wei ‘tell’. But verbs of perception are not generally placed in this class. Yang and He (1992) posit a wide range of verb classes, including verbs of command and appointment, evaluative verbs, verbs for naming, and existential verbs. Zhao (1968) includes perception verbs for Modern Mandarin, but this class is not typically included in the list of pivotal verbs in Archaic Chinese.

Consequently, Zhang’s (1987) diagnostics for singling out perception verbs do not go far toward disambiguating different types of pivotal construction. Most crucially, Zhang’s diagnostics do not serve to distinguish between ECM and control. Verbs of perception are not candidates for either an ECM or control analysis. The genitive embedded subject is clearly case licensed internal to the embedded clause, since the source of genitive case would be the D or n head of the embedded nominalization. These nominalized clauses are likewise not candidates for a control analysis. First, the availability of genitive case licensing would prohibit the appearance of PRO in subject position. Furthermore, the genitive subject does not even have a thematic relationship with the matrix verb. This is clear from the examples in (4). What is heard is the embedded proposition and not the individual referred to by the embedded subject. Zhang’s diagnostics likewise do not serve to isolate ECM from control among pivotal constructions. I turn to this topic in the next subsection.
2.2. Similarities between 使 shi DP and objects

Zhang’s (1987) diagnostics for matrix objecthood at first glance appear to suggest an object control analysis for pivotal constructions. However, as I show in this subsection, his tests apply equally to object control structures, as well as ECM constructions. Consequently, his tests do not help to disambiguate the class of pivotal verbs.

I first consider the accusative case test. Zhang (1987) shows that accusative case is valued on the pivot argument and concludes on this basis that this nominal must be the object of the preceding verb. However, accusative case assignment does not in general correlate directly with objecthood. In the Minimalist approach to case licensing (Chomsky 2000, 2001, 2004), the first DP in the local c-command domain of the probe on v will enter into an Agree relation with transitive v and value accusative case. Both the controller in an object control construction (7a) and the subject of an ECM complement (7b) meet this condition.

(7)  a. I persuaded [VP her [CP PRO to become a doctor]].
   b. I expected [TP her to become a doctor].

Given that accusative case assignment does not serve to distinguish between ECM and control, Late Archaic Chinese shi ‘make’ can still be analyzed as either an ECM (8a) or control (8b) verb. Regardless of whether the pronoun is the subject of the embedded TP or the object in the matrix VP, it is the closest DP to the accusative case valuing probe on matrix v. Note further that both DPs are sufficiently local to the probe, since no phase boundary intervenes them and v.

(8)  a. 上賢使之為三公。（Xunzi 12）
   Shang xian [vP … [v v[Acc] shi [TP zhi[Acc] wei sangong]].
   most able SHI 3.Obj be sangong
   ‘The most capable, make them into sangong (the highest official rank).’

   b. Shang xian [vP … [v v[Acc] shi [VP zhi[Acc] [CP PRO wei sangong]].
   most able SHI 3.Obj be sangong
   ‘The most capable, make them into sangong (the highest official rank).’

Wh-movement likewise does not serve to distinguish between ECM and control. As shown in (9a), object wh-constituents underwent short movement to a focus position between VP and the subject, which Aldridge (2010) argues to be a focus position located in edge of vP, as shown in (9b).

(9)  a. 我將何求？（Zuozhuan, Xi 28）
   Wo jiang he [VP qiu the ]?
   I will what ask for
   ‘What will I ask for?’
Since *wh*-movement is triggered by Agree with the focus feature on *v*, all that is required for the *wh*-word to check this feature is that it be in the c-command domain of *v*, and no phase boundaries intervene between the *wh*-word and *v*. These conditions are met by both ECM subjects and object controllers. Therefore, *wh*-movement also does not serve to distinguish between these two analyses of *shi* ‘make’.

(10) a. 人固受其黮闇，
    Ren gu shou qi danan,
    person originally receive 3.Gen darkness
    誰使正之？
    *Shi shei ... [vP v[IFocused] shi [TP shei zheng zhi]]?
    who SHI correct 3.Obj
    ‘Who could I use to correct this?’

