

A CHARACTER-BASED CONSTRUCTIONAL APPROACH TO CHINESE IMPERFECTIVE ASPECT MARKERS *ZAI* 在 AND *ZHE* 着

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Abstract

在 *zai* and 着 *zhe* are commonly recognized imperfective aspect markers in Mandarin Chinese, though there are noticeable differences between their distributions and functions. By resorting to origins, historical evolutions, and corpus data for the meanings and functions of these two characters, it is observed that they are both polysemies displaying semantic networks organized around a central sense respectively, and thus the characters 在 and 着 are distinct in form and meaning pairings. 在 is a construction indicating presence within a certain range while 着 generally denotes 'reach to'. Related to their basic meanings, 在 and 着 exhibit some constraints respectively when marking imperfective aspect. From this character-based constructional account, 在's and 着's qualifications as Chinese imperfective aspect markers are theoretically arguable.

Keywords: Chinese; imperfective aspect marker; grammaticalization; character; construction

Povzetek

在 *zai* in 着 *zhe* sta splošno poznana označevalca nedovršnega glagolskega vida v mandarinščini, ki pa se po pojavnosti in vlogi tudi med seboj precej razlikujeta. Ob pregledu izvora, zgodovinskega razvoja in korpusnih informacij o pomenu in funkciji the dveh označevalcev lahko zaključimo, da oba nosita večpomenskost, ki je za vsakega označevalca drugače organizirana v pomensko mrežo s središčem v njegovem osnovnem pomenu. 在 *zai* in 着 *zhe* se tako med seboj razlikujeta tako v obliki kot tudi pomenskih navezavah. 在 *zai* je struktura, ki nakazuje prisotnost v določenem območju, medtem ko 着 *zhe* v splošnem pomenu 'dospeti'. Na osnovi njunih primarnih pomenov pa označevalca izkazujeta vsak svoje omejitve pri vzpostavljanju nedovršnega glagolskega vida. S teoretičnega vidika je tako njuna vloga kot označevalca nedovršnega glagolskega vida vprašljiva.

Ključne besede: kitajščina; označevalec nedovršnega glagolskega vida; gramatikalizacija; pismenke; struktura pismenk



1 Introduction

Aspects are different ways of viewing the internal temporal constituency of a situation (Comrie, 1976, p. 3; Bybee, 2003, p. 157). The contrast of perfective and imperfective is the most basic distinction of aspect. The **perfective** indicates that the situation is to be viewed as a bounded whole, looking at the situation from outside, without necessarily distinguishing any of its internal structure. The **imperfective** looks at the situation from inside, or looks inside its temporal boundaries, and it is crucially concerned with its internal temporal structure (Kibort, 2008).

According to Li & Thompson (1981, p. 185), Chinese has the following system of verbal aspect:

- (1) i. Perfectivity: 了 *le* and perfectivizing expressions
- ii. Imperfectivity (durative): 在 *zai*, 着 *zhe*
- iii. Experiential aspect: 过 *guo*
- iv. Delimitative: reduplication of verb

This perspective is generally agreed on. 在 *zai* and 着 *zhe* are therefore commonly recognized as two imperfective aspect markers in Chinese (Huang, Li, & Li, 2009, p. 101). This does not mean they are treated the same by linguists. The most prominent difference is their distributions. 在 *zai* is preverbal while 着 *zhe* occurs post-verbally, as shown in (2).

- (2) a. 在 下雨。
zai xiayu
ZAI fall rain
It is raining.
- b. 下着雨。
xia-zhe yu
fall-ZHE rain
It is raining.

Beside their distributions, meanings have not escaped from the attention of researchers either. 在 *zai* is argued to feature a dynamic meaning while 着 *zhe* is claimed to be relatively static (Kwan-Terry, 1978; Smith, 1991, p. 271).

Confronted with distinct distributions and meanings of the two imperfective aspect markers, a problem arises naturally that where do these differences come from. The present study suggests a character-based constructional approach to solve this problem. Section 2 describes and summarizes the forms and meanings (functions) when 在 *zai* and 着 *zhe* co-occur with various event types, thus provides an overall picture for the constructions in question. The character-based constructional approach is introduced in section 3, and the applications for 在 *zai* and 着 *zhe* are laid out in

section 4, combined with historical data to illustrate their processes of grammaticalization and to explain the forms and meanings of them as distinct constructions. Closely related with their meanings, some constraints of the imperfective aspect marking 在 *zai* and 着 *zhe* are discussed in section 5, and Chinese imperfective aspect marking system is revisited. Section 6 is a summary and provides some implications for the character-based constructional approach in Chinese linguistics study.

