

Ergative Verbs and Neutral Verbs in Pre-Qin Chinese through the Investigation of the ‘Theme + Verb’ Construction

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Abstract: ‘Theme + Verb’ Construction (TVC) is one of the oldest constructions in Chinese. Many contentions exist in previous studies surrounding the form and function of it, especially concerning the dichotomy between ergative verbs that allow TVC and neutral verbs that prohibit TVC. After exhaustively investigating TVC in the *Mencius* and estimating the faithfulness of 6 verbs to TVC in all available Pre-Qin texts, the present study finds that there is no strict distinction between ergative verbs and neutral verbs, virtually most verbs can register TVC. Ergative verbs and neutral verbs can only be treated as two prototypes. However, indeed, change-of-state verbs have the highest contingency to TVC, suggesting the prototypical function of TVC may have something to do with change of state. Another frequent type of TVC introduces the property involving the general property of the theme. The findings of the present study can be cross-linguistically aligned to theories of the transitive continuum and verb alternation, and can also shed light on the investigations of passive expression in isolating languages as a typological characteristic.

Keywords: Archaic Chinese, ergative verb, verb transitivity, construction grammar, passive

1. Introduction

‘Theme + Verb’ construction (TVC, henceforth) is one of the oldest constructions in Chinese. Earliest examples were found in Oracle Bone Scripts:

(1) 辛 丑 卜, ...黍 登。
Xinchou bu, shu zheng.¹

Xinchou (day) divine millet steam

'Day Xinchou's divine said that millet should be steamed ...'

(《殷虛文字綴合》62)

In (1), 黍 *shu* means 'millet', and 登 *deng* is normally interpreted as 蒸 *zheng* 'to steam', so 黍登 *shu deng* means 'to steam millet', and the theme is put before the verb.

Thereafter, TVC is widely seen in texts of all time periods, until now:

(2) 地 削 兵 辱, 主 不 得 意 而 死。

Di xue bing ru, zhu bu de yi er si.

territory encroach army humiliate Lord not fulfill wish Conj. die

'Territory encroaches, and the army is humiliated. The Lord died with wishes not fulfilled.'

(About 250BC, 《韩非子》)

(3) 彩 女 嫔 妃 皆 不 要。

Cainv pinfei jie bu yao.

maid concubine both not want

'Neither maid nor concubine is wanted.'

(About 600, 《敦煌变文》)

(4) 您 的 信 已 经 收 到 了。

Nin-de xin yijing shoudao-le.

you-DE letter already receive-LE.

'Your letter has already been received.'

(Modern Chinese)

TVC has received the attention of many researchers. As early as the 1920s, S. Yang (1924/1956) noted the phenomenon of 施受同辞 'a verb can take agent or theme as its subject', and J. Li (1933/1986) described TVC as 反宾为主句 'object-as-subject sentence'. So far, studies on the form of TVC mainly focused on the animacy of the theme subjects and the verbs in TVC. It was suggested that the theme-subjects in TVC tended to be inanimate (Wei, 1994:299; Yu, 1999), though there were exceptions (Yi, 1989:106). With regards to the verbs in TVC, Cikoski's (1978a, b) dichotomy between ergative verbs and neutral verbs has been especially influential. It was suggested that neutral verbs always take agents as subjects, no matter there is object or not, like 辟 *bi* 'avoid; dodge' in (5); whereas ergative verbs take theme-like subjects when objects are absent, but take causers as subjects when there are objects, as 免 *mian* 'avoid; refrain from' in (6):

¹ Although pinyin is used to annotate the pronunciations of characters in this paper, it needs to be noted that because of the rich varieties of Chinese synchronically and diachronically, pinyin virtually cannot adequately represent the pronunciations of characters when the texts were written.

- (5)a. 秦子，梁子，以公旗辟于下道。
 Qinzi, Liangzi yi gong qi **bi** yu xiadao.
 Qinzi Liangzi with duke name dodge at small path
 ‘Qinzi and Liangzi dodge at the small path under the name of the duke.’
 (《左传》)
- b. 将焉辟之?
 Jiang yan **bi** zhi?
 will how avoid it
 ‘How to avoid it?’
 (《左传》)
- (6)a. 女子曰：“君免乎？”
 Nvzi yue: “jun **mian** hu?”
 woman say emperor refrain from Ques.
 ‘The woman asked: “Is the emperor refrained from (the catastrophe)?”’
 (《左传》)
- b. 若从君惠而免之……
 Ruo cong jun hui er **mian** zhi…
 if accept monarch favor Conj. pardon us
 ‘If (you could) accept the monarch’s favor and pardon us …’
 (《左传》)
 (data from Cikoski, 1978a)