(11) a. 天下之父歸之，其子焉往？
    Tianxia zhi fu gui zhi qi zi yan [vP wang tyan]?
    world Gen father settle here 3.Gen son where go
    ‘If the fathers of the world settled here, where would their sons go?’
Both cases are accounted for on the analysis in (9b), since the wh-word will be able to check the focus feature on v, regardless of its categorical status or grammatical function.

I have shown in this subsection that Zhang’s (1987) attempt to subdivide the class of pivotal verbs does not in fact accomplish this goal. His diagnostics instead distinguish between pivotal constructions and nominalized complements of perception verbs. But these tests are useless for identifying subtypes of canonical pivotal constructions. In sections 4 and 5, I introduce diagnostics which accomplish this task by showing how pivotal constructions can be divided into ECM and control. First, in section 3, I consider and ultimately reject one other attempt to analyze and classify pivotal constructions.

3. Imperative-Complement Approach

Like Zhang (1987), Yue (1999) also argues against the unitary approach to pivotal constructions. Her investigation examines two subclasses of the traditional pivot construction: causative verbs and verbs of command. She concludes that causative verbs involve a pivot construction, but verbs of command take the following nominal constituent as their object and additionally embed an imperative clause in which the subject is an implicit second person pronoun. Her chief evidence for this second claim is that when the embedded clause is negated, an imperative negator must be used. (12a) shows wu in a monoclausal construction expressing a negative imperative. (12b) shows this negator in the complement of a verb of command.

(12) a. 非禮勿視。  (Analects 12)
    Fei Li wu shi.
    not.be Rites NEG.IMP look
    ‘Do not look upon what does not conform to the Rites.’

b. 或謂寡人勿取，或謂寡人取之。  (Mencius 2)
    Huo wei guaren [ wu qu], huo wei guaren qu zhi.
    some tel 1.HUM NEG.IMP take some tel 1.HUM take 3.OBJ
    ‘Some tell me not to take it; some tell me to take it.’

In contrast to clauses embedded under a verb of command, complements of causative verbs were freer in their employment of negation. It was possible to use an imperative negator or a clausal negator.

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2 This proposal is strongly reminiscent of an object control structure. The key difference is that Yue’s (1999) approach posits a second person pronominal as the embedded subject, while the control approach employs a phi-neutral PRO.
Yue concludes that the causative verbs were in transition. While they formerly embedded an imperative complement, during the Late Archaic period they were beginning to take on the characteristics of a pivotal construction.

Though I agree with Yue’s position that shi involves a different structure from the verbs of command, I disagree with the particulars of her analysis. First, there is strong evidence against linking the use of the negative imperative with an implicit second person pronoun subject in the embedded clause. This same negator is found in the complement of subject control verbs and modals. Whether a raising or control analysis is assumed in these cases, the matrix subject will have the same referent as the external argument of the embedded verb. Therefore, the appearance of the ‘imperative’ negator does not entail the existence of a second person subject.

Additional evidence against the existence of an embedded second person subject comes from the absence of blocking effects in the binding of long distance anaphors. In modern Mandarin, the anaphor ziji can be bound by the local subject within its clause or it can be bound by a subject in a higher clause, as in (15a). However, a first or second person potential antecedent in a lower clause blocks binding of ZIJI by a third person subject in a higher clause, as in (15b).

had a long distance reflexive 己, *ji*. Like modern Mandarin *ziji*, Archaic Chinese *ji* could refer to a clause-mate subject or could be bound long distance. In (16a), *ji* is bound by the local subject, while in (16b), *ji* in the embedded clause takes the matrix subject as its antecedent.

(16)  

a.  

$e_i \ \text{xio} \ ji_i \ \text{yi} \ \text{an} \ \text{ren.}$  

*Train yourself in order to protect other people.*

b.  

$e_i \ \text{bu} \ \text{huan} \ \text{[ren zhi bu ji_i zhi]}. \ \text{not worry others GEN not self understand}$

*Do not worry that others do not understand you.*

When embedded in a clause selected by a verb of command, this anaphor could refer to the matrix subject.

(17)  

Dashu order west terr. north terr. subordinate to self  

‘Dashu ordered the western and northern territories to subordinate themselves to him.’