2 Forms and functions of 在 *zai* and 着 *zhe*

2.1 Event types of Chinese verbs based on time notions

Since 在 *zai* and 着 *zhe* behave differently when co-occurring with various types of events, we find it necessary to begin our description with a summary of event types denoted by Chinese verbs based on time notions.

According to Vendler's (1967, p. 106) distinction of four categories of verbs, with the refinements by Dowty (1979) and Foley & Van Valin (1984, p. 33), states hold for an unbounded period of time. Achievements occur at a single moment, with an immediate end point. Activities go for a period of time, with no defined end point. Accomplishments go on for a period of time, but with a defined end point. Travis (2010, p. 120) introduced the following matrix to represent Vendler's four categories.

(3)		– process	+ process
	– definite	state	activity
	+ definite	achievement	accomplishment

Tai (1984) argued that Chinese verb doesn't really have the subcategory of accomplishments. Most of the results in Chinese are expressed by word compounds. This view is accepted by most Chinese linguists (Chen, 1998; Jiang, & Pan, 1998, p. 333; Xuan, 2013; among others).

It can also be observed in Chinese, some verbs present a combination of an achievement and the resultant state, like 坐 *zuo* "sit down, sit", and 站 *zhan* "stand up, stand". We will refer to them as achievement–state for the convenience of description. Similarly, some verbs denote a combination of an activity and the resultant state, like 穿 *chuan* "put on, wear", and 堆 *dui* "pile up, lie in pile". We will refer to them as activity–state¹.

Therefore we can draw an outline of the event types denoted by Chinese verbs according to time notions.

¹ Vendler (1967, p.109) has already pointed out many activities have a "derived" state sense. He also noticed a group of verbs with conceptual divergences of their own, like *to know*, *to understand*. The Chinese activity-state verbs we mentioned here present similar properties.

Table 1: Event Types of Chinese Verbs Based on Time Notions

Event Types	Examples
States	是 <i>shi</i> "is/am/are"; 喜欢 <i>xihuan</i> "like"; 讨厌 <i>taoyan</i> "dislike"
Achievements	死 <i>si</i> "die"; 忘记 <i>wangji</i> "forget"; 到 <i>dao</i> "arrive"
Activities	说 <i>shuo</i> "speak"; 跑 <i>pao</i> "run"; 走 <i>zou</i> "walk"; 写 <i>xie</i> "write"
Achievement-states	坐 <i>zuo</i> "sit down, sit"; 站 <i>zhan</i> "stand up, stand"; 开 <i>kai</i> "open"
Activity-states	穿 <i>chuan</i> "put on, wear"; 包 <i>bao</i> "pack, hold inside"; 堆 <i>dui</i> "pile up; lie in pile"

Because the feature [+definite] is incompatible with imperfective aspect, achievement and accomplishment will not be discussed in the present study focusing on Chinese imperfective aspect marker.

2.2 Forms and functions of 在 *zai*

Zhang (2000) pointed out as a time adverb, 在 *zai* denotes progression of activity or continuation of state. Yang & Bateman (2002) referred to 在 *zai* as an activity-durative aspect marker, which is in line with Kwan-Terry's (1978) and Smith's (1991, p. 271) opinion we mentioned in section 1 that 在 *zai* has a dynamic meaning.

Corpus data shows 在 *zai* actually never co-occur with state verbs or achievement-state verbs. The verbs following it have to be activities. As for activity-state verbs like 穿 *chuan* "put on, wear", when co-occurring with these verbs, 在 *zai* only indicates the progression of the activity.

Table 2: Co-occurrence of 在 *Zai* with Different Types of Verbs

Event Types	在 <i>zai</i> + V	Examples
States	—	是 <i>shi</i> "is/am/are"; 喜欢 <i>xihuan</i> "like"
Activities	Progression of Activity	说 <i>shuo</i> "speak"; 跑 <i>pao</i> "run"
Achievement-states	—	坐 <i>zuo</i> "sit down, sit"; 开 <i>kai</i> "open"
Activity-states	Progression of Activity	穿 <i>chuan</i> "put on, wear"; 包 <i>bao</i> "pack, hold inside"; 堆 <i>dui</i> "pile up; lie in pile"

As is shown in Table 2, basically the form "在 *zai* + activity" conveys the meaning that the activity is in progress.