Striking similarity can be observed between Cikoski’s idea and the Unaccusative Hypothesis (Perlmutter, 1978), which was introduced almost at the same time, though the latter is about intransitive verbs. Harbsmeier (1980) and Hsveh (1994) noticed that the boundary between ergative verbs and neutral verbs is not as clear as Cikoski claimed in 1978. Disagreement of the categorizations was observed for verbs like 伐 *fa* ‘kill, attack’ and 封 *feng* ‘present vavatory’ (Harbsmeier, 1980: 138-139), but the contrast between ergative verbs and neutral verbs still affected the readings of TVCs in Classical Chinese heavily (cf. Onishi, 2004; Liu, 2006, Song, 2007, Wu, 2009). For example, Liu (2006) suggested the inherent function of TVC is to introduce the state of an entity and prototypically formed by causative or stative verbs (similar to ergative verbs in Cikoski 1978’s system), and few action verbs (roughly equivalent to neutral verbs in Cikoski 1978’s system) extended stative senses by entering TVC, thus formed notional passive construction. Mei (1991) did not adopt Cikoski’s distinction of verbs but posited a relevant opinion that there was a definite demarcation in form between the ‘theme + verb’ construction and the ‘agent + verb’ construction in Ancient Chinese.

Quite a lot of researchers believe the function of TVC at least has something to do with passive (e.g. Hong, 1958/2000; Xie, 1996; Yao, 1999), among whom Yao (1999) used the term ‘notional passive’. Obviously, Liu’s (2006) opinion mentioned above is not in the same vein, but follows another line started by Lv (1942:92) that TVC is stative in nature, together with Fang (1961).

With regards to the origin of TVC, Yao (1999) argued it is one of the most basic and ancient constructions in Chinese. Assuming TVC is notional passive, he also proposed that Pre-Qin Chinese did not have any particular grammatical markers to express passive sense. The

commonly recognized passive markers in classical Chinese had their specific functions instead of marking passive: 于 *yu* was employed to introduce agent in many kinds of constructions, and 见 *jian* was among the group of undergoing verbs. On the other hand, in a study about topic-controlled ellipsis pattern in Ancient Chinese, Dong (2015) posited the frequently employed discourse strategy of topic-controlled ellipsis might have facilitated the formation of the following prevailing patient-as-subject clauses.

2. Framework and Methodology

Confronted with disagreements at many aspects and set within the framework of construction grammar, the present study takes a corpus-based approach to explore the form and function of TVC in Pre-Qin Chinese by specifically looking at the verbs in TVC. The following basic tenets of construction grammar are assumed: (a) Constructions are meaningful in their rights (Langacker, 2008:3; Goldberg, 1995; 2003), and the meaning of constructions and verbs interact in non-trivial ways (Goldberg, 1995:24). (b) (Semantic) categories are not always well-delineated but structured around prototypes, with degrees of membership (Langacker, 1991:266; 2008:13; Goldberg, 1995: 13-14). (c) ‘What we see is what we get’, and no underlying levels of syntax or any phonologically empty elements are posited (Goldberg, 2003). (d) The nature of language is usage-based, and contextualized exposure to input and frequency has an effect on language learning, processing, and novel use of language (Langacker, 1988; Bybee, 2012). Based on the assumption of the usage-based nature of language, different from formal syntacticians, constructionists usually take a bottom-up corpus-based approach to study language, and the investigation of type-token distributions is one of the common methods. Token frequency is how often particular words or specific phrases appear in the input. Type frequency, on the other hand, is how many different lexical items can be applied to a certain pattern, paradigm, or construction (Ellis, 2002). Moreover, the interactions between verbs and constructions are often assessed in the contingency of form-function mapping (Ellis & Cadierno, 2009). Some verbs are closely associated with a particular construction (for example, *give* is highly indicative of the ditransitive construction, whereas *leave*, although it can form a ditransitive, occurs in other constructions more frequently) (Ellis et al., 2015).

From the perspective of construction grammar to the investigations of TVC, a question arises as to whether the groundbreaking dichotomy between ergative verbs and neutral verbs (Cikoski, 1978) was imposed on it or discovered from language usage. Whether the stative meaning and passive reading are mutually exclusive. As is mentioned before, Harbsmeier (1980) and Hsveh (1994) pointed out the boundary between ergative verbs and neutral verbs was not clear-cut. Moreover, although Onishi (2004) acknowledged the contrast between ergative verbs and neutral verbs, in his quantitative study of the distributions of 19 ergative verbs in 《史记》 *Shiji*:

Table 1.

Frequencies of verbs in 'agent + verb' combinations and 'patient + verb' combinations

| | 斩 | 诛 | 戮·僇 | 辱 | 伐 | 劓 | 执 | 拘 | 囚 | 系 |
|----|---|----|-----|----|---|----|----|---|---|-------|
| AV | 2 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 1 | 0 |
| PV | 8 | 14 | 3 | 15 | 7 | 1 | 1 | 2 | 7 | 7 |
| | 得 | 征 | 用 | 逐 | 抱 | 葬 | 幸 | 爱 | 嬖 | Total |
| AV | 3 | 0 | 9 | 0 | 0 | 1 | 0 | 2 | 0 | 25 |
| PV | 5 | 6 | 20 | 3 | 1 | 12 | 21 | 3 | 2 | 138 |

(from Onishi, 2004)

It was clearly shown that ergative verbs do not form a homogeneous category. Simply from this distribution, it seems arbitrary to equate 用 *yong* 'use' with 辱 *ru* 'humiliate'.

