

Grammaticalization of Chinese verbal perfectives¹

Chun Ghee Ong
115676@soas.ac.uk

0. Introduction

Applying the concept of grammaticalization (Bybee et. al, 1994), Wu (2000) proposed a three-stage grammaticalization framework for the Mandarin perfectives *-le* [了] and *-guo* [過], leading to a new syntactic model for the aspectual projection (AspP) containing a splitting structure of AspP₁-AspP₂. In this split-AspP, functional heads Asp₁^o (viewpoint) and Asp₂^o (situation) each reflects the composite aspectual features of *-le*, as inspired by Smith's (1997) two-component aspectual system. However, Wu did not continue to further investigate other **Verbal Perfectives** (henceforth V-PFV) in Chinese dialects like Cantonese (*tsɔ* [咗]), Southern Min (preverbal *wu* [有]) or Shanghainese (*tsɿ* [仔]), which have more complex aspectual features that her split-AspP model may be inadequate to project.

This paper will offer more concrete diachronic evidence to support Wu's (2000) three-stage analysis for Mandarin's V-PFV *-le*. Meanwhile, other V-PFVs from Chinese dialects especially the Southern Min's *wu* will also be investigated, for I propose a further split in Wu's split-AspP model: AspP₁(viewpoint) ~ AspP₂₋₁(situation-stative) ~ AspP₂₋₂(situation-completive) to account for its complex features. This paper will argue that this syntactic model not only explains the systematic arrays of interpretations for *wu* and other V-PFVs from Cantonese and Shanghainese, it also accounts for the "odd" use of Mandarin's V-PFV *-le* as a stative aspectual marker similar to *-zhe* [着].

1. The Aspectual System of Chinese

Aspect is one of the most basic conceptual components in a language, enabling us to differentiate and express variant viewpoints of a situation. Traditionally, aspect is classified into *perfective* and *imperfective* viewpoint categories. The *perfective* viewpoint represents the exterior focal coverage of a situation, "without necessarily distinguishing any of the internal structure of the situation", while the *imperfective* viewpoint denotes the interior focal coverage and it is "crucially concerned with the situation's internal structure" (Comrie, 1976). According to Smith (1997), Chinese expresses these aspectual meanings with three perfectives (PFV), three imperfectives (IPFV) and a 'neutral'² viewpoint marker in Mandarin³.

¹ This working paper is adapted from my MA thesis (2001) "Grammaticalization of Chinese Verbal Perfectives in Mandarin, Southern Min and Other Chinese Dialects".

² Refer to Smith (1997, pp.276-277) for more details on this null \emptyset neutral viewpoint, which can also be an imperfective (IPFV) stative viewpoint, as shown in sentence (1f). As this Chinese \emptyset -aspectual expression is rather complicated and irrelevant to V-PFVs, we will not discuss about this 'neutral' viewpoint here.

³ Unlike Smith (1997), Li & Thompson (1989) did not propose the 'neutral' viewpoint, and came up with another two aspect categories in the forms of *Experiential* (*-guo*) and *Delimitative* (reduplication of verb) types.

- (1) a. Lisi chi -**guo** fan⁴. [李四吃過飯。]
Lisi eat PFV rice 'Lisi has eaten his meal/ rice before.'
- b. Lisi chi -**le** fan. [李四吃了飯。]
Lisi eat PFV rice 'Lisi ate his meal.'
(It does not have to mean Lisi has finished his meal)
- c. Lisi chi -**wan** fan. [李四吃完飯。]
Lisi eat RVC⁵ rice 'Lisi has finished eating his meal.'
- d. Lisi **zai** chi fan. [李四在吃飯。]
Lisi IPFV eat rice 'Lisi is eating his meal.'
- e. Lisi chi **zhe** fan. [李四吃着飯。]
Lisi eat IPFV rice 'Lisi is eating his meal.'
- f. Lisi \emptyset chi fan. [李四吃飯。]
Lisi \emptyset -IPFV/neutral eat rice 'Lisi eats his meal.'

From the examples (1a-c), we can observe that the Mandarin perfective construction differentiates event termination and completion into two distinct concepts. The complexity of such perfective expressions often involves the use of V-PFV markers *-le* and *-guo*.

1.1. Two-Component Aspectual System

In her book (1997, *The Parameter of Aspect*), Carlota S. Smith proposed a two-component aspectual system, stating that a sentence's composite aspectual meaning could convey two "informative components" — *situation-type* and *viewpoint-type*. In defining these two aspectual components, Smith (1997) introduced specific conceptual terms, such as initial point (I), final endpoint (F) and event (E), as illustrated in (2) below:

(2) Situation Types

a. *States*: (I) — (F)

Denotes a situation having an "undifferentiated period without internal structure" with its *initial* point (I) and *final* endpoint (F) excluded.

b. *Accomplishment*: I F_{Nat} R

Denotes a situation with *internal stages* (. . .) having its initial point, and a *natural final endpoint* (F_{Nat}), with the *resultant* stage (R) may or may not continue after the process.

⁴ This paper uses *Hanyu Pinyin* for Mandarin examples, and the IPA for the dialect examples.

⁵ RVC stands for Resultative Verb Complement, which according to Smith (1997), conveys the perfective viewpoint and affirms completion and termination. Other RVCs include *hui* 'able', *cheng* 'successful' etc.

- c. *Activity*: I F_{Ab}
Denotes a process involving "physical or mental activity, and consist entirely in the process", and it include an initial point and an *arbitrary* final endpoint (F_{Ab}). The endpoint here represents a *termination*, unlike Accomplishment's which mean *completion*.
- d. *Achievement*: . . . E_R . . .
Consists of "instantaneous events that result in a change of state", and the *resultant* stage (E_R) may be associated with the event.
- e. *Semelfactives*: E
Consists of a "single-stage event with no result or outcome", thus it could be conceptualized as instantaneous.

Viewpoint Types

a. *Perfective*: I F (general)
//////////

It presents the situation unmarked for its whole process, and it has an initial and final endpoint.

b. *Imperfective*: I . . . // . . . F (general)

It presents part of a situation (. . .) in its preliminary or the resultant stages with no necessary information about its endpoint. The unmarked part spanned (//) would have to be contained within the situation.

Using the defining terms as above, Smith (1997, pp. 263-294) further offered a specified schema framework for the main aspectual markers in Mandarin Chinese:

(3) Aspectual Temporal Schema of Mandarin Chinese

(i) a. *Perfective V-le* [了]: I F/E

////////// (RVC)

b. *Le* (S) makes visible a situation S at interval I. For time $t_{i,j}$, t_e included in I: there is a time t_i that coincides with I and a time t_j that coincides with F, or a time t_j that coincides with E. There is no time $t_{i,j}$ in I that precedes I/E. Note that there could be an independent specification of completion by a Resultative Verb Complement (RVC).

(ii) a. *Perfective -guo* [過]: I F/E F+1

//////////

b. *Guo* (S) makes visible a situation S at interval I. For times $t_{i,j}, t_e$, included in I: there is a time t_i that coincides with I; and/or a time t_j that coincides with F/E, and a time t_e that follows F/E and coincides with F+1. There is no time $t_{i,j}$ that precedes I/E.

Another striking property of AspP in Cinque's (1999) Universal base Hypothesis is that there is also a subdivision in the aspectual system similar to that of Smith's (1997) two-component theory. According to (7) above, Chao & Mui (2000) pointed out that out of the three subcategories in the ASPECTS division: *External Aspect*, *Perfective/Imperfective* and *Internal Aspect*, the second and third seem to correlate to Smith's (1997) *viewpoint-type* and *situation-type* components respectively. At this point, the functional projection of AspP seems liable to be split into two or more AspP types of projections (e.g. External AspP or Internal AspP), but Cinque (1999) had yet to propose any systematic analysis⁶ to evaluate such structural possibility. The next subsection will look at how Wu (2000), based on Smith's (1997) two-component system, propose this possible AspP-splitting in her AspP₁-AspP₂ model.

2.2. Two-component Schema and AspP-Splitting

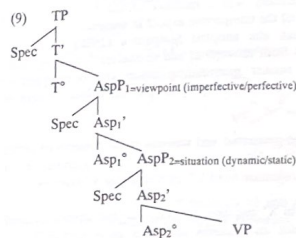
Returning to Smith's (1997) two-component schema in §1.1, we see from the schematic definition (4i) earlier that the Mandarin V-PFV *-le* is capable of expressing perfective viewpoint-type aspect, but not necessarily complete situation-type aspect. The closure of event can be expressed by the supplementary resultative verb complement such as *wan* 'finish'. Therefore, there will be a difference in interpretations between *V-le* and *V-RVC-le*, as shown below:

- (8) a. Lisi chi *-le* fan. [李四吃了飯。]
Lisi eat LE rice 'Lisi ate his meal.'
(It does not have to mean Lisi has finished his meal)
- b. Lisi chi *-wan-le* fan. [李四吃完了飯。]
Lisi eat RVC-LE rice 'Lisi finished his meal' (Lisi finished his eating)
- c. Lisi chi *-le* fan, keshi mei chi wan. [李四吃了飯, 可是沒吃完。]
He eat-LE rice but not eat-finish 'Lisi ate his meal., but did not finish it'
- d. *Lisi chi *-wan-le* fan, ke-shi mei chi wan. [*李四吃完了飯, 可是沒吃完。]
Lisi eat-RVC-LE rice but not eat-RVC

The aspectual asymmetry between *-le* and *RVC-le* is illustrated more clearly with the termination of the eating activity possible in (8c) but not (8d). We can terminate an event that is "marked" by *-le*, but not the one "marked" by *RVC-le*. Therefore, the separate isolated roles assumed by the viewpoint-type V-PFV *-le* and situation-type RVC have led Wu (2000, *Grammaticalization and the Development of Functional Categories in Mandarin Chinese*) to propose a splitting of the AspP projection for *-le*. In this split functional projection, there are two AspP₁ and AspP₂ projections, which can independently represent *viewpoint-type* (perfective/imperfective) and *situation-type*

⁶ Firstly, there is no clear definition of *External Aspect*, as compared with *Perfective/Imperfective* and *Internal Aspect*. Secondly, it is impossible to claim that every aspectual element instantiates an *External Aspect* type of projection (c.f. 10) like *Asp/Habitual*, while all aspectual elements are bound to contain at least a viewpoint (*Perfective/Imperfective*) or situation (*Internal Aspect*) type of aspectual feature (Smith, 1997)

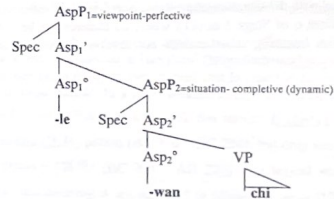
(dynamic (completive)/stative) aspects respectively. The tree structure in (9) below shows how this split AspP looks like.