2.3 The grammatical functions of 着 *zhe*

There are numerous studies devoted to the particle 着 *zhe* in Mandarin. The widely accepted opinion concerning its function suggests 着 *zhe* signals progression of activity and continuation of state (Liu, 1985; Gao, 1986, p. 172; Lü, 1999, pp. 665–666). Nevertheless, Dai (1991), Yuan (1992) and Fang (2000) argue that 着 *zhe* has only one function, and Guo (1997) proposes 着 *zhe* has more than two functions.

This disagreement is understandable if we take into consideration all the possibilities when 着 *zhe* co-occurs with verbs, as presented in the following discussion.

1. "V *zhe* (+ object)" denotes an action in progression or a state in continuation, but not all state verbs are allowed in this form. Permanent states like 是 *shi* "is/am/are", 姓 *xing* "be surnamed" are among the few exceptions.

- (4) 人们 跳着, 唱着。
 Ren-men tiao-zhe, chang-zhe
 people-PL dance-ZHE, sing-ZHE
 People are dancing and singing. (Lü, 1999, p. 666)

Chen (1980) noticed when 着 *zhe* co-occurs with activity verbs that are volitional, the clause sounds unfinished. He suggested 着 *zhe* has a subordinating function and usually serves as background information for the main event in discourse. The self-sufficiency of "V *zhe* (+ object)" increases as the verb becomes less volitional, and the whole structure is more state-like rather than activity-like at the same time. So when the verb is an achievement–state or an activity–state, and the subject is not the agent of the verb, the clause purely displays a state, without any activity meaning. Existential sentence (locative inversion) is among this situation.

- (5) 墙 上 挂着 一幅 画。
 Qiang shang gua-zhe yi-fu hua
 wall top hang-ZHE one-CL painting
 There is a painting hanging on the wall.

2. "V₁ *zhe* (+object₁) +V₂ (+ object₂)" denotes two events happening at the same time. V₁ can be the means of V₂ and V₂ can be the purpose of V₁. The V₁ in this form needs to be an activity and "V₁ *zhe* (+object₁)" serves as background information.

- (6) 说着 看了 我 一眼
 shuo-zhe kan-le wo yi yan
 speak-ZHE look-PERF I a glance
 gave me a glance while speaking (Lü, 1999, p. 666)

- (7) 藏着 不肯 拿出来
 cang-zhe bu ken na chulai
 hide-ZHE not willing take out
 hide (something) and not willing to take it out (Lü, 1999, p. 666)

3. "V₁ zhe +V₁ zhe +VP" denotes the VP happens unexpectedly when V₁ is in progress. The V₁ in this form also needs to be an activity and "V₁ zhe +V₁ zhe" is a subordinating form as background information.

- (8) 说着 说着 不觉 到了 门口
 shuo-zhe shuo-zhe bujue dao-le menkou
 talk-ZHE talk-ZHE unconsciously arrive-PERF doorway
 arrive at the doorway unconsciously while talking (Lü, 1999, p. 666)

4. "S + V zhe + AP" denotes the subject displays some kind of property through the experience of the verb. The verb here needs to be a perception/cognition/emotion verb, corresponding to different event types based on the time notions.

- (9) 这个 主意 听着 不错。
 Zhe-ge zhuyi ting-zhe bu cuo
 this-CL idea sound-ZHE not bad
 This idea sounds not bad.
- (10) 这把 椅子 坐着 很舒服。
 Zhe-ba yizi zuo-zhe hen shufu.
 this-CL chair sit-ZHE very comfortable.
 This chair is rather comfortable to sit on.

In general, 着 *zhe* has the following functions when co-occurring with different event types.