He also found the verb 杀 *sha* 'kill' occurred with theme-subject and agent-subject equally frequently, which made categorization not possible. However, if we take a continuum view, ergative verb and neutral verb may simply be two prototypes and do not have any clear-cut borders in their rights.

Corresponding to the continuum of verb categories, since construction meaning interacts with verb meaning, the stative TVC and passive TVC proposed by Liu (2006) may also be two prototypical uses of one construction, instead of two mutually exclusive constructions.

In order to attest our conjecture in the earliest Chinese, the present study presents the type-token distributions of TVC in the whole book of the *Mencius* in section 3, with the intention to reveal the a preliminary picture of TVC and extract verbs that can occur in TVC. In section 4, the contingency between the selected verbs and TVC in all Pre-Qin literature available in the free online corpus Cncorpus 语料库在线 *YuliaokuZaixian* (<http://www.cncorpus.org/>) is quantified in percentage and presented. Based on the results in section 3 and section 4, section 5 concludes about the distinction between ergative verbs and neutral verbs, as well as the form and function of TVC in Pre-Qin Chinese, and discusses the implications of the present study.

3. TVC in *Mencius*

The *Mencius*(《孟子》) is a collection of conversations and anecdotes of the thinker and philosopher Mencius on topics about moral and political philosophy. A number of linguistic and textual clues suggest that the text was not written by Mencius himself but by his disciples (Lau, 1993:331), probably during the late 4th century BC (Kern, 2010:69).

The *Mencius* comprises seven chapters, 38125 characters, of which a sample of 55 tokens of TVC is collected. The sample is analyzed regarding the animacy of themes (subjects), the modes, and the semantics of the verbs.

Among the total of 55 tokens, 10 (18.18%) take the form ‘theme 不可胜 *bukesheng* verb’, constituting a considerable type frequency. The ‘theme 不可胜 *bukesheng* verb’ construction denoted the theme cannot bear the imposition of the verb or the amount of the theme cannot be fully consumed by the verb, in which the theme-subjects are mostly inanimate, with only one token taking a human being as the theme-subject:

- (7) 民……不 可 胜 诛。
 Min bu ke sheng zhu.
 citizen not can bear kill
 ‘Citizens are too many to wipe out.’

Only three verbs occur in the ‘theme 不可胜 *bukesheng* verb’ construction, specifically 用 *yong* ‘use’ (6 tokens), 食 *shi* ‘eat’ (3 tokens), and 诛 *zhu* ‘kill’ (1 token).

Beside the 10 tokens of the ‘theme 不可胜 *bukesheng* verb’ construction, there are 8 other symbols containing 可 *ke* ‘can’, 足 *zu* ‘suffice’ or 难 *nan* ‘be difficult to’, denoting the property of the theme that it can or cannot be affected or receive certain action. In these eight tokens, four of the themes take human beings as the theme-subjects. The verbs occurring in ‘theme 可 *ke*/足 *zu*/难 *nan* verb’ are also transitive verbs: 运 *yun* ‘operate’ (1 token), 法 *fa* ‘follow the example of’ (2 tokens), 伐 *fa* ‘kill’ (1 token), 杀 *sha* ‘kill’ (1 token), 欺 *qi* ‘deceive’ (1 token), and 罔 *wang* ‘deceive’ (1 token).

In the rest 37 tokens, it is found that the themes are inanimate in 20 (54.05%) of the collected tokens. Body part words is used in one token to refer to human themes:

- (8) 暴 其 民 甚， 则 身 弑 国 亡。
 Bao qi min shen, ze shen shi guo wang.
 abuse its people too much, Conj. body kill country die
 ‘If people are abused too much, body (life) will be killed and the country will die.’

The verb type frequencies of TVC are aggregately shown in Table 2 (the 可 *ke* ‘can’/足 *zu* ‘suffice’/难 *nan* ‘be difficult to’ construction excluded).

Table 2.

Verb type frequencies in TVC in the Mencius

| | | | | | | | | |
|-----------|-------|----------|---------|----------|-----------|----------|--------------|------------|
| Verb | 举 | 见 | 闻 | 卒 | 行 | 听 | 定 | 辟 |
| Meaning | raise | appear | hear | die | implement | listen | pacify | avoid |
| Frequency | 5 | 3 | 3 | 3 | 2 | 2 | 2 | 2 |
| Verb | 用 | 成 | 食 | 治 | 亡 | 备 | 弑 | 聚 |
| Meaning | use | complete | eat | govern | die | prepare | kill | accumulate |
| Frequency | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Verb | 蔽 | 助 | 驾 | 削 | 税 | 溢 | 絜(used as 洁) | Total |
| Meaning | cover | help | harness | cut down | tax | overflow | clean | |
| Frequency | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 37 |