(Wu 2000, p.139)

Wu (2000) applied the above split-AspP structure to *RVC-le* sequence and proposed that *-le* is licensed by the head of viewpoint-type AspP₁; while the RVC like *wan* is licensed by head of situation-type AspP₂. Hence, in (8b) *Lisi chi-wan-le fan*, *wan* and *-le* each will take up their respective aspectual roles in the situation-completive SIT-AspP₂ and viewpoint-perfective PFV-AspP₁, as shown in (10) below. The resultant sequence *chi-wan-le* is due to the raising of the verb *chi* to attach with *-wan* and subsequently with *-le*.

- (10) Lisi chi-wan-le fan. [李四吃完了飯。]



(Wu 2000, p.139)

According to (10), one may ask how modern Mandarin V-PFV *-le* comes to acquire only viewpoint-perfective feature (AspP₂), and not situation-completive (AspP₁) feature. At this stage, we can start to analyze the syntactic operations involved in the internal structure of *-le*'s AspP model. In the following section 3, I introduce Wu's (2000) three-stage proposal to help understand how grammaticalization are related to the syntactic changes within the AspP model of V-PFV *-le*.

3. Three-stage grammaticalization for V-PFV *-le* (Wu, 2000)

After her split-AspP proposal, Wu (2000) argued that during its grammaticalization the Mandarin V-PFV *-le* is "historically was a member of the V_2 set and was grammaticalized as an instantiation of the completive aspect in sentence final position just like other V_2 elements". Next, she adopted Simpson's (1998) notion that grammaticalization may be derived from movement and re-analysis⁸, and suggested that *-le* "has in fact undergone further grammaticalization and re-analyzed as perfective aspect". Thus, this motivates her to propose the three basic stages of grammaticalization for V-PFV *-le*:

- (11) **Stage 1:** an element α is base-generated and remains in its position of origin X^0 throughout the derivation. At this stage, α is licensed⁹ by a structurally higher projection head Y^0 , as α contains Y^0 features.
- Stage 2:** α is base-generated in X^0 but then raises to a second functional head position Y^0 to check its features, as α is associated with the interpretation of Y^0 .
- Stage 3:** α becomes re-analyzed as being base-generated in Y^0 and is no longer interpreted as instantiating the properties of X^0 ; consequently a new element β is or can be base-generated in X^0 . At this stage, if α contains Z^0 features, it can be licensed by another higher projection head Z^0 .

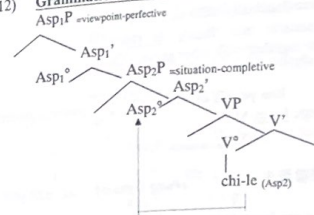
Wu (2000) mapped her three-stage hypothesis onto the evolutionary development of V-PFV *-le*, with the initial postulation that it is base-generated as a verbal suffix. During the course of grammaticalization, the V-PFV *-le* begins as a verbal suffix, with its features associated with the situation-completive Asp_2^0 head. In other words, *-le* is equivalent to the affixal α of Stage 1 in (11), where its features can be licensed by the higher Asp_2^0 . This licensing relation does not involve movement, and is illustrated in Stage 1 structure below:

⁷ V_2 elements in V_1 - V_2 expressions are generally referred to verbal lexical elements sharing equal status with V_1 . In modern Chinese, RVC is one of the most common V_2 elements.

⁸If an element α is base-generated at X^0 and raised from its original lexical head position to a relevant higher functional head position Y^0 , α may be re-analyzed after grammaticalization, and it can be generated at Y^0 . Consequently, α no longer maintains its previous licensing or checking relation with X^0 .

⁹According to Wu (2000), α is raised at LF (Logical Form) level. In order to avoid confusion, this paper considers only syntactic movements at SS (Surface Structure) level.

(12) Grammaticalization Stage 1 for Mandarin V-PFV *-le*



Key

- (x): x feature which is yet to be checked
 →: Licensing relation

*The verb stem is *chi* 'eat'

(adapted from Wu 2000, p.272)

In (12), the licensing relation between *-le* and Asp_2^0 can motivate *-le* to be raised to Asp_2^0 to check its feature set (Asp_2). However, we must note that this type of raising can only be realized in Stage 2.

In looking for a possible interpretation of this Stage 1 *-le*, we expect *-le* to behave like a lexical head affix that is closely associated with its V^0 feature. At this point, I refer to the ancient Chinese examples¹⁰ in (13) below:

- (13) a. ... shi zong ze nan liao. [.....事總則難了。]¹¹
 things collected then difficult complete
 'When all things are gathered, it will be difficult to complete them at once'
- b. liao wu xi se. [了無喜色。]¹²
 all no happy expression
 '(There is) completely no happiness in (his) expression'

As seen above, *-le* is formerly used in ancient Chinese as a completive morpheme, which is then pronounced as *liao* [liau] (henceforth *le* (*liao*)). This is also noted by Shi (1988) and Sun (1996) as they agreed that *le* (*liao*) in ancient Chinese could only be used to mean 'finish'. In a more detailed comparison with the diachronic analysis by Wang Li (1957, History of Chinese), this ancient *le* (*liao*) [了] did not appear during the pre-Qin [先秦] period (BC 770 – BC 256), but only started to emerge during the Han Dynasty [漢代] (BC 206 – AD 220) as a lexical verb meaning 'to finish'¹³. Though this meaning is not recorded in *Shuo-wen Jie-zi* (100 AD) 《說文解字》, it

¹⁰The ancient Chinese examples will be in Hanyu Pinyin and not IPA.

¹¹From *Changyan Sunyi* [《昌言·損益》] 仲長統 'Words of Wisdom – On gains and losses'

¹²From *Jinshu XieAn Zhuan* [《晉書·謝安傳》] 'Book of Jin - Biography of XieAn'

¹³Wang (1957) quoted an example from *Tongyue* 《儻約》 written by Han scholar Wang Bao [王褒]:

Chen qi zao sao, shi liao xi di. [晨起早掃，食了洗滌]
 Morning wake up early sweep, eat finish wash up

is noted specifically in another dictionary Guanya-Shigu 《廣雅釋詁》¹⁴. Since then, *le* (*liao*) was often used as a verb especially after the Jin Dynasty [晉代] (AD 265-420). In fact, in modern Mandarin this 'finish' *le* (*liao*) is still being used occasionally, seen in (14c) below together with other ancient Chinese examples.

- (14) a. Guan-shi wei yi liao ye. [官事未易了也。]¹⁵ (post-Jin period)
 Official matters not manage finish SFP
 'All official matters are not yet finished'
- b. Qi-Ru qing wei liao. [齊魯青未了。]¹⁶ (Tang Dynasty: AD 628-907)
 Qi-Ru green not finish
 'The greens in Qi-Ru have not finished blossoming'
- c. Wo xiang liao -le zhe xin-shi. [我想了了這心事。] (Modern Mandarin)
 I wish finish LE this emotion-problem
 'I wish to solve this problem completely'

This (14) form represents the interpretation of verbal *le* (*liao*) as the representative interpretation of V-PFV *-le*'s Stage 1 grammaticalization. In (14), the *le* (*liao*) verbal 'finish' feature corresponds well with that of the suffix¹⁷ *-le* base-generated at V^o. However, to justify *le* (*liao*) as the total manifestation of Stage 1 *-le*, we also expect it to contain situation-completive Asp2 features to fulfill its licensing relation with the structurally higher Asp2^o (c.f. (26)). This will lead us to the second part of Wang's (1957, pp. 398) analysis of the ancient *le* (*liao*):

In the works of Tang poets, *le* (*liao*) had already been used in ways other than just verbal predicates, and it was gradually 'de-lexicalizing' [虛化]. In fact, it could be used as an adverb, meaning an action had been completed.

(Wang, 1957: pp. 398)

During the Tang Dynasty period, though *le* (*liao*) was primarily used as a verb, it started to have some "de-lexicalized" functional features. These features, suggesting 'action had been completed', can be the situation-completive Asp2 features associated in the licensing relation between the Stage 1 V^o suffix *-le* and Asp2^o (c.f. (12)). As far as I have researched, this post-Jin/Tang period *le* (*liao*) now fully fits in the description of the Stage 1 *-le*: it not only contains prominent verbal features as displayed in (14), it can also be occasionally used as a Asp2-type (situation-completive) aspectual marker, which justify its Stage 1 licensing relation with the higher Asp2^o head.

¹⁴ Guanya-Shigu - Chapter 4 [《廣雅·釋詁·四說》]: "了, 訖也" "*le* (*liao*), means finish"

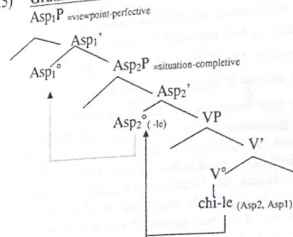
¹⁵ From "History of Jin - Biography of Fu Xian" [《晉書·傅咸傳》]

¹⁶ From Tang poem "Wang Yue" by Du Fu [《望岳》杜甫]

¹⁷ Wang (1957) proposed that this Stage 1/ ancient *-le* is not a suffix, but an independent verb. However, he admitted (pp. 398) that "this *-le* (*liao*) behaved like a suffix and always followed immediately after verbs in Tang folk literatures".