Table 3: Co-occurrence of 着 *Zhe* with Different Types of Verbs

Subcategories of Verbs	V+ 着 <i>zhe</i>	Examples
States	Continuation of the state	爱 <i>ai</i> "love"; 喜欢 <i>xihuan</i> "like"
Activities	Progression of Activity (subordinating)	说 <i>shuo</i> "speak"; 跑 <i>pao</i> "run"
Achievement –states	Continuation of the resultant State	坐 <i>zuo</i> "sit down, sit"; 开 <i>kai</i> "open"

Subcategories of Verbs	V+ 着 <i>zhe</i>	Examples
Activity–states	Progression of Activity (subordinating) / Continuation of the resultant State	穿 <i>chuan</i> "put on, wear"; 包 <i>bao</i> "pack, hold inside"; 堆 <i>dui</i> "pile up; lie in pile"

The form "(S+) V+ 着 *zhe*" therefore entails two constructions:

Table 4: Constructions involved by "(S+) V+ 着 *zhe*"

Frame	Form	Meaning and Function
Activity	agent+ activity + 着 <i>zhe</i>	a subordinate activity in progress, as background information
State	non-agent + state + 着 <i>zhe</i>	the non-agent subject is in some kind of state

3 A character-based constructional approach

Ever since Langacker (1987) argued syntactic patterns, are form and meaning pairings, but at a more abstract (schematic) level than words, lexicon–syntax continuum has become a fundamental notion among constructionalists and cognitive linguists. Croft (2003) and Baredal (2011) question the dichotomy between lexical rules and syntactic constructions. This idea was further demonstrated by Bybee (2006) by positing there is no unitary "grammar" of language but rather a continuum of categories and constructions ranging from low frequency, highly specific, and lexical to high frequency, highly abstract, and general. Boas (2008) also points out the importance of the lexicon–syntax continuum. Langacker (2008) stated clearly that there is no clear border between lexicon and grammar.

Based on the concept of lexicon–syntax continuum, the imperfective aspect markers in Chinese, 在 *zai* and 着 *zhe*, are also likely to be derived from some specific lexical items, exhibiting complicated polysemous networks ranging from lexical meanings to grammatical functions.

As for Chinese, characters can provide crucial hints for us to plot polysemous networks of words, considering the special properties of Chinese characters as a writing system. Saussure referred to Chinese writing system as an "ideographic system" (1983, p. 26). More specifically, Chinese characters are also declared to be "logographic writing system" (Diringer, 1962; Fabar, 1992), "morpho–syllabic" (DeFrancis, 1989) "morphemic writing system" (Hill, 1967; Su, 2001). Although these classifications are

based on different perspectives, they all acknowledge the semantic functions of Chinese characters. In this sense, each character is a construction, as constructions are pairings of form and meaning/function². In order to capture the semantic network of words, we can turn to corpora of classical Chinese and see how the meanings and functions of a certain character changed over time. This is what we call *Character-based Constructional Approach*.

Actually it has been noted there are usually some kinds of systematically related and therefore explainable connections between different meanings and functions of the same lexical items (Tyler, 2012, p. 6) and that linguistic units, i.e. lexical items, morphemes and syntactic constructions, can subsume a range of distinct but related meanings organized with respect to a central meaning (Tyler, 2012, p. 22), which means by taking the character-based constructional approach, it will be able to reveal the central meaning/function of the construction represented by the character.

In our study of Chinese imperfective aspect markers, we search characters 在 and 着 in the classical Chinese corpus, Yuliaoku Zaixian (<http://www.cncorpus.org/>) to extract their meanings and functions, including imperfective aspect marking, at different times. Data is analyzed for the central meanings of these two characters, as constructions.

It is not really a novel idea to approach Chinese function words from characters. As early as 1825, the Germany linguist and philosopher Wilhelm von Humboldt spoke of a threefold isolation in Chinese, "The Chinese writing expresses, by a single sign, each simple word and each integral part of composed words; it suits the grammatical system of the language perfectly. The latter offers . . . a threefold isolation, of ideas (concepts), words, and characters". Wenzel (2010) further shed light on the relationship of Chinese grammar, phonological system and writing system, "The Chinese language is basically monosyllabic, has a non-alphabetic script, and offers almost no morphology (no inflections)". In the same vein, Xu (2004) and Pan (2006) proposed a "character-based method" in Chinese linguistic study and Chinese teaching. However, what is innovative about the character-based constructional approach is systematically incorporating constructional grammar with character-based method, including the fundamental tenet of lexicon-syntax continuum as well as the emphasis on the bottom-up corpus-based research method. Boas (2008) discusses how construction grammar is supposed to deal with the interactions between lexical entries and grammatical constructions, and points out that further research should be done with a bottom-up corpus-based approach. The present study is carried out along this line.

² Since the notion meaning is sort of problematic for some general syntactical constructions, Goldberg (2006, p. 3) began to use "function" instead: "conventionalized pairings of form and function".