This fact presents a problem for Yue’s (1999) analysis, because she assumes that the embedded subject is underlyingly a second person pronoun. She therefore predicts that the anaphor in the embedded clause in (17) should not be able to refer to the matrix subject, counter to fact.

Regarding the distribution of the negator *wu*, its appearance may correlate with irrealis mood. This account can unify the imperative examples in (12) with the modal contexts in (14). If *wu* appears in irrealis contexts, we might expect also to see it used regularly in conditional clauses. Hong (2010) demonstrates that this was indeed the case in Pre-Archaic Chinese oracle bone inscriptions, though *wu* in conditionals came to be replaced by other negators in the Late Archaic period.

As to the contrast between the two examples in (13), another fact about *wu* is that it is only used in transitive, agentive clauses. The embedded clause in (13a) is clearly agentive, with a volitional agent. The embedded clause in (13b), on the other hand, has the hallmark appearance of an unaccusative. The subject is the internal argument of the embedded verb and consequently cannot be an agent.

In this and the preceding section, I have considered alternative attempts at subclassification of pivotal verbs. Both of these alternatives have been found to be inadequate. In this paper, I will argue that some pivotal verbs like the causative verb *shi* are ECM verbs, while others like *jiao* ‘teach’ are object control verbs. I turn to a discussion of diagnostics distinguishing ECM from object control in section 4.

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3 See Boodberg (1934), Feng (1984), Wei (1999), and others for a view that the final /-t/ reconstructed for Old Chinese 勿 *wu* is an incorporated object pronoun.
4. Object Control vs. ECM

In this paper, I propose that Archaic Chinese pivotal constructions need to be divided between object control and ECM. The key syntactic difference between object control and ECM structures is that there is a direct thematic relationship between the matrix verb and the following DP in the former but not in the latter. This is due to the fact that object control verbs select the controller as an internal argument. In ECM constructions, on the other hand, the matrix verb selects the embedded proposition but not the DP which functions as the embedded subject.

4.1. Object control

In the Government and Binding theory of Chomsky (1981), we capture the thematic relation between verbs and arguments in terms of $\theta$-role assignment. Specifically, the nominal argument following the matrix verb in an object control structure receives a $\theta$-role from that verb. Since it is the controller of the embedded subject PRO, it is also semantically linked to the $\theta$-role of that argument in the embedded clause. Thus, in (18a), the matrix object her is understood simultaneously as the patient of persuade, as well as the agent of come. The proposal that her receives a $\theta$-role from the matrix verb is further supported by the fact that the thematic relation between this object and the preceding verb is completely parallel in a monoclausal example. In other words, the matrix object in (12a) receives the same patient $\theta$-role as in the monoclausal (12b), in which the object following persuade is the sole argument of that verb.

\[(18) \quad \begin{align*}
\text{a. } & I \left[ v_P \text{ persuaded } [v_P \text{ her_i } [c_P \text{ PRO_i } \text{ to come}]] \right] \\
\text{b. } & I \left[ v_P \text{ persuaded } [v_P \text{ her}] \right]
\end{align*}\]

Davies and Dubinsky (2004:6-7) offer additional support for the assignment of a $\theta$-role by the matrix verb from selectional restrictions. In (19a) we see that the predicate understand is incompatible with an inanimate subject. The predicate in (19b) does not have this restriction.

\[(19) \quad \begin{align*}
\text{a. } & * \text{The rock understands.} \\
\text{b. } & \text{The rock is granite.}
\end{align*}\]

If we embed these predicates in the complement of persuade, we find that both are semantically anomalous, suggesting that persuade imposes selectional restrictions of its own on the following DP. Note that this selectional restriction is mirrored in the monoclausal case in (20c).

\[(20) \quad \begin{align*}
\text{a. } & * I \text{ persuaded the rock to understand.} \\
\text{b. } & * I \text{ persuaded the rock to be granite.} \\
\text{c. } & * I \text{ persuaded the rock.}
\end{align*}\]

Given that the matrix object is semantically linked to both the matrix verb and the predicate in the complement clause, we predict that altering thematic role of the embedded subject has the potential to affect the interpretation of the sentence as a whole. In other words, as Rosenbaum (1967) shows, changing from active to passive in the embedded clause significantly alters the acceptability. (21b) is semantically anomalous because the controller should be linked to a
volitional agent, which is always an external argument. Instead, the embedded subject is an internal argument.