It can be observed in Table 2 that although the sample is fairly small, the frequency profile of the verbs in TVC follows a Zipfian distribution whereby the highest frequency types account for the most tokens (Zipf, 1935). In terms of verbal semantics, many verbs in TVC entail the change of state of the theme, such as 举 *ju* ‘raise’, 见 *xian* ‘appear’, 卒 *zu* ‘die’, 定 *ding* ‘pacify’, 成 *cheng* ‘complete’, 亡 *wang* ‘die’, 备 *bei* ‘prepare’, 聚 *ju* ‘accumulate’, 削 *xue* ‘cut down’, and 絜(used as 洁) *jie* ‘clean’. A related phenomenon is that adverbs denoting already, such as 既 *ji* or 已 *yi* are sometimes captured highlighting the change-of-state sense:

- (9) 犠牲 既 成, 粢 盛 既 絜。
 Xisheng *ji cheng, zi cheng ji jie.*
 sacrifice already complete rice grains (in the sacrificial vessel) already clean
 ‘The sacrifice is ready. The rice and the grains have already been cleaned in the vessel.’
- (10) 今 乘 舆 已 驾 矣。
 Jin cheng yu *yi jia yi.*
 now horse carriage already harness SFP
 ‘The horse and carriage have already been harnessed (are ready now).’

To summarize TVC in the *Mencius*, it encodes a perfective change-of-state sense in most cases, whereas ‘theme + 可 *ke*/足 *nan*/难 *nan* + V’ consists another special type denoting the property of the theme. Animate theme-subjects are observed as frequent as inanimate ones, exhibiting no special tendency, and body parts are occasionally employed to take the place of human theme-subjects.

4. Contingency between Verb Types and TVC in Pre-Qin Period

In order to select verbs for the study of contingency, factors of overall frequency, polysemy, homonym, and semantic diversity is taken into consideration.

To guarantee the applicability of the present study, the study of verbs with relatively high frequency will be more meaningful than investigation of uncommon verbs. However, a lot of tokens will add to the workload of coding. We searched all the verbs listed in Table 1 in all Pre-Qin texts (before 255 BC) available in the open online corpus Cncorpus 语料库在线 *YuliaokuZaixian* (<http://www.cncorpus.org/>) to get an idea of the overall frequency of each verb respectively. Results are shown in Table 3.

Table 3.

Frequencies of verbs in Pre-Qin literature

| Rank | Verb | Frequency | Rank | Verb | Frequency | Rank | Verb | Frequency |
|------|------|-----------|------|------|-----------|------|-------|-----------|
| 1 | 行 | 3023 | 9 | 亡 | 1264 | 17 | 蔽 | 168 |
| 2 | 用 | 2164 | 10 | 听 | 834 | 18 | 助 | 164 |
| 3 | 见 | 2045 | 11 | 举 | 763 | 19 | 驾 | 154 |
| 4 | 成 | 1872 | 12 | 定 | 629 | 20 | 削 | 146 |
| 5 | 闻 | 1826 | 13 | 备 | 534 | 21 | 税 | 55 |
| 6 | 卒 | 1701 | 14 | 辟 | 490 | 22 | 溢 | 42 |
| 7 | 食 | 1592 | 15 | 弑 | 320 | 23 | 絜 | 23 |
| 8 | 治 | 1367 | 16 | 聚 | 258 | | Total | 21404 |

After a further investigation of the tokens we found verbs with high frequency are mostly polysemies or homonyms, such as the original meaning of 行 *xing/hang* is ‘road’, it can also mean ‘line; row; army’ and many other meanings. Since our purpose is to look at the contingency between verbs and TVC, polysemies or homonyms will bring great trouble to coding and considerable noise to our analysis, thus should ideally be eliminated.

Based on the frequency and with polysemies/homonyms excluded, we narrowed our study down to six verbs, specifically 削 *xue* ‘cut down’, 助 *zhu* ‘help’, 听 *ting* ‘listen’, 备 *bei* ‘prepare’, 弑 *shi* ‘kill’, and 聚 *ju* ‘accumulate’, all of which occur in more than 100 tokens. Moreover, these six verbs present a remarkable diversity in terms of verbal semantics, with 削 *xue* ‘cut down’, 备 *bei* ‘prepare’, 弑 *shi* ‘kill’ and 聚 *ju* ‘accumulate’ implying change of state, among which 弑 *shi* ‘kill’ is punctual, 助 *zhu* ‘help’ as a typical transitive verb not implying change of state, together with the perception verb 听 *ting* ‘listen’. For these six target verbs, we coded all tokens to pick out TVC structures.

We assessed the contingencies between these six verbs and TVC by looking at how faithful they are to TVC: among all the tokens of a verb, what is the type frequency of TVC? The results are calculated in percentage and presented in Table 4.

Table 4.