4 Constructions 在 *zai* and 着 *zhe*

4.1 The construction 在 *zai*

In oracle bone inscriptions at least 3000 years ago, 在 *zai* first appeared as a verb meaning "be living; exist; be in/at ... (some place)".

- (11) 王 在 兹, 大 示 左。
 Wang zai zi, da shi zuo.
 emperor ZAI here senior master support
 The emperor is here, with the support of a senior master.³ (Chen, 2001, p.176)
- (12) 朕 在 位 七十 载。 (Yi-Qian, about 1000 BC)
 Zhen zai wei qishi zai.
 I ZAI position seventy year
 I was in the position for seventy years.

According to the etymological dictionary, 说文解字 *Shuowenjiezi* "The Explanation of Simple Graphs and Analysis of Compound Graphs" compiled by 许慎 Xu Shen (30 BC – 124 BC), the seal style and the explanation of 在 *zai* is as follows.

- (13) 在, 存也, 从土才声。
 在, to exist. (Meaning) from 土 *tu* "earth" and phonetic 才 *cai*.

No later than the Han Dynasty (206 BC–220 AD), 在 *zai* developed the function of a preposition which indicates "in/on/at certain time, location or range".

- (14) 王夫人 在 壁后 听之。
 Wang Furen zai bihou ting zhi.
 Mrs. Wang ZAI next room behind listen to it
 Mrs. Wang listened to it behind the next door.
 (Liu, Yiqing. 404–444. *Shishuoxinyu*)
- (15) 在 药 则 未 为 良 时。
 Zai yao ze wei wei liang shi.
 ZAI medicine whereas not yet is good time
 Whereas in terms of making medicine, (it is) not good time yet.
 (Shen, Kuo. 1031–1095. *Mengxibitan*)

The progression marking function of 在 was not developed until Ming Dynasty (1368–1644). The earliest appearance of "在 +VP" structure detected in corpus is from *Pingyaozhuan* (1620).

³ This translation needs to be further studied, but it is apparent that *zai* is a verb in this sentence.

- (16) 众人 都 在 笑。
 Zhongren dou zai xiao.
 everybody all ZAI laugh
 Everybody is laughing.
 (Luo, Guanzhong.1620. *Pingyaozhuan*)

The polysemy network (mainly functions, in this case) of 在 and the timeline of its development can therefore be represented in Figure 1.

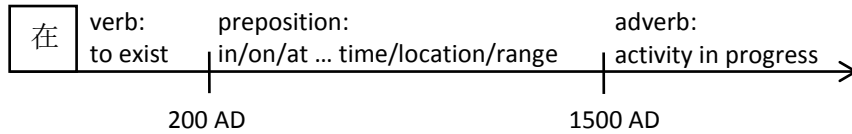


Figure 1: Development of 在

It can be seen that the meaning/function of 在 originates from the temporal domain and gradually extended to the temporal domain, which reflects the cognitive feature that spatial sense is "more central" than the temporal sense (Lakoff, 1987, pp. 416–417), and the general conceptual metaphor which maps spatial notions onto non-spatial domains (Taylor, 2008; Langacker, 1987, 1990; Talmy, 2000; and Boroditsky 2000). At the same time, even though the domains are changed, the sense "presence within a certain range" is well preserved. The verbal meaning of "to exist" can be interpreted as to occupy some space, a range in the spatial domain, and when this range happens to be in the temporal domain, according to the event types we presented in section 2, it denotes an activity.

Therefore, the form "A 在 B" can easily be understood as a presence construction, which means the presence of A in the range B. The biggest constraint is B has to cover a range in certain domain.

4.2 The construction 着 *zhe*

According to Wang (2004, pp. 357–361), 着 was originally a pure verb which means "adhere to; come into contact with; reach to". This use can at least be traced back to Warring States Period (475 BC to 221 BC). It is normally read as *zhuo* for this meaning in contemporary Chinese.

- (17) 风 行 而 著於 土。
 feng xing er zhuo-yu tu
 wind walk and then adhere to earth
 The wind walks and then adheres to the earth. (*Zuozhuan*, about 450 BC)

- (18) 胡人 衣食之业 不 着於 地。
 Huren yishizhiye bu zhuo-yu di.
 Hu people life no adhere to place
 The life of Hu people is not fixed in one place.
 (Sun, Wu. *Bingfa* "The art of War", about 450 BC)

From the late Han Dynasty (206 BC–220 AD), 着 began to exhibit other functions like following another verb and serving as resultative verb complement (RVC).