Next, we look at Stage 2 where the suffix α is allowed to raise to the higher Asp2^o to check its aspectual feature (due to the licensing relation in Stage 1). This time, the Stage 2 *-le* will be licensed by the functional head Asp1^o (perfective), as shown in (15) below:

(15) Grammaticalization Stage 2 for Mandarin V-PFV *-le*



Key

- (x): x feature which is yet to be checked
 →: Licensing relation
 ⇨: Raising movement

(Wu 2000, p. 256)

As illustrated in (15), the suffix *-le* has to contain the two feature sets of Asp1 and Asp2 in order to justify its checking of features at Asp2^o and its licensing relation with the higher Asp1^o. Wu suggests that the Stage 2 *-le* instantiates situation-completive aspectual content as well as its original 'finish' verbal meaning. At this point, the ancient *le* (*liao*), which started to "de-lexicalize" during Tang Dynasty, may seem to fit in this Stage 2 interpretation. However, as it was mostly used as a verb (Wang, 1957), it is not clear whether this Tang *le* (*liao*) has been raised to Asp2^o in accordance with Stage 2 grammaticalization.

Examining the post-Tang period for more definite interpretation of Stage 2 *-le*, I still refer to Wang's (1957, pp. 400) analysis of the Song Dynasty's (AD 960 - 1279) *le* (*liao*). He argued that the Song period is "the time when the new and old rules of using *le* (*liao*) co-existed", particularly in the popular lyrical literature. This meaning of "new rule" may be unclear, but from the examples given by Wang (1957), it is possible to derive the transitional meaning of Asp2^o-completion in this middle-Chinese *le* (*liao*):

- (16) a. Deng xian fang-liao xiu gong-fu. [等閒妨了繡功夫。]¹⁸
 Wait boredom stop-LE embroidery work
 'Unsettled feelings completely halted my embroidery work'
 * 'Unsettled feelings halted and finished my embroidery work'
- b. Ru-jin dou jiao huai liao xue-sheng. [如今都教壞了學生。]¹⁹
 Now all teach spoil-LE student
 'Now (you) did not teach these students well at all'
 * 'Now (you) finished teaching these students wrongly'

¹⁸ From Nan-gezi by Song poet Ouyang Xiu [《南歌子》歐陽修]

¹⁹ From Song textbook Zhuizi-Yulei [《朱子語類》]

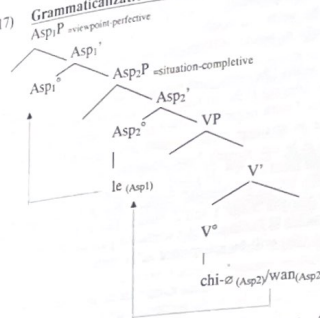
The *le* (*liao*) in (16) could no longer be interpreted as a simple verb meaning 'finish' as it had a stronger completive aspectual meaning. In further reading, one could also interpret the perfective-ness out of the completive aspectual meaning in this *le* (*liao*).

We proceed next into the post-Song period expecting more aspectual uses of *le* (*liao*), and I refer to the Korean translations in the 13th-15th century textbook *Laoqida Yanjie*, in which *le* (*liao*) was one of ancient Korean loanwords²⁰. In this Korean textbook, *le* (*liao*) was pronounced as [lio] (료) alone and as [lio] (료) in compound verbs. Most importantly, it was recorded that the *le* (*liao*) then have two separate meanings, that is 'complete' (마치다), and 'finish' (끝나다). These two distinct meanings of the Chinese ancient *le* (*liao*) were confirmed by Zhu (1958) that they were translated accordingly into Korean at the period of Yuan Dynasty [元朝] (1279-1368). In Dyer's (1983) grammatical analysis of *Laoqida Yanjie*, he even suggested that there are two types of verbal *-le*: a particle *le* that often expresses meaning of 'finish'; and a more frequently used suffix *-le* that "always follows a verb and indicates a completed action". Hence, this latter form of middle-Chinese suffix *le* (*liao*) as shown in *Laoqida Yanjie*, is a possible interpretation of Stage 2 *-le*. This middle-Chinese *le* (*liao*), while retaining its base-generated verbal features (it has not lost its [liau] phonological form yet) is raised to *Asp2°* to instantiate situation-completive aspect as its most prominent aspectual expression.

At Stage 3, *-le* is being re-analyzed as being base-generated at *Asp2°* instantiating situation-completive aspect and is no longer associated with the properties of *V°*. Concurrently, Stage 3 *-le* is also licensed by a higher viewpoint *Asp1°*, thus it contains *Asp1* features and instantiates viewpoint-perfective aspect as well. Wu points out that because of this re-analysis, a new suffix element like *RVC* -*wan* 'finish' or a phonologically empty element \emptyset can be base-generated at *V°* to occupy the V-suffix position. The generation of this new element can trigger another Stage 2 raising as it licensed by the higher *Asp2°*. Thus, the *-wan*/ \emptyset element will be similar to *-le* at Stage 1 and 2, as shown in the tree (17).

²⁰ These loanwords can be found in the 15th century Korean textbook *Laoqida Yanjie* 《老乞大諺解》.

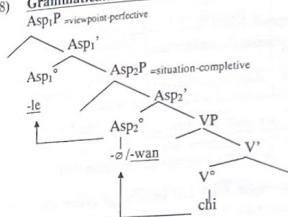
(17) Grammaticalization Stage 3 for Mandarin V-PFV *-le*



Key
 (x): x feature which is yet to be checked
 → : Licensing relation
 ↗ : Raising movement

The Stage 3 *-le* will be raised and base-generated at *Asp2°* — a reenactment of Stage 2 raising and Stage 3 re-analysis. To clarify the whole Stage 3 evolutionary transition, we can illustrate the post-Stage 3 resultant movements as below:

(18) Grammaticalization Post-Stage 3 for Mandarin V-PFV *-le*



Key
 → : Raising movement
Note : Elements base-generated at *Asp1°* and *Asp2°* are hypothesized to have undergone Stage 2 and 3 processes, with no transition stages involved.

In (18), *-le* expresses just perfective aspect with no completive meaning, befitting the general use of V-PFV *-le* in modern Mandarin (c.f. (1b)). Meanwhile, one possible interpretation for the Stage 3 *-le* in (17) earlier can be the modern Mandarin completive *-le*, which noted by Lü (1980), Sybesma (1999) and Wu (2000), always co-occurs with a restricted group of 28 verbs (henceforth R-*le*) as shown below:

- (19) a. Wo zongshi wang-le ta-de-mingzi. [我總是忘了他的名字。]
 I always forget-LE his-DE-name 'I always forget his name.'
- b. Wo hai mei-you mai-le nei-liang-che. [我還沒有賣了那輛車。]
 I still NEG sell-LE that-CL-car 'I still did not sell off that car.'

- c. *Wo zongshi kan-le ta-xie-de-shu. [*我總是看了他寫的書。]
 I always see-LE he-write-DE-book
 'I always read the books he wrote.' (Intended)

As seen above, only certain verbs like *wang* and *mai* can allow this *R-le* to combine with the habitual adverb like *zongshi* (19a) to result in a completion type of reading. In (19b), *R-le* can even be used with negative marker *mei-you*, implying that it does not contain perfective feature as *mei-you* never co-occur with general V-PFV *-le*. In addition, we notice that this *R-le* has already been phonologically reduced to [l*], and that signals its dissociation from the V^o *-le* [liau] (c.f. (17)). This is the type of *-le* that has prominent completive (Asp₂^o) aspectual content, and a re-analyzed status different from the ancient *le* (*liao*) in Stage 1 and 2. Hence, this modern *R-le* in (19) will fit in the interpretation for the (17) Stage 3 *-le*; while the general V-PFV *-le* used with normal verbs like *chi* in (1b) will be interpreted as an instantiation of the (18) post-Stage 3 grammaticalization.

In general, I have added further historical examples to support Wu's three-stage proposal and shown how these have the expected interpretations for every grammaticalization stages for *-le*. All these can be summarized as in the tabulation (20) below:

Interpretation Stage	Types of aspect instantiated		Types of <i>-le</i>
	*Primary	*Secondary	
Stage 1	V ^o ('finish')	Asp ₂ ^o (completive)	Ancient <i>le</i> (<i>liao</i>) [6 th -9 th Century]
Stage 2	V ^o ('finish') + Asp ₂ ^o (completive)	Asp ₁ ^o (perfective)	Middle-Chinese <i>le</i> (<i>liao</i>) [10 th -15 th Century]
Stage 3	Asp ₂ ^o (completive)	Asp ₁ ^o (perfective)	<i>R-le</i> (present)
Post-Stage 3	Asp ₁ ^o (perfective)	N.A. ²¹	V-PFV <i>-le</i>

*Key: Primary = Features checked Secondary = Features yet to be checked

As summarized above, Wu's (2000) split-AspP and three-stage grammaticalization proposals fully accounted for the historical evolutionary development of V-PFV *-le*. However, there are still some exceptional cases in sentence (21) below, where V-PFV *-le* is used to express stative situations. This stative use of *-le* seems to be contradicting the evolutionary path of 'finish' → 'completive' → 'perfective' worked out earlier in Wu's (2000) proposal:

- (21) a. Hou-mian gen -le san-ge ren. [后面跟了三个人。]
 Back follow LE three CL people 'There were three men following me'
- b. Zhe-liang ba-shi zuo man -le ren. [这辆巴士坐满了人。]
 This CL bus sit full LE people 'This bus has become fully seated'

²¹ According to Wu (2000), the Asp₁^o *-le* can be licensed by another structurally higher TenseP*.