\[(21)\]  
a. I \[\text{persuaded} \ [\text{VP} \ Mary \ [\text{CP} \ \text{PRO to give John a medal}]]] 
b. \text{*I} \[\text{persuaded} \ [\text{VP} \ John \ [\text{CP} \ \text{PRO to be given a medal by Mary}]]]

Finally, since the matrix verb selects the following DP, this DP is an argument of the control verb. Therefore, it cannot be an expletive which is incapable of having a \(\theta\)-role.

\[(22)\]  
a. I persuaded Mary to come. 
b. \text{*I persuaded there to be a ceremony.}

\[4.2. \text{ECM}\]

In contrast to control structures, there is no selectional relationship between the matrix verb and the following DP in an ECM construction. Rather, this DP is merged in the embedded clause and functions as the embedded subject. This is indicated first by the fact that the thematic relation between this class of verb and its object in monoclausal constructions is not carried over to biclausal contexts. In (23a), the third person pronoun is the theme of the verb ‘believe’. But this is not the case in (23b). What is being asserted here is belief in the entire embedded proposition. It cannot be belief in \textit{her}, since the embedded proposition asserts that the referent of the third person pronoun is not worthy of trust or belief.

\[(23)\]  
a. I believe her. 
b. I believer her to be a liar.

Davies and Dubinsky (2004:6-7) further show the lack of selectional restrictions between the matrix verb and embedded subject. Thus, we see selectional restrictions only between the embedded subject and predicate within the embedded clause.

\[(24)\]  
a. \text{*I believe the rock to understand.} 
b. I believe the rock to be granite.

The lack of a thematic relationship between the matrix verb and the following DP is also indicated by the possibility of passivizing the embedded clause. In other words, the active and passive variants are synonymous with each other.

\[(25)\]  
a. I expected \[\text{TP} \ Mary \text{ to give John a medal}] 
b. I expected \[\text{TP} \ John \text{ to be given a medal by Mary}]

Finally, expletives are permitted in the DP position following the matrix verb. This is possible because this DP is not an argument of the matrix verb. As long as the embedded subject position is not a thematic argument, it is compatible with expletives.

\[(26)\]  
I expected \[\text{TP there to be a ceremony}].
4.3. Diagnostics applied to 使 shi and 教 jiao

In this subsection, I apply the diagnostics from sections 4.1 and 4.2 in order to show that Archaic Chinese shi ‘make’ is an ECM verb, while jiao ‘teach’ is compatible with an object control analysis.

4.3.1. 教 jiao ‘teach’ as object control

The data available for classical Chinese shows that there is thematic parallelism between monoclausal and biclausal uses of 教 jiao: ‘teach’. In the biclausal examples in (27), jiao is used to mean ‘teach’ or ‘guide’, and the DP following jiao in all of these examples is the theme of this verb, i.e. the one who is taught or guided.

(27) a. 何以異於教玉人彫琢玉哉?  (Mencius 2)
Hello yi yu jiao yu ren [diaozhuo yu] zai?
‘How is this different from teaching a jade craftsman to carve jade!’

b. 今子教寡人法天合德。  (Guanzi 66)
Ji n zi jiao guaren [fa tian he de].
‘Now you teach me to imitate Heaven spreading virtue.’

c. 尊賢良之人而教之為善。  (Mozi 37)
Zun xian liang zhi ren er jiao zhi [wei shan].
‘Respect wise and good people in order to teach them to be good.’

This thematic relationship is mirrored in the monoclausal examples below. Jiao is also used to mean ‘teach’ or ‘guide’, and the object following jiao is the one who is taught or guided.

(28) a. 不教民而用之，
Bu jiao min er yong zhi,
not teach people Conj use 3.Obj
謂之殃民。
wei zhi yang min.
call 3.Obj harm people
‘To use the people without teaching them is to do harm to them.’

b. 爲人兄者，
Wei ren xiong zhe,
be person brother (elder) Det
必能教其弟。
bi neng jiao qi di.
certainly can teach 3.Gen brother (younger)
‘One who is an elder brother can certainly teach his younger brother.’
This thematic parallelism is also supported by the lack of any examples of embedded passives or unaccusatives. In other words, I found no cases in which thematic relations were altered in the embedded clause, suggesting that there is a thematic relationship between the matrix verb and the following DP, which also serves as the controller of the embedded subject. Since Archaic Chinese, like modern Chinese, has no expletives, this diagnostic cannot be applied to this language.