TVC type frequency of each verb in Pre-Qin literature

| Verb | TVC Type Frequency | Token Frequency | Percentage |
|----------------|--------------------|-----------------|------------|
| 助 'help' | 2 | 164 | 1.22% |
| 弑 'kill' | 25 | 322 | 7.76% |
| 听 'listen' | 120 | 807 | 14.87% |
| 备 'prepare' | 139 | 533 | 26.08% |
| 聚 'accumulate' | 81 | 255 | 31.76% |
| 削 'cut down' | 71 | 145 | 48.97% |

If we plot the percentages in a bar chart, a continuum can be clearly observed.

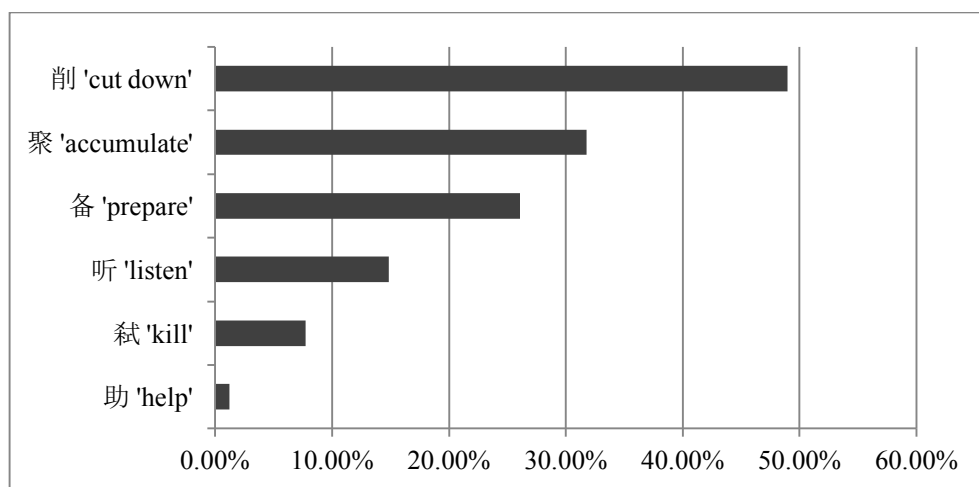


Figure 1. Faithfulness of verbs to TVC

In Figure 1, it seems impossible to draw a border between ergative verbs and neutral verbs for our six targets based on their faithfulness to TVC. Moreover, Cikoski's (1978) definition of ergative verbs is problematic per se in the sense that beside TVC, all target verbs also allow 'agent + verb' (AV, henceforth) use without the presence of the theme, as shown in examples (11)- (16). Virtually, in the present study, we did not find a single verb that only occurs in TV but not AV.

- (11) 右 兵, 弓 矢 御, 殳 矛 守, 戈 戟 助。
 You bing, gong shi yu, shu mao shou, ge ji zhu.
 respect weapon bow arrow shield pole spear defend dagger-axe halberd help
 'Attach importance to the use of weapons: bow and arrow to shield, spear to defend, and dagger-axe and halberd to support.'

(《司马法》)

- (12) 取 国 者, 称 国 以 弑。
 Qu guo zhe, cheng guo yi **shi**.
 take country person claim country Conj. kill
 ‘The person who wants to behead a country kills (the emperor) to claim the country.’
 (《谷梁传》)
- (13) 桓 公 不 听, 遂 与 之 盟。
 Huan Gong bu **ting**, sui yu zhi meng.
 Duke Huan not listen to Conj. with them align
 ‘Duke Huan did not listen and formed a league with them.’
 (《谷梁传》)
- (14) 使 敌 备 东, 而 击 其 西。
 Shi di **bei** dong, er ji qi xi.
 let enemy prepare east Conj. attack its west
 ‘Let enemies prepare at the east then attack the west.’
 (《兵法》)
- (15) 今 子 常…… 而 蓄 聚 不 厌。
 Jin Zichang... er xu **ju** bu yan.
 now Zichang Conj. store accumulate not satisfy
 ‘Right now, Zichang ... keeps storing and accumulating (things) without satisfaction.’
 (《国语》)
- (16) 君 陈…… 无 倚 法 以 削。
 Jun Chen... wu yi fa yi **xue**.
 the monarch of Chen... not rely on law Conj. exploit
 ‘The monarch of Chen... (please) do not exploit (people) relying on the law.’
 (《尚书》)

It is also noteworthy that even for the target verb most faithful to TVC, 削 *xue* ‘cut down’, TVC type frequency accounts for less than 50% of the token frequency.

Therefore, in the language use during Pre-Qin period, the notions of ergative verbs and neutral verbs can only be understood as prototypes: most verbs can take both agent-subject and theme-subject, but ergative verbs are those with relatively high contingencies to TVC, while neutral verbs have relatively low contingencies to TVC. This is not to say there is no tendency at all. As is noted before, among the target verbs, 削 *xue* ‘cut down’ and 聚 *ju* ‘accumulate’ inherently encode a change of state of the theme, and 助 *zhu* ‘help’ does not. A tentative generalization can be made that change-of-state verbs are more likely to be ergative. 弑 *shi* ‘kill’ seems to be an exception to this generalization as it also implies a change of state of the theme but the faithfulness to TVC is only observed to be 7.76%. This exception may be accounted for by the animacy, status, and power of its theme. In Pre-Qin Chinese, the theme of 弑 *shi* ‘kill’ has to be the emperor/king/monarch, and it is found in our tokens that the type frequency of 弑君 *shijun* ‘kill the monarch’ is as high as 162.