Though the overall meaning of the sentences in (21) conveys perfective-ness, the internal situation-type aspect belongs to the stative type, rather than the situation-completive type that we have worked out. Thus, there seems to be two features of [perfective + completive] and [perfective + stative] co-existing in V-PFV *-le*. This poses some problems for the situation-type Asp₂^o, as it is impossible for Asp₂^o to contain two opposing features. Therefore, we need to look at other Chinese dialects to gather more evidence to investigate this exceptional form of V-PFV *-le*.

4. Grammaticalization of Southern Min V-PFV *wu*

As one of the main Chinese southern dialects, Southern Min (閩南話) is widely spoken in China's Fujian province, Taiwan, and other parts of Southeast Asia including Singapore and Malaysia. In researching Southern Min V-PFV elements, I take the representative dialect – Xiamen Hua (廈門話), which is spoken in Fujian's coastal city of Xiamen. The main reason for choosing Southern Min Xiamen Hua (henceforth SMX) is that many Chinese linguists and dialectologists have argued that Southern Min is indirectly associated with the northern dialects, especially Beijing Mandarin. Zhang (1996) provided credible historical and phonological evidence to support the claim that the present Southern Min is formed through the interaction of ancient central Chinese (which were also the "ancestors" of the northern dialects) and the ancient proto-MinYue dialects. In (22) below, SMX and Beijing Mandarin are shown to be closely related as both originate from the ancient central Chinese dialects.

(22)

AD 291

AD 310-316

AD 317-589

: After the "Riot of Eight Kings" [八王之亂], years of political turmoil induced a huge population shift from the north to the south.

: Three notable migration waves occurred at the end of Xi-Jin [西晉] dynasty, involving the Qingxu, Siyu and Qinyong [青徐、司豫、秦雍] migrants, with the first two types of migrants more actively involved in the evolution of the modern Min dialects. They introduced the ancient central-east and central-west Chinese dialects to the ancient MinYue [閩越] dialects.

: Setup of the northern Tong Jin [東晉] and the southern Nan-Chao [南朝] dynasties caused the first great rift between northern and southern Chinese dialects.

As the result of developing from the same origins, SMX and Mandarin share many similarities. In fact, the aspectual system of SMX is almost identical to that of Mandarin as shown in (23) below.

(23)

Types of Aspect	SMX	Mandarin	Examples in SMX	Examples in Mandarin
Imperfective	ti- [在]	zai- [在]	ti-k'un 'sleeping'	zai-shui 'sleeping'
	-tiâu [着]	-zhe [着]	kui-tiâu 'kneeling'	gui-zhe 'kneeling'
Perfective	-liáu [了]	-le [了]	k'un-liáu 'slept'	shui-le 'slept'
	-gue [過]	-guo [過]	ki-gue 'have been'	qu-guo 'have been'
	Wu [有]	*you [有]	wuki 'went'	*you-qu 'went (intended)'

Although there are many similarities between SMX and Mandarin, SMX has an additional aspectual marking in the form of *wu*-V sequence. According to Chinese dialectologist Zhou (1991, *Southern Min Dialect and Pu Tong Hua Mandarin*), this aspectual use of *wu*, which is derived from the existential lexical meaning, is rather unique among Chinese dialects. Zhou (1991) described two of such aspectual uses of *wu* + V²² in modern SMX, as shown below in (24).

(24) a. **wu** + V: *wu* indicates the existential or completive state of an action, similar to Mandarin V-PFV *-le* or SFP *-le*

(SMX) To-a *wu* lit- k'ui. [桌仔有裂開。]
Table WU split-open 'The table has split'

(Mandarin) Zhuo-zi lie-kai-le. [桌子裂開了。]
Table split-open LE 'The table has split'

b. **wu** + V (or Adj)-NEG (bo): Used as yes/no question phrases. In this phrase formation, *wu* can be replaced by V-PFV *-le* again.

(SMX) Wu tsia? pa pǝ bo? [有吃飽飯無?]
WU eat full rice NEG 'Did you eat until you were full?'

(Mandarin) Chi bao-le fan mei? [吃飽了飯沒?]
eat full LE rice NEG 'Did you eat until you were full?'

Looking at more examples as in (25) below, this preverbal *wu* seems to bear the ambiguous features of [perfective + completive] ~ [perfective + stative] and it can also express [perfective + stative] feature alone, similar to the previous "odd" case in Mandarin V-PFV *-le* of (21).

(25) a. I *wu* k'uā hi. [伊有看戲。]
i. He WU see show [perfective + completive]
'He has (just) finished seeing the show.'

²² There are also V-*wu* sequences, where the *-wu* mainly functions as a coverb or a potential suffix like the Mandarin *-de*. Please refer to Ong (2001).

ii. He WU see show [perfective + stative]
'He has seen the show (and there is no denial about it).'

b. Loli dǝŋ *wu* tse ɣə æ laŋ. [囉哩頂有坐五個人。]
Lorry top WU sit five CL person [perfective + stative]
'The lorry is seated with five persons.'

In (25a), the VP phrase *wu* k'uā hi can either mean that the process of watching the show has just completed (hence [+completive] in (i)), or indicate the state of having watched the show (hence [+stative] in (ii)). The latter stative feature is even more prominent in (25b), where it is not possible to derive the other [perfective + completive] feature.

The investigation of V-PFV *wu* grammaticalization is vital in understanding the opposing features [completive/stative] that can co-exist in Chinese V-PFV aspectual elements. The following subsections will inspect the aspectual contents of the V-PFV *wu*, and apply the three-stage grammaticalization method to explain how *wu* acquires its aspectual properties.

4.1. Three-stage grammaticalization for V-PFV *wu*

If Wu's (2000) three-stage grammaticalization is applicable to Mandarin V-PFV *-le*, it should be possible to extend it to the similar V-PFV *wu*. As shown in (24) earlier, V-PFV *wu* can always be replaced by V-PFV *-le* without any change in the aspectual meaning. However, there may be a problem with asymmetrical affix ordering in the uses of *wu* and *-le*, as the former seems to be a prefix rather than a suffix. In this case, it is important to note that SMX has many "word-order inversion" [語序倒置] phenomena (Zhou, 1991), which cause it to be different from Mandarin at times, as shown in (26) below:

(26) a. SMX has certain adverbs like 'first' following the main verb, rather than preceding it.

(SMX) Wa kiā sǝŋ. [我先走。]
I go first 'I go first'

(Mandarin) Wo xian zhou. / *Wo zhou xian. [我先走。 / *我走先。]
I first go / *I go first 'I go first'

b. SMX puts the negation marker after the verb, while the Mandarin negation marker precedes the verb

(SMX) K'ua bæ²³ liau. [看未了。]
See NEG finish '(I) have not finished watching'

(Mandarin) Mei kan wan. / *Kan mei wan. [沒看完。 / *看沒完。]
NEG see finish / *See NEG finish '(I) have not finished watching'

²³ Note that SMX [未] bæ is equivalent to [沒] mei in Mandarin

- c. SMX puts adverbial phrases like 'to death' in front of the adjectival predicate rather than after it as in Mandarin.

(SMX) Si lang kiam. [死人咸。]
die man salty
'It is salty enough to kill (one)' (i.e. 'it is extremely salty')

(Mandarin) Xian si ren. / *Si ren xian. [咸死人。 / *死人咸。]
Salty die man / *dead man salty
'It is salty enough to kill (one)' (i.e. 'it is extremely salty')

Therefore, the SMX V-PFV *wu* can be posited as base-generated in the preverbal position, rather in the postverbal position like Mandarin *-le*, as its word order is shown to be different from Mandarin's. However, unlike the suffix V-PFV *-le*, *wu* is not an affix, because it can be separated from the verb by a non-aspectual element like the adverb *ban-ban* 'slowly' (27a) and VP *che xue-tsia* 'sitting on a train' (27c).

- (27) a. I *wu* ban-ban *tsia* a! [伊有慢慢吃啊!]
He WU slowly eat SFP 'He did eat slowly!'
b. *I ban-ban *wu* *tsia* a! [*伊慢慢有吃啊!]
He slowly WU eat SFP 'He did eat slowly!' (Intended)
c. I *wu* tse xue-tsia *k'i* a! [伊有坐火車去啊!]
He WU sit train go SFP 'He did leave on a train'
d. *I tse xue-tsia *wu* *k'i* a! [*伊坐火車有去啊!]
He sit train WU go SFP 'He did leave on a train!' (Intended)

If this verbal *wu* is a prefix of the main verb *tsia* 'eat' or *ki* 'go', then (27b) and (27d) are expected to be grammatical, which is not the case, as shown above. Thus, *wu* cannot possibly be base-generated as an affix in a V^o head containing the main verb, but is likely to be a verb²⁴ occupying another VP projection higher than that of the main verb.

In the spirit of Grimshaw's (1991) *Extended Projections*, I propose that the SMX verbal *wu* is instantiated as an extended verbal (or aspectual) projection of the primary lexical projection containing the main predicate verb (such as *ki* 'go'). In other words, the VP-VP occurrence of *wu* + V is the result of the primary V^o head (*ki* 'go') features initiating a potential extension²⁵ of another set of (extended) head features that constitute another verbal (or aspectual) projection for *wu*. One piece of evidence for positing this preverbal *wu* as an extended projection head is that it also

²⁴ This *wu* might possibly be a clitic, but there is not much evidence to support this claim since it does not display any P2 behaviour or allomorphic properties as a classic clitic does (c.f. (24)).