4.3.2. 使 shi ‘make’ as ECM

Turning now to shi, in the biclausal examples, shi is a causative verb, causing the embedded proposition. As discussed in section 2, the embedded subject receives accusative case, as can be seen in the morphological form of the pronoun in (29a). This is unsurprising for an ECM construction, given that the embedded clause is nonfinite and therefore does not make nominative case available for the embedded subject. This DP is therefore dependent on matrix v for case licensing.

(29) a. 上賢使之為三公。（Xunzi 12）
Shang xian shi [zhi wei sangong].
Most able make 3.Obj be sangong
‘The most capable, make them into sangong (the highest official rank).’

b. 王使人問疾。（Mencius 4）
Wang shi [ren wen ji].
king send person ask illness
‘The king sent someone to ask about his illness.’

We can see the lack of thematic parallelism if we compare monoclausal and biclausal cases. Monoclausal uses of shi have the meaning of ‘use’ or ‘employ’, as in (30a). In contrast, biclausal examples like (30b) are causative.

(30) a. 使民以時 （Analects 1）
shi min yi shi
employ people with time
‘employ the people according to the appropriate time’

b. 便民教、忠 （Analects 2）
shi [min jing zhong]
make people respectful loyal
‘make the people respectful and loyal’

Clear evidence for the lack of a thematic relationship between the matrix verb and the following DP comes from the fact that thematic relations can be altered in the embedded clause without affecting the overall acceptability. Specifically, unaccusatives (31a) and passives (31b, c) are permitted in the embedded complement clause.

(31) a. 誰能使五穀常收，
Qi neng shi [wugu chang shou]
how can make grain always harvest
b. 善治者，使跖可信。

‘One who governs well makes (the thief) Zhi able to be believed.’

c. 使國可長保而傳于子孫，

‘To make the nation be able to be maintained for a long time and passed on to one’s descendants; is this not a cause for joy?’

The above preliminary investigation of well-known diagnostics distinguishing ECM from control structures yields the initial conclusion that jiao ‘teach’ is compatible with an object control analysis, while shi ‘make’ is better analyzed as an ECM verb. However, only two of the diagnostics from English were actually applicable to archaic Chinese. In the next section, I introduce two language specific diagnostics which lend additional support to the proposal put forth in this paper.

5. Language-specific Diagnostics

In this section, I discuss constraints on VP-internal positions in Archaic Chinese. I show that neither quantified nor null DPs were allowed in a position immediately dominated by a VP node.

5.1. Subject/object asymmetries

First I examine quantificational DPs. (32) shows that quantified DPs were permitted in subject position. Specifically, (32) shows cases involving huo ‘someone/something’ and mo ‘none/noone’.

(32) a. 或謂孔子曰子奚不為政？

Someone say Confucius C sir why Neg do government

‘Someone asked Confucius, “Why don’t you join the government?”’

b. 君仁莫不仁。

ruler benevolent noone Neg benevolent

‘If the ruler is benevolent, then noone is not benevolent.’
However, *huo* and *mo* never surfaced in object position. In order to quantify over material in the VP, a quantificational verb or adverb appeared before the VP and quantified over the object or the event as a whole.

(33) a. 不盡收則不盡御。

Bu jin [VP shou pro] ze bu jin [VP yu pro]

‘If (the grain) is not all harvested, then it cannot all be used.’

b. 不如多與之邑。

Buru duo [VP yu zhi yi]

‘It would be better to give them more cities.’

A quantificational DP could be base merged in the VP, but it then had to move out of the VP, as in (34a). In (34b), *mo* is merged as an internal argument but moves to subject position in a passive construction.

(34) a. 子入大廟，每事問。

Zi ru da miao, [mei shi] [VP wen ___].

‘When the master enters the great temple, he asks about every matter.’

b. 若吾子之德，莫可歌也，

Ruo [wu zi zhi de], mo ke ge ___ ye,

‘My good sir, given your virtues, if none could be praised in song, then who would come (because of these virtues)?’