To summarize, it is able to claim that change-of-state verbs have a high contingency to TVC in Pre-Qin Chinese and correspondingly, the prototypical function of TVC has something to do with change of state.

5. Conclusions and Implications

The present study investigates ‘theme + verb’ construction (TVC) in the *Mencius* and the contingency between TVC and six target verbs in Pre-Qin literature. Findings suggest in Pre-Qin Chinese, the theme-subject in TVC can be animate or not, the most frequent verbs encode change of state, which can also be viewed as the prototypical function of TVC. Besides, another frequent type of TVC is formed by the modal verb 可 *ke* ‘can’ denoting some generic property involving the potential of the theme. In terms of the origin of TVC, fairly large number of tokens are collected from the earliest Chinese texts, supporting Yao’s (1999) claim that TVC is one of the most basic and ancient constructions in Chinese.

It needs to be noted that the present study is rather limited in scope. There are only 38125 characters in the *Mencius* and the contingencies between verbs and TVC is only estimated for 6 verbs. Investigations of more materials and more verbs are necessary for a more comprehensive picture. Moreover, all the materials come from Pre-Qin literature, the earliest record of Chinese, so it is also of interest to see the evolvement of TVC as well as of individual verbs in Chinese history after this period.

Despite the limited scope, ergative verb and neutral verb posited by Cikoski (1978) are shown to be two prototypes along with a continuum instead of finely defined categories. Change-of-state verbs are more faithful to TVC, constituting the central members of ergative verbs. However, in fact all studied verbs can occur in ‘agent + verb’, ‘theme + verb’, as well as ‘agent + verb + theme’ construction, which has another implication for verb transitivity that Chinese did not have a clear-cut distinction for transitive and intransitive verbs in the Pre-Qin period. Along this line, our finding that change-of-state verbs are the most frequent in TVC seems consistent with Hopper & Thompson’s (1980) finding that non-action is lower than action in terms of transitivity.

From a cross-linguistic perspective, TVC is usually involved with the discussion of the unaccusative hypothesis (Perlmutter, 1978; Burzio, 1986; Belletti, 1988). Unaccusative verbs take theme-like subjects whereas unergative verbs take agent-like subjects. The notion of ergative verbs originates from a subclass of unaccusative verbs that can alternate between transitive and intransitive use, like *break* and *close*, which are also referred to as anticausative verbs (Levin, 1993: 26-27; Schäfer, 2009). It has been suggested that English anticausative verbs can roughly be characterized as verbs of change of state or change of location (Smith, 1970; Levin, 1993:28). The findings of the present study can be aligned to their theory. Moreover, based on the study of auxiliary selection in Romance and Germanic languages, Sorace (2000) proposed a unergative-unaccusative hierarchy on which change-of-state/location verbs happen to take the unaccusative end, suggesting change-of-state/location verbs are virtually always unaccusative in the studied Romance and Germanic languages.

As for the passive sense of TVC, data from Vietnamese, another representative of isolating language beside Chinese, show the same phenomenon of notional passive TVC:

- (17) nhà này **mua** năm ngoái.
 house this buy year preceding
 ‘This house was bought last year.’

(data from Liem, 1969: 11)

(18) chuyện này thường **nghe** ở Sài Gòn.
 story this usual hear Loc Saigon
 ‘This story is usually heard in Saigon.’

(data from Clark, 1974)

(19) sách đó **bán** nhiều.
 that book **sell** much
 ‘That book has sold a lot.’

(data from Clark, 1974)

The notion of passive has been controversial in Vietnamese linguistics for decades, and researchers are still arguing whether it exists or not (Nguyen, 2008). From the perspective of construction grammar, due to the lack of inflection of isolating languages, no disparity in form can be captured between passive TVC and non-passive TVC. In terms of the meaning, admittedly passive is related to change of state in many cases, but there are some notional TVCs not involving the change of state, such as in (18), and the following example:

(20) 君 有 大 过 则 谏, 反覆 之 而 不 听, 则 易 位。
 Jun you da guo ze jian, fanfu zhi er bu **ting**, ze yi wei.
 monarch have big mistake Conj. admonish repeat it Conj. not listen Conj. change position
 ‘If the monarch made big mistake, (you) admonished but are not listened, (you should) change a monarch.’

(《孟子》)

So, the passive sense can be interpreted as a derived non-prototypical function of TVC, but for sure, more studies are called for to support this point.