²⁵ Applying the Extended Head Feature Principle (Grimshaw, 1991) into the *wu* + V projection, the lexical verb V can have various extended projections such as the functional projection AspP (e.g. V-PFV *wu*), which bears extended head features different from (yet related) that of the lexical verb.

expresses an existential meaning, just like the Mandarin *you* [有], when it occurs with NP complements:

(28) a. Wa-æ ts'u *wu* si æ lan [我的家有四个人。] (SMX)
My house WU four CL person 'My house has four persons inside'

b. Wo-de jia *you* si ge ren [我的家有四个人。] (Mandarin)
My house YOU four CL person 'My house has four persons inside'

The existential use of this SMX *wu* in (28) prompts a comparison with the English auxiliary 'has/have', which is also an existential marker when occurring with NP complements (e.g. He *has* [a dog]_{NP} / They *have* [some dogs]_{NP}). Both of these existential verbs *wu* and 'has/have' are also capable of occurring before VP complements as aspectual markers, with the former being a perfective marker and the latter being a perfect (anterior) marker (e.g. He *has* [decided to leave]_{VP} / They *have* [decided to leave]_{VP}). As a verbal perfect marker, 'has/have' is well established (Grimshaw, 1991) as an extended head of the primary verbal head (e.g. 'decided'), and so it is very likely that the similar SMX preverbal *wu* as perfective marker can also be an extended verbal (or aspectual) head of a lexical verb such as *ki* 'go' in *wu* + *ki* 'has gone'.

From the grammaticalization point of view, both aspectual SMX *wu* and English 'has/have' share the same lexical source (i.e. the existential 'have' meaning) and they follow the same universal evolutionary path of 'lexical 'have' → resultative → anterior (English 'has/have') → perfective (SMX *wu*)', which is proposed by Bybee et al. (1994). Thus, it is possible for both aspectual markers to acquire the same type of syntactic status as an extended verbal head after being grammaticalized as functional elements. Having observed the lexical and grammaticalizing similarities of SMX *wu* and English 'has/have', I deduce that the SMX *wu* can be instantiated as a separate head in an extended VP (or AspP), and not as an affix like the Mandarin V-PFV *-le*.

Applying its proposed syntactic properties as proposed above into the Stage 1 grammaticalization, SMX *wu* is expected to behave like the Mandarin *-le*; that is, to instantiate verbal features while maintaining a licensing relation with the higher Asp₂^o head. In other words, this Stage 1 *wu* mainly expresses the (verbal) existential meaning, while it is also capable of expressing the situation-completive aspect. In other words, Stage 1 *wu* would have aspectuality in the form of [existential + completive], as traced in a particular ancient phonetics dictionary Tang-Yun Zheng [《唐韻正》]:

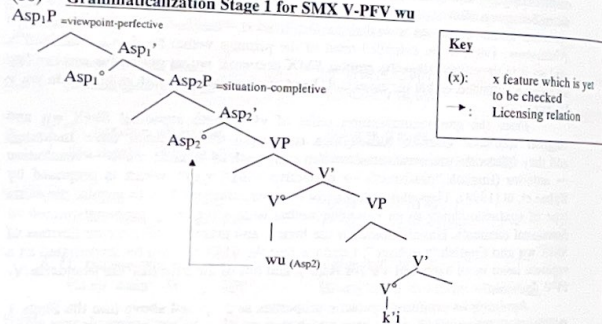
(29) **Tang-Yun Zheng**

You (*wu*) [有] used to be pronounced as *yi* because it shared the same completive meaning with *yi* [以]. Meanwhile, *yi* [以], due to the *Jia-jie*²⁶ mechanism acquired its completive meaning from the similar sounding *yi* [已].

E.g. Ba bi *you* (*wu*) da-guo. [霸必有大國]²⁷
 Super-power must **already-is** big-country
 'A super power (like this) must already be a big country'

Therefore, with diachronic evidence supporting this aspectual form of Stage 1 V-PFV *wu*, we can describe its grammaticalization process in the same way as the Mandarin *le*:

(30) **Grammaticalization Stage 1 for SMX V-PFV *wu***

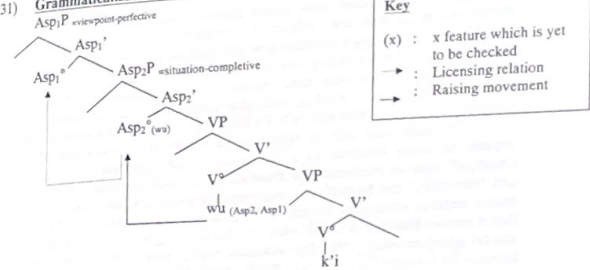


Proceeding next to Stage 2 grammaticalization, V-PFV *wu*, while still being base-generated as V° head, is raised to Asp2° to fulfill its licensing relation in Stage 1, as portrayed in (31) below:

²⁶ *Jia-jie* [假借] as first proposed by *Shuo-wen Jie-zi*, literally means 'borrowing a form for its sound'. In the pictographic evolution of Chinese characters, this character construction device is used to borrow homophones to express an abstract meaning. For example, the expression of the meaning of 'come' is rather difficult to pictorialize, and it will be useful to borrow another similar sounding word *lai* [來] 'wheat'. As *lai* was used more and more to express 'come', the character [來] now only express this meaning.

²⁷ Extracted from *Mencius* | 《孟子》

(31) **Grammaticalization Stage 2 for SMX V-PFV *wu***



According to (31) above, the Stage 2 *wu* was able to express the situation-completive as well as viewpoint-perfective aspect. This fits the description of V-PFV *wu* in (32a-i) below where it has the appropriate [perfective + completive] features. However, there are still the additional [perfective + stative] interpretations in (32a-ii) and (32b) below to account for. Furthermore, there is an "odd" combination of [perfective + completive + stative] interpretation in (32c), which the Stage 2 process in (31) cannot explain.

- (32) a. I *wu* k'i lau-k'a. [伊有去樓下。]
 i He WU go downstairs [perfective + completive]
 'He just went downstairs.'
- ii He WU go downstairs [perfective + stative]
 'He has gone downstairs (some time ago)'
- b. Wa au-bue *wu* tue tsia kau [我后面有跟只狗。]
 i. I back WU follow CL dog [perfective + stative]
 'There's a dog following behind me'
- ii. I back WU follow CL dog *[perfective + completive]²⁸
 'A dog has followed (behind) me' (Intended)
- c. I *wu* k'i gue lau-ka. [伊有去過樓下。]
 He WU go GUE downstairs [perfective + completive + stative]
 'He had gone to downstairs earlier.'

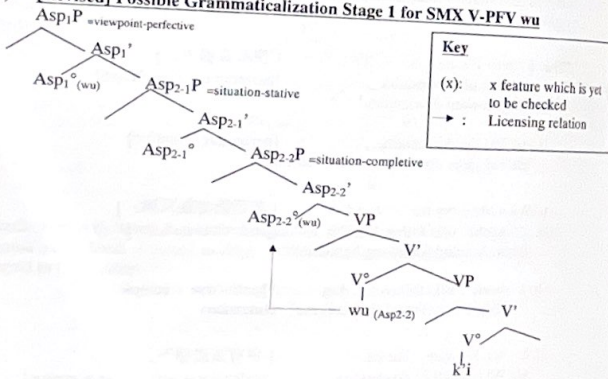
²⁸ The reason why (46b) cannot have the [perfective + completive] aspect is probably due to its passive construction. As observed, the subject 'My behind' is not a volitional subject like the 'He' in (46a). This is similar to the "there" construction in English, where it is grammatical when a stative verb is used - for example 'There lies a cat on the floor' - and is ungrammatical when a non-stative verb is used - for example 'There jumped a cat on the floor'.

In (32a), the ambiguous reading of preverbal *wu* suggests that the Asp_2^0 might license two opposing features of dynamic ~ stative simultaneously. This seems inappropriate for Asp_2^0 , as a functional head cannot possibly contain two diametrically different feature sets at the same time, subject to alternation at will. Instead, I propose that this ambiguity in V-PFV *wu*'s situation-type aspectual expression (completive ~ stative) is due to an additional splitting structure within the situation- Asp_2 projection. The split- Asp_2 projection will thus consist of two situation-type Asp_2 s: $Asp_{2.1}$ (situation-stative) and $Asp_{2.2}$ (situation-completive), which instantiates either completive (c.f. (32a-i)) or stative (c.f. (32a-ii)), (32b) respectively.

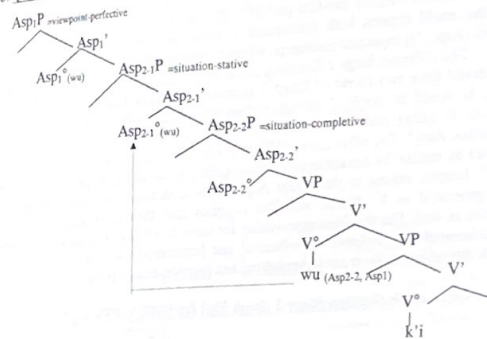
The additional split in situation-type Asp_2 also implies that SMX *wu* is capable of being involved in a "viewpoint ($Asp_{1.1}$)-situation ($Asp_{2.1}$)-situation ($Asp_{2.2}$)" type of combinational expression, in which the components "situation₁" and "situation₂" can be two opposing aspectual properties like stative ~ dynamic or telic ~ atelic as defined by Vendler (1957), Comrie (1976) and Smith (1997). Indeed, this is proven possible in (32c), where the [+stative] *-güe* (similar to Mandarin *-guo*) can be added to occupy the other available $Asp_{2.1}$ head as the [+completive] *wu* is licensed by (or raised to) the lower $Asp_{2.2}$ head. The resultant aspectual expression is hence [perfective + completive (dynamic) + stative] in the *wu* + *V-güe* sequence.