Another diagnostic distinguishing object from subject position was the possibility of null pronominalization. As the dialogue in (35) shows, null subjects were very common in Archaic Chinese. Object position, in contrast, was generally not null. In the second part of the question in (35), the subject is null, but the object is expressed as an overt pronoun, even though the referent of this pronoun is known from the preceding part of the question. Likewise, in the answer, the subject is null, but the object pronoun is repeated.

(35) Q: 君饋之粟，则受之乎?

Jun kui zhi su, ze ___ shou zhi hu?

‘If his lord gives him grain, then should (he) take it?’

A: 受之。

___ shou zhi.

‘Yes, he should.’
5.2. Language-specific Constraints Applied to pivots

In this subsection, I use the language-specific constraints on VP-internal positions introduced in section 5.1 in order to test whether the DP following shi ‘make’ or jiao ‘teach’ is an object or an embedded subject. I begin with shi. First, we can see that quantified DPs are permitted in this position. Given that quantifiers like huo ‘some’ and mo ‘none’ never appear in a position immediately dominated by a VP node, the constituent immediately following shi cannot be the matrix object. No problem incurs, however, if the position following shi is the embedded subject, since these quantifiers can freely appear in subject position.

(36) a. 使或美，或惡
    shi [TP huo mei], [TP huo e]
    ‘make some beautiful some ugly’

b. 猶使同事者莫不同名也。
    You shi [TP tong shi zhe mo bu tong ming ye]
    ‘It is like making nothing with the same substance not have the same name.’

Applying the second diagnostic, we see that the position following shi can be a null pronominal.

(37) a. 故天福之，使立為天子。
    Gu Tian fu zhi, shi [pro li wei tianzi].
    ‘So Heaven bestowed favor on them and made them be installed as rulers.’

b. 可使治國者，使治國。
    [Ke shi zhi guo zhe], shi [pro zhi guo]
    ‘Those who can be made to govern a nation, make (them) govern a nation.’

It may be countered that the null position in (37b) is not a null pronominal but rather a trace left by movement of the topic in clause-initial position. However, topicalization from object position always requires an overt resumptive pronoun. In both examples in (38), the pronoun zhi resums the topic in clause-initial position.

(38) a. 諸侯之禮，吾未之學也。
    [Zhuhou zhi li], wu wei zhi xue ye.
    ‘The rites of the feudal lords, I have not yet studied them.’

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4 The pronoun in (38a) is fronted to a position immediately following the negator. This is due to an independent process of object shift in the context negation and is unrelated to topicalization. Note that the resumptive pronoun in (38b) remains in its base position following the verb.
Therefore, if the position following *shi* were an object position, there would be a resumptive pronoun referring to the clause-initial topic. Given that there is no resumptive pronoun, we must conclude that the position following *shi* is not the object of *shi* but rather the subject of the embedded clause.

At this point, let me point out that a raising approach to ECM is also ruled out by the evidence presented thus far in this subsection. This fact also rules out a raising to object analysis of ECM along the lines of Lasnik & Saito (1991), Johnson (1991), Koizumi (1993, 1995), Runner (1995, 1998), Lasnik (1995, 1999), Hornstein (1999, 2001), and others. On a raising analysis, the embedded subject moves to a position in the matrix VP where it does not receive a theta-role but can value accusative case, for example a VP-internal AgrO projection.

(39) I \[vP <I> expect [vP her \ldots [TP <her> to [vP <her> come]]]]\]

The arguments made by (36) and (37), however, militate against such an approach. These examples clearly show that the DP following *shi* cannot be located in matrix object position and therefore could not have undergone raising from the embedded clause.

In contrast to *shi* ‘make’, I found no examples in which a quantified or null DP followed *jiao* ‘teach’ in a biclausal construction. This fact is compatible with the analysis of *jiao* as an object control verb, since an object control verb selects the following DP as an internal argument in the VP. The following example emphasizes this point clearly by contrasting instances of *jiao* and *shi*.

The DP following each of these verbs refers to the same entity in the discourse. But *Jiao* is followed by a pronoun, while the position following *shi* is null.