- (19) 蓝田 爱念 文度, 虽 长大,
 Lantian ainian Wendu, sui zhangda,
 Lantian care for Wendu although grou up
 犹 抱着 膝上。
 you bao-zhuo xishang
 still hold-ZHUO on the knee

Lantian cares for Wendu. Although (Wendu) has already grown up,
 (Lantian) still holds her on the knee. (Liu, Yiqing. 404–444. *Shishuoxinyu*)

After the Southern and Northern Dynasties (220–589), the verb function of 着 disappeared in Chinese, but it is preserved in Japanese. 着 < *tsuku* still means "reach; arrive at" in Japanese now. Ever since the Tang Dynasty (618–907), there could be an object after 着.

- (20) 想得 家中 夜深 坐,
 Xiang-de jia-zhong shenye zuo,
 think about home in midnight sit
 还 应 说着 远行人。
 hai ying shuo-zhao yuanxingren.
 still should talk about travelling person

(I) think families should be talking about the travelling person while sitting at home at midnight. (Bai Juyi, 804. *Handan Dongzhiye Sijia*)

Seeming to be rather similar to an aspect morpheme, 着 is normally pronounced as "zhao" or "zhuo" for this function in modern Mandarin and apparently bears some kind of lexical meaning of "come into contact with; adhere to; reach to". The typical progressive or durative aspect marker usage of 着 was first seen in the Song Dynasty (960–1279) and did not become common until the Yuan Dynasty (1271–1368). According to the search result from corpus, the state–continuation meaning, as shown in (21), was developed slightly earlier than the subordinating activity–progression sense, as shown in (22).

(21) 惠州 近日 科折 秣米 一事，
Huizhou jinri kezhe shumi yi-shi,
Huizhou now trade-off rice one-issue

正 违着 此 赦文。
zheng wei-zhe ci shewen.
exactly violate-ZHE this remit

The recent issue of rice trade-off in Huizhou right goes against this remit.
(Su, Shi. 1037–1101)

(22) 如 战阵 厮杀， 擂着 鼓， 只是 向前 去。
Ru zhanzhen sisha, lei-zhe gu, zhishi xiang-qian qu
like battlefield fight beat-ZHE drum just toward forward go
Just like the fight on the battlefield, beating the drum, just go forward.
(Zhu, Xi. 1263. *Zhuziyulei*)

So the development of functions of 着 along the timeline can be summarized in Figure 2.

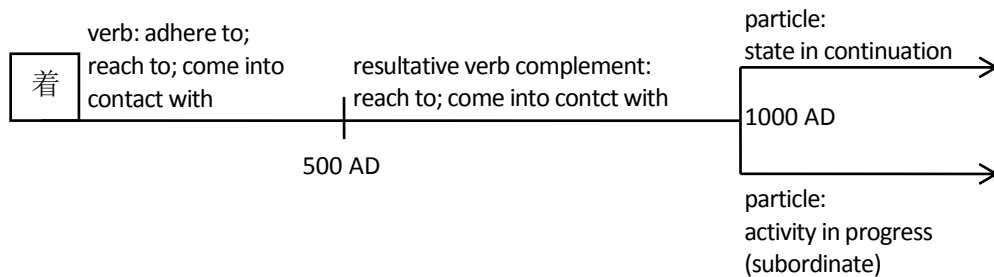


Figure 2: Development of 着

Similar to 在, the meaning of 着 also extends from the spatial domain to the temporal domain, reconfirming the "central" role of spatial perspective (Lakoff, 1987, pp. 416–417) in human cognition. The motivation underlying this extension seems to lie in its original meaning "adhere to; reach to". The earliest form "A 着 B" means "A reaches to/ comes into contact with B", from which the form "A V 着 B" was derived and 着 specifies the result, "reach to/ in contact with B". The progression of activity meaning occurs when "A V 着 B" is mapped onto the temporal domain, thus B is realized by another activity. So the "agent+ activity + 着" form we listed in section 2 can better be represented as "agent+ activity A + 着 + activity B" denoting activity A reaches to activity B in the temporal domain, just like in example (6) and (8), repeated here as (23) and (24).