According to this splitting- Asp_2 proposal, there would have to be two types of licensing relations back in the Stage 1 grammaticalization shown in (30), where the V-PFV *wu* base-generated in V^0 could be licensed by a higher $Asp_{2.1}^0$ or $Asp_{2.2}^0$, as structurally represented as in (33a) and (33b) respectively:

(33) a. [Revised] Possible Grammaticalization Stage 1 for SMX V-PFV *wu*



b. [Revised] Possible Grammaticalization Stage 1 for SMX V-PFV *wu*



According to (33), this Stage 1 *wu* would have the ambivalent aspectual properties of [existential + stative ($Asp_{2.1}^0$)] and [existential + completive ($Asp_{2.2}^0$)]. While the latter interpretation has been illustrated in the ancient dictionary Tang-Yun Zheng of (29) (ancient *wu* used in the same way as the completive *yi* [以/已]), the former form, [existential + stative], is attested in many ancient Chinese dictionaries like Ci-Quan [《辭詮》] and Jing-Zhuan Shi-ci [《經傳釋辭》], where the predicative 'is' meaning specified for this ancient *wu* justifies its Stage 1 [existential + stative] aspectual content:

(34) a. Ci-Quan

[有]: "Incomplete internal" (predicate) verb [不完全內動詞], can be used in the same way as *wei* [為] (which can be translated as predicate 'is').

E.g. Miao neng shi, bu zu yi you (wu) ming. [眇能視, 不足有明。]²⁹
 One-eye blind can see no full that is clear
 'Though you can see with one eye, it is not enough to see clearly'

b. Jing-Zhuan Shi-ci

[有]: Similar to *wei* [為].

E.g. Qi you (wu) ji shu da yan? [其有吉孰大焉?]³⁰
 This is lucky which more
 'This is auspicious enough that you could not have a better outcome, isn't it?'

²⁹ Extracted from Yi Jing - Fu [《易經·復》]

³⁰ Extracted from Jing-Yu [《經語》]

wu in (27a) is observed to have no [+completive] feature. In fact, the eating activity in (27a) is interpreted as an ongoing state, as another clause indicating incompleteness of the eating event can be added in (36a). In contrast, the obligatory [+completive] feature in (27c) cannot allow such construction, as seen in (36b).

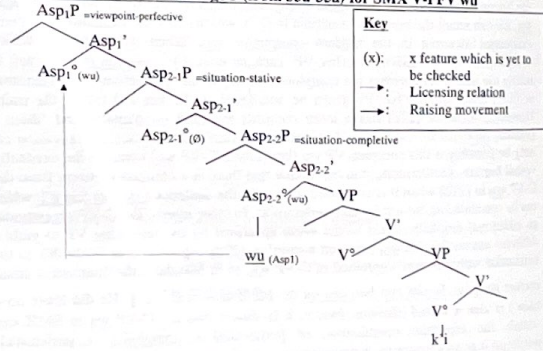
(36) a. I wu ban-ban tsia, bu-go i bo tsia wan. [伊有慢慢吃, 不過伊無吃完。]
He WU slowly eat, but he NEG eat finish
'He did eat slowly, though he did not finish his meal'

b. *I wu tse xue-tsia ki, bu-go i bo k'i wan. [*伊有坐火車去, 不過伊無去完。]
He WU sit train go but he NEG go finish

In general, this form of C-VP wu in (36a) and (27a) can be analyzed as a [perfective + stative] aspectual element. However, this wu is also able to instantiate the verbal existential feature, just like the previous form of C-VP wu in (27c): when compared with just I ban-ban tsia a ('he is eating slowly'), (27c) I wu ban-ban tsia a puts a strong emphasis on existence of the event of 'eating slowly'.³³ Thus, a conclusion similar to the one in (35a) can be drawn — namely that the (27c) C-VP wu is fit to represent the Stage 2 wu in (35b), as it contains all three aspectual features in the form of [existential + stative + perfective].

In (35a) and (35b), I argue that the two types of wu raising have subsequently resulted in wu being re-analyzed and base-generated in either Asp₂₋₁^o or Asp₂₋₂^o in the Stage 3 grammaticalization, as illustrated in (37) below.

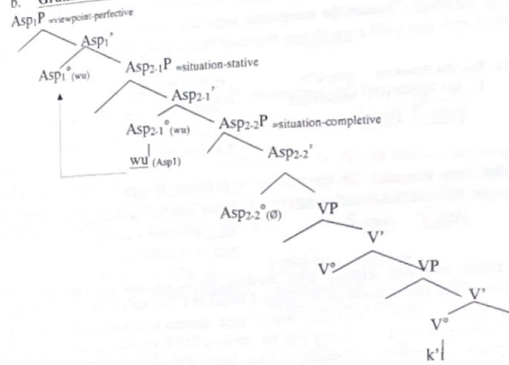
(37) a. Grammaticalization Stage 3 (from 33a-35a) for SMX V-PFV wu



Interpretation for (37a): [perfective + completive] (c.f. (32a-i) and (25a-i))

³³ This contrastive stress from the C-VP wu is more obvious when we compare I wu tsia 'He has just eaten / He has eaten' and I wu ban-ban tsia 'He did eat slowly'. The former can have add stress marker jin-e 'really' as in I jin-e wu tsia 'He really did eat', while the latter does not allow another stress marker as *I jin-e wu ban-ban tsia is weakly ungrammatical.

b. Grammaticalization Stage 3 (from 33b-35b) for SMX V-PFV wu



Interpretation for (37b): [perfective + stative] (c.f. (32a-ii) and (25a-ii))

According to Stage 3 grammaticalization shown in (37) above, we expect the Stage 3 wu to evolve into two separate forms, which are the [perfective + completive]-only V-PFV wu (37a) and [perfective + stative]-only V-PFV wu (37b). For the latter form of wu in (37b), there are examples earlier in (25b) Loli wu tsæ gə æ lan 'The lorry is seated with five persons.' and (32b) Wa au bue wu tue tsia kau 'There's a dog following behind me', where only the [perfective + stative]-only V-PFV wu can be used. As for the first form of wu shown in (37a), if it is generated (after re-analysis) in Asp₂₋₂^o (situation-completive) with no association with Asp₂₋₁^o (situation-stative), then another stative-aspectual marker in the form of the suffix -gue [過] (similar to Mandarin [+perfective/+stative] -guo³⁴ [過]) can co-occur with it. The whole AspP model will thus have -gue in stative-Asp₂₋₁^o and (37b) wu in completive-Asp₂₋₂^o, yielding a wu-V-gue sequence, which is possible in SMX as shown below:

(38) a. Wa wu k'i-gue lit-pun. [我有去過日本。]
I WU go GUE Japan
[Asp₂₋₂^o] [Asp₂₋₁^o]
wu [perfective + completive]
-gue [+stative]

b. I wu tsia-gue liu-lian bo? [伊有吃過榴蓮無?]
He WU eat GUE durian NEG
[Asp₂₋₂^o] [Asp₂₋₁^o]
wu [perfective + completive]
-gue [+stative]

³⁴ Smith (1997, pp.269) noted that -guo can affect both situation type and viewpoint, and she offered a two-level structure to represent the aspectual content of -guo: [||[verb constellation]+ -guo]subcat Par] where guo has the feature of [+viewpoint-perfective /+situation-stative].

The same logic can be applied to the Stage 3 (37a) form of [perfective + stative]-only V-PFV wu (Asp₂₋₁^o) since the completive aspectual marker -wan [完] (Asp₂₋₂^o) can co-occur with it to yield a wu-V-wan sequence that is also grammatical in SMX.

- (39) a. Wa wu tso-wan gon-k'o. [我有做完功課。]
 I WU go WAN homework 'I have finished my homework'
 [Asp₂₋₁^o] [Asp₂₋₂^o] wu [perfective + stative]
wan [+completive]
- b. I wu tsia-wan liu-lian bo? [伊有吃完榴蓮無?]
 He WU eat WAN durian NEG 'Have you finished eating your durian?'
 [Asp₂₋₁^o] [Asp₂₋₂^o] wu [perfective + stative]
wan [+completive]

The above examples explain why modern SMX wu can co-occur with both completive and stative markers. Its Stage 3 forms in (37a) and (37b) make it possible for (stative) Asp₂₋₁^o or (completive) Asp₂₋₂^o type element to co-exist in the same Asp model. Hence, it has been shown that the modern SMX wu used in (38) and (39) is appropriate to represent the duality of the Stage 3 grammaticalization in (37). In addition, note that for both forms of Stage 3 wu, the reanalysis induces the absence of any verbal features in wu, thus resulting in the loss of emphatic stress unlike earlier the Stage 2 C-VP wu. This is especially true in examples (38) and (39) where wu simply expresses aspectual meaning.

To summarize, I trace the three-stage grammaticalization paths of the V-PFV wu in SMX in the table (40) below:

(40)

Grammatical -ization Stage	V ^o (Existential)	Asp ₂₋₂ ^o (Situation-Completive)	Asp ₂₋₁ ^o (Situation-Stative)	Asp ₁ ^o (Viewpoint-Perfective)	Verbal / Aspectual Features of V-PFV <u>wu</u>
Stage 1 (33a)	Base-Generated	Licensed	-	-	[Existential + Completive]
Stage 1 (33b)		-	Licensed		[Existential + Stative]
Stage 2 (35a)	Base-Generated	Raised	-	Licensed	[Existential + Completive + Perfective]
Stage 2 (35b)		-	Raised		[Existential + Stative + Perfective]
Stage 3 (37a)	-	Base-Generated	-	Licensed	[Completive + Perfective]
Stage 3 (37b)	-	-	Base-Generated		[Stative + Perfective]

We have used Wu's (2000) three-stage framework to show how V-PFV wu undergoes grammaticalization in a manner similar to that of Mandarin V-PFV -le, except that it needs a second splitting in the AspP₂ in order to account for its ambiguous

interpretations and different feature-licensing relations. At first sight, this split-AspP₂ suggestion may seem to be over-stretching Wu's (2000) initial split-AspP proposal. However, there are other V-PFV elements in other Chinese dialects that also display aspectual behaviours that justify this secondary split-AspP proposal, as to be introduced in the following subsection.