(40) 所謂西伯善養老者，
Suo wei [Xi Bo shan yang lao] zhe,
Rel say Xi Bo encourage care elder Det
制其田里，教之樹畜，
zh i q i t i a n li, jiao zhi shu chu,
manage 3.Gen farm dwelling teach 3.Obj sericulture husbandry
導其妻子，使養其老。
DAO qi qi zi, shi [__ yang qi lao].
‘What is meant by saying that Xi Bo encourages caring for the elderly is that he manages their farmland and dwellings, teaches them sericulture and animal husbandry and instructs their wifes and sons to care for the elderly.’

Further evidence in favor of the ECM analysis of *shi* comes from coordination of the embedded complement. The examples in (41) show that multiple clauses embedded under *shi* can be coordinated to the exclusion of *shi*. This indicates that what follows *shi* is a major constituent, which is predicted if the complement of *shi* is the embedded clause TP.
(41) a. 今王發政施仁，使
Jin  wang  fa    zheng  shi  ren,  shi
now  king  institute  government  extend  benevolence  make
天下仕者皆欲立於王之朝，
[TP Tianxia  shi  zhe  jie  yu  li  yu  wang  zhi  chao]
world  serve  Det  all  want  stand  in  king  Gen  court
耕者皆欲耕於王之野，
[TP geng  zhe  jie  yu  geng  yu  wang  zhi  ye] ....
cultivate  Det  all  want  cultivate  in  king  Gen  field
（Mencius 1）
‘Now, if your majesty institutes benevolent government, this will make [all those
wishing to serve want to join your government] and [all farmers want to cultivate
your fields].’

b. 今大人欲王天下，正諸侯，
Jin  daren  yu  wang  tianxia,  zheng  zhuhou,
now  you  want  rule  world  direct  feudal  lords
將欲使意得乎天下，
jiang  yu  shi  [TP yi  de  hu  tianxia],
Mod  want  make  will  obtain  in  world
名成乎後世。
[TP ming  cheng  hu  hou  shi].
name  know  in  later  generation
（Mozi 9）
‘Now, you want to rule the world and lead the feudal lords, and you will want to
make [your will be done throughout the world] and [your name be known in
generations to come].’

In the case of jiao, I found no examples involving coordination of material following jiao
which excludes this verb. What I did find was an example in which the entire VP headed by jiao
is coordinated. What this suggests is that the DP and embedded clause following jiao do not
form a major constituent to the exclusion of jiao. Rather, they are part of the VP headed by jiao,
which is why the verb must be included when they are coordinated.

(42) 伯樂教其所憎者相千里之馬，
Bo  Le  [VP  jiao  [qi  suo  zeng  zhe]  xiang  qian  li  zhi  ma],
Bo  Le  teach  Dem  Rel  hate  Det  select  1000  league  Gen  horse
教其所愛者相駑馬。
[VP  jiao  [[qi  suo  ai  zhe]  xiang  nu   ma].
teach  Dem  Rel  love  Det  select  ordinary  horse
（Hanfeizi 23）
‘Bo Le taught those he hated to pick out excellent horses and taught those he liked to pick
out ordinary horses.’

So far in sections 4 and 5, I have argued on the basis of both cross linguistic and language
specific diagnostics that shi ‘make’ is an ECM verb, while jiao ‘teach’ is compatible with an
object control analysis. The language specific arguments are particularly convincing, since they
show that the DP following shi cannot be an object selected by this verb but rather must be
analyzed as the embedded subject. In the next subsection, I add an argument from a diachronic perspective.

5.3. Evidence from future developments

As I discussed in section 2, Archaic Chinese had a wh-movement operation targeting the edge of vP. This resulted in the surfacing of internal argument wh-constituents or wh-phrases originating in embedded clauses in a position in the matrix clause between the subject and VP. Subjects of clauses embedded by shi ‘make’ also underwent this fronting.

(43) 若子死，將誰使代子？
Ruo zi si, jiang shei shi [tshou dai zi ?
‘If you die, then who shall (I) make replace you?’

In Early Middle Chinese of the Han period (2nd century BCE – 2nd century CE), monosyllabic wh-words continued to undergo fronting, as in (44a). But movement of phrasal wh-constituents was lost, as shown in (44b).