- (23) 说着 看了 我 一眼
 shuo-zhe kan-le wo yi yan
 speak-ZHE look-PERF I a glance
 gave me a glance while speaking (Lü, 1999, p. 666)
- (24) 说着 说着 不觉 到了 门口
 shuo-zhe shuo-zhe bujue dao-le menkou
 talk-ZHE talk-ZHE unconsciously arrive-PERF doorway
 arrive at the doorway unconsciously while talking (Lü, 1999, p. 666)

Moreover, if the verb in "A V 着 B" represents a static state but not an activity, the "reach to" meaning can be realized without the presence of B. Here the form "A V 着 (B)" means A reached to the state V 着 (B), and this is where the state–continuation meaning comes from.⁴

- (25) 门 开着。
 Men kai-zhe.
 door open-ZHE
 The door is open.

To summarize, the central meaning of the character 着 is "reach to; in contact with". This meaning is retained in different constructions involving 着, including "A 着 B" and "A V 着 (B)".

5 Revisit Chinese imperfective aspect marking system

Assuming 在 *zai* and 着 *zhe* are the two imperfective aspect makers in Chinese, just like Li & Thompson stated in 1981, we should be able to claim under any circumstances, Chinese imperfective aspect is marked by either 在 or 着. However, there are actually some constraints involved with 在 and 着 respectively. Besides, there are some other plausible imperfective aspect markers in Chinese.

5.1 Constraints of aspect marking 在 *zai*

We have already shown 在 can co-occur with activity verb to denote activity in progress, but exception arises when the verb assigns locative as an argument. Generally all locatives need to be put between 在 and the verbs, appearing as adjunct phrases,

⁴ The locative inversion sentence we mentioned in section 2 involves another ground-anchored construction (Liu, 2015) and the positions of constituents A and B are different from the basic form of 着 in 'A V 着 B'.

probably because 在 is also the commonly used pronoun to introduce locative in Chinese.

(26) a. ?他们 在 搬往 纽约。
Ta-men zai ban wang Niuyue.
3rd-PI ZAI move to New York

b. 他们 在 往 纽约 搬。
Ta-men zai wang Niuyue ban.
3rd-PI ZAI to New York move

They are moving to New York.

(27) a. *他们 今天 在 住 在 纽约。
Ta-men jintian zai zhu zai Niuyue.
3rd-PI today ZAI stay at New York

b. 他们 今天 在 纽约 住。
Ta-men jintian zai Niuyue zhu.
3rd-PI today ZAI New York stay

They are staying at New York today.

5.2 Constraints of aspect marking 着 *zhe*

In the first place, it has already been mentioned "agent+ activity + 着 *zhe*" is not self-sufficient. The function of 着 here is actually linking one activity to another, essentially having nothing to do with the aspect.

Another important constraint concerning 着 *zhe*'s aspect marking function is it cannot be negated. More precisely, it basically does not appear in negative form. As we talked about in section 4, the basic meaning of 着 is "reach to" and this meaning is mapped from the spatial domain to the temporal domain. So if entities, activities or states do not come into contact (either in the spatial domain or in the temporal domain), we simply do not need 着 *zhe*. The negative forms of (25) is displayed in (28).

(28) a. ?门 没 开着。
Men mei kai-zhe.
door not open-ZHE

b. 门 没 开。
Men mei kai.
door not open

The door is not open.

5.3 Other plausible imperfective aspect markers in Chinese

Some other morphemes (characters, according to the character-based constructional approach) beside 在 *zai* and 着 *zhe* can also express imperfective aspect independently under certain circumstances, like 正 and 呢.

- (29) 老师 进来 的 时候, 他们 正 吵 得 厉害。
 Laoshi jin-lai de shihou, ta-men zheng chao de lihai.
 teacher came-in Link time, 3rd-PI ZHENG fight Link heatedly
 They were fighting heatedly when the teacher came in.
- (30) 别 说话, 奶奶 睡觉 呢。
 Bie shuohua, nainai shuijiao ne.
 don't talk grandma sleep NE
 Grandma is sleeping. Stop taking!

If we look at the 正 from the character-based constructional perspective, its central meaning is "no deviation, right", consistent with its definition in 说文解字 *Shuowenjiezi* "The Explanation of Simple Graphs and Analysis of Compound Graphs".

- (31) 正, 是也, 从止, 一以止。
 正, right, no deviation. (Meaning) from 止 zhi "foot", to walk toward one direction.