References

1. Bybee, Joan L. (2012). Usage-based theory and exemplar representations of construction. In T. Hoffmann & G. Trousdale (Eds.), *The Oxford handbook of construction grammar* (pp. 49-69). New York: Oxford University Press. Available at <https://www.unm.edu/~jbybee/downloads/Bybee2013UBTandExRep.pdf/>
2. Belletti, Adriana. (1988). The Case of Unaccusatives. *Linguistics Inquiry*, 19(1), 1-34.
3. Burzio, Luigi. (1986). *Italian syntax: A government-binding approach*. Dordrecht: Foris.
4. Cikoski, John S. (1978a). An outline sketch of sentence structures and word classes in Classical Chinese—Three Essays on Classical Chinese grammar I. *Computational Analyses of Asian & African Languages*, 8, 17-152.
5. Cikoski, John S. (1978b). An outline sketch of sentence structures and word classes in Classical Chinese—Three Essays on Classical Chinese Grammar III. *Computational Analyses of Asian & African Languages*, 8, 133-208.
6. Clark, M. (1974). Passive and ergative in Vietnamese. In L. D. Nguen (Eds.), *South-East Asian linguistic studies* (pp. 75-88). Canberra: ANU, Pacific Linguistics.
7. Dong, Xiufang. (2015). 上古汉语叙事语篇中由话题控制的省略模式 Shanggu hanyu xushi yupian zhong you huati kongzhi de shenglv moshi [Topic-controlled ellipsis pattern in Ancient Chinese]. *Zhongguo Yuwen [Studies of the Chinese Language]*, 4, 306-314.
8. Ellis, N. C., O'Donnell, M., & Römer, U. (2015). Usage-based language learning. In Brian MacWhinney and William O'Grady (Eds.), *The handbook of language emergence* (pp. 163-180). Wiley-Blackwell. [_HandbookofEmergenceOffprint.pdf/](#)
9. Ellis, N. C. (2002). Frequency effects in language acquisition: A review with implications for theories of implicit and explicit language acquisition. *Studies in Second Language Acquisition*, 24, 143-188.
10. Ellis, N. C., & Cadierno, T. (2009). Constructing a second language. *Annual Review of Cognitive Linguistics*, 7 (special section), 111–290.
11. Fang, Guangtao. (1961). 关于汉语被动句基本形式的几个疑问 Guanyu hanyu beidongju jiben xingshi de ji ge yiwu [Several issues about the basic form of Chinese passive sentence]. *Zhongguo Yuwen [Studies of the Chinese Language]*, 11, 18-25.
12. Goldberg, Adele E. (1995). *Constructions: A construction grammar approach to argument structure*. Chicago: University of Chicago Press.
13. Goldberg, Adele E. (2003). Constructions: A new theoretical approach to language. *Trends in Cognitive Science*, 7, 219-224.
14. Harbsmeier, Christoph. (1980). Current issues in classical grammar. Some critical reflections on J. S. Cikoski: Three essays on classical Chinese grammar. *Acta Orientalia*, 41, 126-147.
15. Hong, Cheng. (1958/2000). 论古汉语的被动式 Lun guhanyu de beidongshi [On the passive construction in classical Chinese]. In *Hong Cheng wenji [Collected works of Cheng Hong]* (pp. 112-138). Nanjing: Jiangsu Guji Chubanshe [Jiangsu Phoenix House].
16. Hsveh, Frank F. S. (1994). Subject deletion and "passive construction" in Classical Chinese. In S. Gao (Eds.), *第一届国际先秦汉语语法研讨会论文集 Di yi jie Guoji*