4.3. Further evidence for a Split-AspP₂ (situation-type) Projection

4.3.1. Shanghainese V-PFV tsi

The Shanghainese V-PFV tsi [仔] is considered to be the old form of the present V-PFV -le, which is exactly the same as the Mandarin V-PFV Stage 3 -le. In fact, both V-PFVs tsi and le[+*] are interchangeable in the sentences in (41) and express the same feature of [perfective + completive]³⁵:

- (41) a. I tʃin-tʃɔ tan lɛ→ lian tsa tʃi. [伊今朝打了兩只雞。]
 He today kill LE two CL chickens 'He killed two chickens today'
 le:[perfective + completive]
- b. I tʃin-tʃɔ tan tʃi lian tsa tʃi. [伊今朝打仔兩只雞。]
 He today kill tʃi two CL chicken 'He killed two chickens today'
 tʃi:[perfective + completive]

According to Qian (1997, pp. 308), V-PFV tsi can also be used like the Mandarin progressive marker -zhe, and is able to "convert a past semelfactive activity into a state". In other words, tsi can also have the [perfective + stative] aspectual feature similar to that of the SMX Stage 3 (41b) wu, as shown in the examples given below:

- (42) a. Tɛ ɔ læ tʃi tʃi su ti. [把刀來指仔舍弟。]
 Hold knife come point tʃi my brother
 i. '(He) was pointing a knife at my brother' tʃi: [perfective + stative]
- ii. '(He) pointed a knife at my brother' tʃi: [perfective + completive]
- b. G→ŋ tʃi lian ŋ→ niŋ [跟仔兩個人。]
 Follow tʃi two CL person
 '(He) was being followed by two persons' tʃi: [perfective + stative]

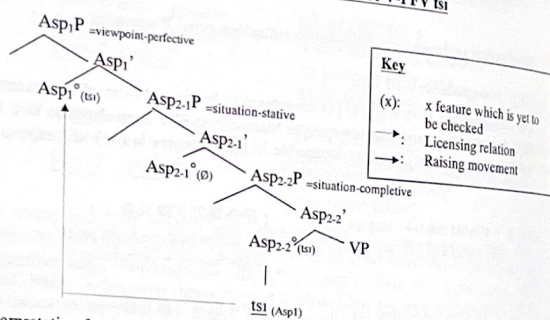
In (42a), tsi displays ambiguous situation-type aspects as it can be equivalent to the Mandarin stative zhe³⁶ as well as the completive -le. This is very similar to the SMX V-PFV wu in (32a). To account for such [perfective + stative/completive] features in

³⁵ The situation-completive feature in tsi may not be as prominent as SMX V-PFV wu, but according to Qian (1997, pp.306) from the mid-19th to mid-20th centuries, it was frequently used to express strong completive meaning.

³⁶ According to Shanghainese native speakers, when tsi is used as a stative marker like the Mandarin zhe, its vowel can undergo phonological changes and be pronounced as tsɛ. Otherwise, as a completive marker it is still pronounced as tsi.

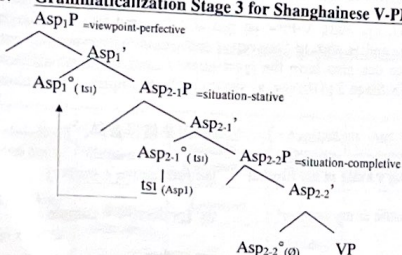
tsi, two separate situation-state Asp_{2-1}° and situation-completive Asp_{2-2}° heads can be proposed to instantiate these different base-generated properties, as illustrated below:

(43) a. **Grammaticalization Stage 3 for Shanghaiese V-PFV tsi**



Interpretation for (43a): [perfective + completive] (c.f. (41))

b. **Grammaticalization Stage 3 for Shanghaiese V-PFV tsi**



Interpretation for (43b): [perfective + stative] (c.f. (42))

If there were to be no splitting in the situation- Asp_{2-2} , the V-PFV tsi would not have been used as both a stative and a completive marker at the same time in (41) and (42). To support this further, we can apply the "viewpoint-situation₁-situation₂" test on tsi with other aspectual markers like the experiential stative gu [過] (similar to Mandarin guo and SMX gue) and the completive le [了]:

- (44) a. I tan tsi gu liang tsa tʃi. [伊打仔過兩只雞。]
 He kill tsi GU two CL chicken 'He has killed two chickens (before)'
tsi: [perfective + completive]
tsi + GU: [perfective + completive + stative]

- b. I tan tsi le liang tsa tʃi. [伊打仔存了兩只雞。]
 He kill tsi LE two CL chicken 'He has (already) killed two chickens'
tsi: [perfective + stative]
tsi + LE: [perfective + completive + stative]

According to the above, for V-PFV tsi to co-occur with a stative and a completive marker in (44a) and (44b) respectively, a split- Asp_{2-2} model is necessary to explain the opposing situation-type features instantiated in the combined aspectual expressions. Therefore, the aspectual ambivalent characteristics of the Shanghaiese tsi provide strong evidential support for our split- Asp_{2-2} proposal.

4.3.2. Cantonese V-PFV tsɔ

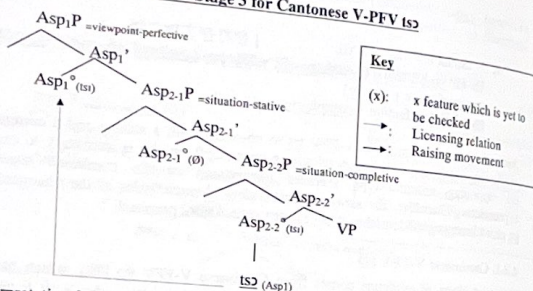
The next piece of evidence comes from Cantonese V-PFV tsɔ [咗], which has the same ambiguous aspectual properties as the Shanghaiese tsi – that is, it is able to instantiate both [perfective + completive] and [perfective + stative] features:

- (45) a. Ah-ma sek tsɔ fan [阿媽吃咗飯。]
 Mother eat tsɔ rice 'Mother has eaten her meal'
tsɔ: [perfective + completive]³⁷
- b. Ba-si ts'ɔ tsɔ sei gɔ nam yan [巴士坐咗四個男人。]
 Bus sit tsɔ four CL male person
 i. 'The bus is (now) seated with four men' tsɔ: [perfective + stative]
 ii. 'The bus is (already) seated with four men' tsɔ: [perfective + completive]

Again, to account for the simultaneous [completive/stative] situation-type aspects in tsɔ, a split Asp_{2-2} is needed to allow situation-stative (Asp_{2-1}°) as well as situation-completive (Asp_{2-2}°) feature-licensing in its early stages of grammaticalization. Thus, tsɔ can evolve to be re-analyzed and base-generated at Asp_{2-1}° or Asp_{2-2}° , acquiring two different forms as in (45a) and (45b). The final development stages can be illustrated in the same way as for the Shanghaiese tsi:

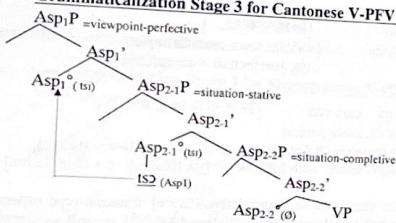
³⁷ The [+completive] feature in tsɔ is rather prominent, as (60a) cannot have the eating activity terminated by a following clause tan-hai mei sek yn 'but she has not finished':
 *Ah-ma sek tsɔ fan tan-hai mei sek yn. [阿媽吃咗飯，但是沒吃完。]

(46) a. Grammaticalization Stage 3 for Cantonese V-PFV *tsɔ*



Interpretation for (46a): [perfective + completive] (c.f. (45a), 45b-ii)

b. Grammaticalization Stage 3 for Cantonese V-PFV *tsɔ*



Interpretation for (46b): [perfective + stative] (c.f. (45b-i))

According to the above, if the Cantonese *tsɔ* is licensed in a split-Asp₂ model, it is also possible for it to co-occur with other situation-type aspectual markers like the stative *gɔ* [過] (similar to Mandarin *guo*, SMX *gue* and Shanghainese *gu*), just like the Shanghainese *tsɔ* does:

- (47) Ba-si tsɔ^o tsɔ sei gɔ nam yan gɔ [巴士坐咗四個男人過。]
 Bus sit *tsɔ* four CL male person *gɔ*
 'The bus has been seated with four men'
tsɔ: [perfective + completive]
tsɔ + *gɔ*: [perfective + stative + completive]

Therefore, we have observed that the Cantonese *tsɔ* behaves in the same way as the V-PFVs in Shanghainese and SMX, requiring a split Asp₂ to account for its grammaticalized ambivalent forms.

4.3.2. Mandarin *-le* and *-zhe*

The last piece of evidence comes from the evolutions of Mandarin progressive marker *-zhe* and V-PFV *-le*. According to Wang (1957, pp.406-408), in ancient Chinese both the verbal *-le* and *-zhe* had been sharing the same aspectual properties for a long time (until Yuan dynasty). In some cases, ancient Chinese *-zhe* could even be used like modern Mandarin *-le* to express completive meaning, as shown in (48).