(44) a. 子將何欲？
Zi jiang he [VP yu the ]?
‘What do you want?’

b. 此固其理也，有何怨乎？
Ci gu qi li ye, [VP you he yuan ] hu?
‘This is the way things are; what complaint could you have?’

Long distance fronting was also lost in the Han period, as shown in (45a). What is observed instead is movement within the embedded clause. (45b) shows that fronting across a clause boundary did take place in the Late Archaic period.

(45) a. 吾敢誰怨乎？
Wu gan [shei yuan ____ ] hu?
‘Who do I dare to resent?’

b. 吾誰敢怨？
Wu shei gan [yuan e ]?
‘Who do I dare to resent?’
What is interesting is that *wh*-words cease to extract across a causative verb from the Han period. What this suggests is that the causative verb selects an embedded clause, and the *wh*-word is unable to move out of this clause.

(46) a. 若其王在陽翟，
    Ruo qi wang zai Yangdi,
    if 3.Gen king be.at Yangdi
    主君將令誰往？
    zhujun jiang ling [shei wang]?
    lord Mod make who go
    ‘If there king were in Yangdi, then who would (our) lord send?’

    b. 蕭相國即死，令誰代之？
    Xiao xiangguo ji si, ling [shei dai zhi]?
    Xiao minister if die make who replace 3.Obj
    ‘Should Prime Minister Xiao die, who should we have replace him?’

This contrasts with objects in ditransitive VPs. So long as the moving constituent was monosyllabic, movement was possible even from specifier position in the VP.

(47) a. 公何患於齊？
    Gong he huan tne yu Qi?
    lord what fear from Qi
    ‘What do you fear from Qi?’

    b. 君臣淫亂，民何效焉？
    Jun chen ying luan, min he xiao tne yan?
    lord minister improper disorder people what emulate 3.Dat
    ‘If the lord and his ministers behave in an improper and disorderly manner, then what will the people learn from them?’

Given that an object in a VP specifier position was able to undergo fronting, the in-situ *wh*-words in (46) cannot be analyzed as controllers in object control structures.

Another development in early Middle Chinese is the loss of morphological case distinctions on pronouns. As we have seen in section 2, accusative and genitive cases were clearly distinguished in Late Archaic Chinese. The accusative pronoun was found in object position, as in (48a). Genitive pronouns were used as possessors, as well as subjects of nominalized embedded clauses, as in (48b).

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5 Note that the causative verb in these examples is *ling* rather than *shi*. In the Han period, *ling* was more commonly used than *shi*. Although I have no explanation for this fact, I have found no evidence that the two employ different structures. I therefore assume that *ling* is also an ECM verb.

6 I have not found any examples of object control *wh*-words in the *Shiji* and *Zhanguoce* with the verbs *qing* ‘ask’, *ming* ‘order’, *qian* ‘send’, *jiao* ‘teach’, *quan* ‘encourage’, and *wei* ‘tell’. However, the possibility of movement from ditransitive VPs suggests that if examples existed then movement should be possible.
We have also seen that the accusative pronoun could occurred as the subject of the exceptionally
case-marked subject of the clause embedded by shi ‘make’.

From the Han period, morphological case distinctions began to be lost. One indication of this
change is the confusing of accusative and genitive pronoun in the position of ECM subjects.

The only examples of potential object control verbs with pronominal controllers that I have
found in the Shiji and Zhanguoce use the accusative pronoun.

This is consistent with the fact that objects within VP were still consistently marked
accusative and not genitive in the Han period7.

7 Genitive indirect objects can be found in later Middle Chinese texts. But I have not found examples like this in
texts dating before the 5th century.
In this subsection, I have provided additional evidence from diachronic change for the ECM analysis of *shi* ‘make’.

6. Conclusion

This paper has argued on the basis of a variety of diagnostics that the causative verb *shi* ‘make’ in late Archaic Chinese embedded a TP complement whose subject was exceptionally case-marked by the higher *v*. In contrast to this, *jiao* ‘teach’, was an object control verb. In this way, I have shown that pivotal constructions do not comprise a unitary class. The conclusions of this paper clearly show that we must look beyond surface similarity and scrutinize structural properties in order to adequately account for the grammar of Archaic Chinese.

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