- Xianqin Hanyu Yufa Yantaohui Lunwenji [Papers of the First International Congress on Pre-Qin Chinese Grammar]*(pp. 383-419). Changsha, Hunan: Yuelu Press.
17. Kern, M. (2010). Early Chinese Literature, Beginnings through Western Han. In S. Owen (Eds.), *The Cambridge history of Chinese literature, Volume I* (pp. 1-115). Cambridge: Cambridge University Press.
 18. Langacker, Ronald W. (1991). *Foundations of Cognitive Grammar, vol. 2, Descriptive application*. Stanford: Stanford University Press.
 19. Langacker, Ronald W. (2008). *Cognitive Grammar: A basic introduction*. New York: Oxford University Press.
 20. Lau, D. C. (1993). Mengtzu 孟子 (Mencius). In M. Loewe (Eds.), *Early Chinese Texts: A Bibliographical Guide* (pp. 331–335). Berkeley: Society for the Study of Early China; Institute of East Asian Studies, University of California, Berkeley.
 21. Levin, Beth. (1993). *English verb classes and alternations*. Chicago: University Press of Chicago.
 22. Li, Jinxi (1933/1986). *比较文法 Bijiao wenfa [Contrastive grammar]*. Beijing: Zhonghua Book Company.
 23. Liem, N.-D. (1969). *Vietnamese Grammar: A combined tagmemic and transformational approach*. Canberra: Australian National University.
 24. Liu, Chenghui. (2006). 先秦汉语的受事主语句和被动句 Xianqin hanyu de shoushi zhuyu ju he beidongju [Theme as subject sentence and passive sentence in Pre-Qin Chinese]. *Language and Linguistics*, 7(4), 825-861.
 25. Lv, Shuxiang. (1942). *中国文法要略 Zhongguo wenfa yaolve [An outline of Chinese grammar]*. Chongqing: The Commercial Press.
 26. Mei, Tsu-Lin. (1991). 从汉代的“动杀”、“动死”来看动补结构的发展——兼论中古时期起词的施受关系的中立化 Cong Handai de ‘dong-sha’, ‘dong-si’ lai kan dongbujiegou de fazhan [A view of the development of the resultative verb compound in Han Dynasty from ‘verb + sha’ and ‘verb + si’: The neutralization of the agent-theme relationship of the starting verb in the mediaeval times]. In *Yuyanxue Luncong [Linguistics] Vol. 16* (pp. 112-172). Beijing: The Commercial Press.
 27. Nguyen, H. C. (2008, May). *Vietnamese passive sentences from a typological perspective*. Paper presentend at the 18th Annual Meeting of the Southeast Asian Linguistics Society. Universiti Kebangsaan Malaysia, Bangi. Abstract retrieved from http://lingweb.eva.mpg.de/jakarta/seals_xviii/abstracts/nguyen.pdf
 28. Onishi, Katsuya. (2004). 施受同辞刍议——《史记》中的“中性动词”和“作格动词” Shishoutongci chuyi: Shijizhong de 'zhongxingdongci' he 'zuogedongci' [A preliminary discussion of the alternation between agent and patient: Neutral verbs and ergative verbs in Shiji]. In K. Takashima & S. Jiang (Eds.), *Meaning and form: Essays in Pre-Modern Chinese grammar* (pp. 375-394). Muenchen: Lincom Europa.
 29. Perlmutter, David M. (1978). Impersonal passives and the Unaccusative Hypothesis. In *Proceedings of the 4th Annual Meeting of the Berkeley Linguistics Society* (pp.157–189). Berkeley: Berkeley. Berkeley Linguistics Society.
 30. Schäfer, Florian. (2009). The causative alternation. *Language and Linguistics Compass*, 3(2), 641-681.
 31. Smith, C.S. (1970). Jespersen’s ‘move and change’ class and causative verbs in English. In M. A. Jazayery, E.C. Polom’e, & W. Winte (Eds.), *Linguistic and literary*

- studies in honor of Archibald A. Hill, vol. 2, descriptive linguistics* (pp.101-109). Mouton: The Hague.
32. Song, Yayun. (2007). 《左传》反宾为主句考察 *Zuozhuan fanbinweizhuju kaocha* [A study of the patient-subject sentences in Zuozhuan]. *Hanyu Xuebao [Chinese Linguistics]*, 2, 25-30.
 33. Sorace, Antonella. (2000). Gradients in auxiliary selection with intransitive verbs. *Language*, 76, 859-890.
 34. Wei, Peiquan. (1994). 古汉语被动式的发展及演变机制 *Guhanyu beidongshi de fazhan ji yanbian jizhi* [The development and evolving mechanism of passive construction in classical Chinese]. *中国境内语言暨语言学 Zhongguo Jingnei Yuyan ji Yuyanxue [Language and Linguistics]*, 2, 293-319.
 35. Wu, Xueru. (2009). 从认知语义学的角度看上古汉语的“作格动词” *Cong renzhi yuyixue de jiaodu kan shanggu hanyu de ‘zuogedongci’* [An investigation on the ‘ergative verbs’ in Pre-Qin Chinese from the viewpoint of cognitive semantics]. *Qinghua Zhongwen Xuebao [Tsing Hua Journal of Chinese Literature]*, 2, 161-198.
 36. Xie, Zhibin. (1996). 古代汉语反宾为主的句法及外动词的被动用法 *Gudai hanyu fanbinweizhu de jufa ji waidongci de beidong yongfa* [The syntax of object-as-subject in classical Chinese and the passive use of transitive verbs]. *Guhanyu Yanjiu [Studies of Classical Chinese]*, 2, 32-36.
 37. Yi, Mengchun. (1989). *先秦语法 Xianqin yufa [Pre-Qin Grammar]*. Changsha: Hunan Education Publishing House.
 38. Yao, Zhenwu. (1999). 先秦汉语受事主语句系统 *Xianqin hanyu shoushizhuyuju xitong* [The system of theme-subject sentences in Pre-Qin Chinese]. *Zhongguo Yuwen [Studies of the Chinese Language]*, 1, 43-53.
 39. Yu, Min. (1999). 古汉语的“所”字 *Guhanyu de ‘suo’ zi* [The character *suo* in Classical Chinese]. In 俞敏语言学论文集 *Yumin yuyanxue lunwenji [Collections of Yu Min's linguistic papers]*(pp. 375-386). Beijing: The Commercial Press.
 40. Zipf, G. K. (1935). *The psycho-biology of language: An introduction to dynamic philology*. Cambridge, MA: The M.I.T. Press.