In example (29), the "no deviation" meaning is mapped onto the temporal domain, thus indicates two or more events happen exactly at the same time. Imperfective meaning is conveyed without the presence of 在 *zai* or 着 *zhe*.

As for the particle 呢 *ne*, there are various opinions regarding its functions. Considering the fact that 呢 *ne* normally occurs in the middle of discourse, this study follows Alleton (1981) and Shao's (1989) opinion that the basic function of 呢 *ne* is "to remind, appealing to the communicators' active participation." So in spoken Chinese, as long as there is proper context, it can denote imperfective aspect independently.

5.4 Section summary

From the above analysis, the relationship between 在 *zai*, 着 *zhe* and imperfective aspect marking can generally be shown as in Figure 3.

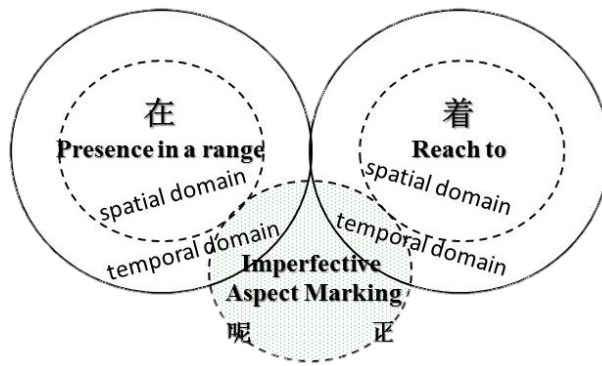


Figure 3: Relationship between Functions of 在 *zai*, 着 *zhe* and Imperfective Aspect Marking

Both 在 *zai* and 着 *zhe* have their distinct central senses, which underwent extension from spatial domain to temporal domain. In modern Chinese, they both can express imperfective aspect conditionally, but many constraints are observed at the same time. Additionally, imperfective aspect can also be expressed by other morphemes/characters in Chinese. Therefore, under the character-based constructional account, the roles of 在 *zai* and 着 *zhe* as Chinese imperfective aspect markers are questionable. We can only say, they can indicate imperfective aspect under certain circumstances, just like some other characters such as 正 *zheng* or 呢 *ne*.

6 Conclusion and implication

The character-based constructional approach believes that in Chinese, each character is a form-meaning pairing. By studying characters through historical development and with the assumption of the lexicon–syntax continuum, there can be a new perspective to look at Chinese lexicon and syntax.

Through this approach, it is discovered that the basic meaning of the character 在 is to indicate presence in a certain range and 着 is "to reach to". Their meanings and functions were originally developed in the spatial domain and were mapped onto the temporal domain later on, which reflects general human cognition principle. The process of grammaticalization is clearly exhibited here, consistent with Humboldt's hypothesis (1925) about evolutionary stage of language.

- (32) Content word > grammar word > clitic > inflectional affix
(Hopper and Traugott's, 2003, p. 7)

Hopper and Traugott noted it is no coincidence that Humboldt's four stages correspond quite closely to a typology of languages that was in the air during the first decades of the nineteenth century (2003, p. 20). Chinese is basically known as an isolating

language, corresponding to the stage of "grammar word" stage in the cline according to them. It is therefore self-explanatory that Chinese grammar words are polysemous. The semantic network of a single Chinese grammar word is organized around a central sense, which, according to the character-based constructional approach, can be accessed through the corresponding character(s). For this reason, the imperfective aspect marking use of 在 *zai* and 着 *zhe* are also constrained by their basic meanings respectively, and so do some other plausible imperfective aspect markers in Chinese. In other words, as an isolating language, the imperfective aspect marking system is not maturely developed.

Hopefully, the character-based constructional approach will be able to provide some novel insights for Chinese linguistics study, and to help explain some mysterious constructions under other frameworks, like the famous 把 *ba* structure. On the other hand, blurring the traditional boundary between spoken and written language, this account may also be able to facilitate classical Chinese study and Chinese dialect study.

Last but not least, the character-based constructional approach may also bring some pedagogical implications as the biggest challenge for Chinese learners with an alphabetic native language is claimed to be Chinese characters (Allen, 2008; Bell, 1995; DeFrancis, 1984; Everson, 1988; Guder, 2005; McGinnis, 1999). Since the character-based constructional approach base vocabulary and grammar on characters, characters will be an indispensable medium instead of extra burden for teachers and learners. Introduction of individual characters can be more coherent and explanatory at the same time.

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