- (48) a. Yang-zhi yin deng-hou wo le, [楊志因等候我了，
 Yang-zhi cause wait me LE 犯著這罪。]³⁸
 fan zhe zui.
 commit ZHE this crime
 'Yangzhi had committed this crime as he waited for me.' [+completive]
 *'Yang was committing this crime as he waited for me' * [+stative]
- b. Ruo bu shi shuo, bian sha-zhe ni [若不實說，便殺著你。]
 If not honest say then kill ZHE you
 'If you lie, I will have to kill you' [+completive]
 *'I am killing you if you lie' * [+stative]

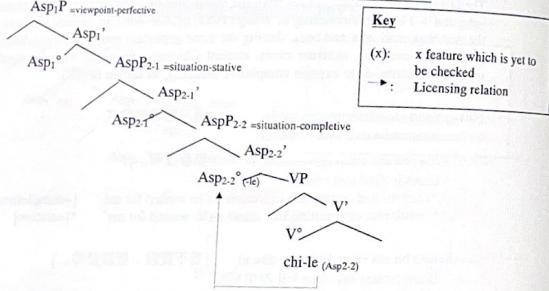
On the other hand, ancient Chinese verbal *-le* could be used to express activity, which is equivalent to modern Mandarin use of *-zhe*, as shown in (49) below:

- (49) Tai-hou zhi-le tian yue: nin cong wu er - [太后指了天曰：您從吾兒-
 Empress point-LE sky say: you from my son
 -qiu zuo tian-zi, he de huang shuo? 求做天子，何得慌說？]³⁹
 beg be emperor, why need lie say?
 'The Empress said while pointing at the sky ...' [+stative]
 *'The Empress pointed at the sky and said ...' * [+completive]

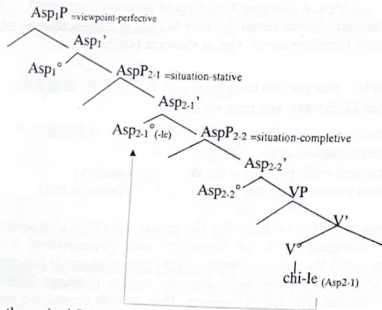
As shown above, we now have evidence that the ancient V-PFV *-le* also carried the [+stative] feature alongside with its frequently used [+completive] feature. Meanwhile, we can recall the earlier example in (21) *Hou-mian gen-le liang ge ren* 'There were two persons following me', where the modern Mandarin V-PFV *-le* displays the same "exceptional" stative meaning. Thus, in both ancient and modern Mandarin Chinese, the V-PFV *-le* are also able to instantiate two opposing situation-type features of [+completive] ~ [+stative] just like the Shanghainese *tsɔ*, Cantonese *tsɔ* and SMX *wu did*. Hence, the only way to account for this ambivalence in Mandarin *-le* is to have the split-Asp₂ model in its grammaticalization process:

³⁸ Both (59a) and (59b) are from *Xuanhe Yishi* 《宣和遺事》 'History of Xuanhe period'
³⁹ *Wudai Shi Ping-hua* 《五代史平話》 'Historical Stories of Wudai'

(50) a. (Revised) Grammaticalization Stage 1 for Mandarin V-PFV -le

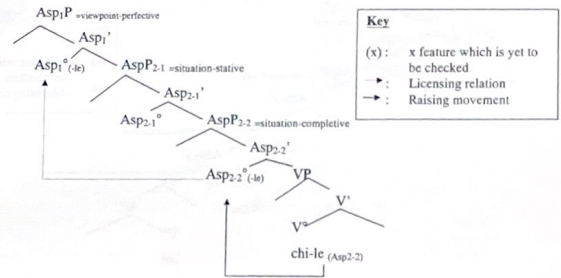


b. (Revised) Grammaticalization Stage 1 for Mandarin V-PFV -le

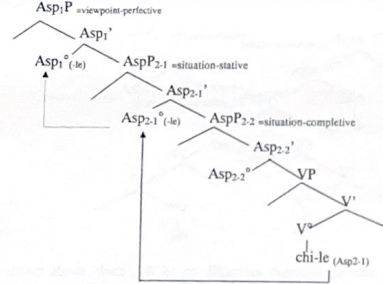


From the revised Stage 1 different licensing relations in (50a) and (50b), the Stage 2 and 3 grammaticalizing processes can be outlined in a similar way like we have done for SMX *wu* in §4.1:

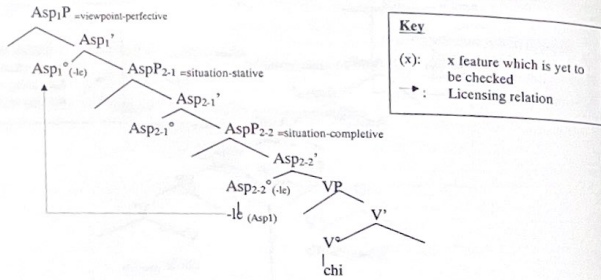
(51) a. (Revised) Grammaticalization Stage 2 (c.f. (50a)) for Mandarin V-PFV -le



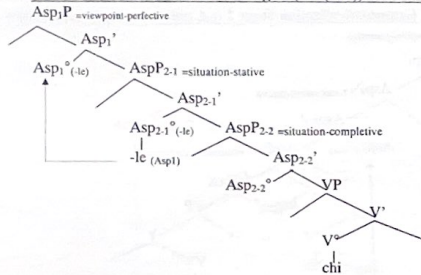
b. (Revised) Grammaticalization Stage 2 (c.f. (50b)) for Mandarin V-PFV -le



(52) a. (Revised) Grammaticalization Stage 3 (c.f. (51a)) for Mandarin V-PFV *-le*

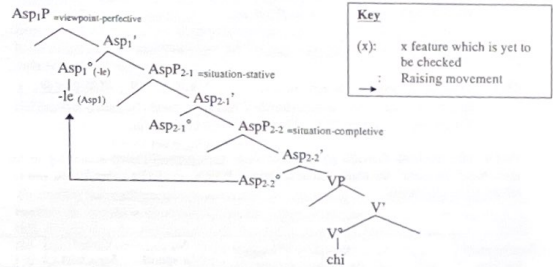


b. (Revised) Grammaticalization Stage 3 (c.f. (51b)) for Mandarin V-PFV *-le*

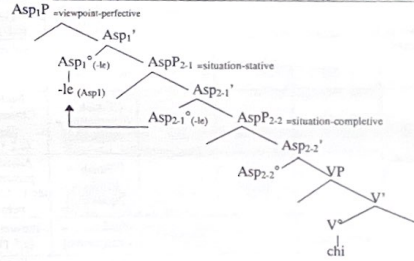


In fact, after the three basic stages of grammaticalization, it is conceivable to hypothesize a post-Stage 3 grammaticalization in which the aspectual *-le* of both (50-52a) and (50-52b) types are raised and base-generated in the same perfective-Asp1° head:

(53) a. Post-Stage 3 Grammaticalization (c.f. (52a)) for Mandarin V-PFV *-le*



b. Post-Stage 3 Grammaticalization (c.f. (52b)) for Mandarin V-PFV *-le*



As shown above, there will be no difference between the two grammaticalization paths in the post-Stage 3 of V-PFV *-le*, where it will be expected to instantiate solely [+perfective] feature. We can easily associate this post-Stage 3 *-le* with the general use of modern V-PFV *-le*. This most commonly used *-le* can be seen in (1b), (8) and many other examples in the previous sections in this paper. One prominent characteristic of this modern general *-le* is that it no longer expresses completive or stative situation-type aspect, as compared with the present R-*le* (c.f. (19)) and the stative *le* (c.f. (21)). The loss of [+completive] feature is more obvious between the previous examples (8a) and (8c) reproduced below:

- (8a) Lisi chi -le fan. [李四吃了飯。]
Lisi eat PFV rice 'Lisi ate his meal.'
(does not have to mean Lisi has finished his meal)
V-PFV -le: [+perfective] / *[perfective + completive]
- (8c) Lisi chi -le fan, keshi mei chi wan. [李四吃了飯，可是沒吃完。]
He eat-LE rice but not eat-finish 'Lisi ate his meal., but did not finish it'
V-PFV -le: [+perfective] / *[perfective + completive]

Hence, after revising through all the three-stage grammaticalization according to the split-Asp₂ proposal, the evolution of Mandarin P-PFV -le can be summarized and re-tabulated in (53) below:

(53)

Grammaticalization Stage	V ^o (Finish)	Asp _{2,2} ^o (Situation-Completive)	Asp _{2,1} ^o (Situation-Stative)	Asp ₁ ^o (Viewpoint-Perfective)	Verbal/Aspectual Features of V-PFV -le	Types of -le
Stage 1 (50a)	Base-Generated	Licensed	-	-	['Finish' + Completive]	Ancient *le (liao) (c.f. (14))
Stage 1 (50b)		-	Licensed	-	['Finish' + Stative]	Ancient *le (liao) (c.f. (49))
Stage 2 (51a)	Base-Generated	Raised	-	Licensed	['Finish' + Completive + Perfective]	Middle-Chinese *le (liao) (c.f. (16))
Stage 2 (51b)		-	Raised		Adjectival present -le (c.f. (54), see below)	
Stage 3 (52a)	-	Base-Generated	-	Licensed	[Perfective + Completive]	Present R-le (c.f. (19))
Stage 3 (52b)	-	-	Base-Generated	Licensed	[Perfective + Stative]	Present stative -le (c.f. (21))
Post-Stage 3 (53a), (53b)	-	-	-	Raised and Base-generated	[Perfective]	General present -le (c.f. (8))

Key: a = [6th - 9th Century] b = [10th - 15th Century]
c = General present -le refer to the form that is not used as R-le, present stative -le, or present adjectival -le

In (53), every basic (viz. before post-Stage 3) development stage of V-PFV -le contains at least the two simultaneous situation-type features of [+stative/completive], which explains why in ancient and modern Chinese V-PFV -le could possibly be used to express stative as well as completive aspects.

Firstly, the Stage 1 forms of -le in (50a) and (50b) correspond respectively with the two distinct uses of ancient Chinese le (liao) as discussed earlier in (14) and

(49). Secondly, the Stage 2 seems to have the complex combinations of ['finish' + completive + perfective] and ['finish' + stative + perfective] features, which can be instantiated by the appropriate forms of -le. The first combination can be easily represented by the Middle Chinese -le as shown previously in (16). However, the latter combination would require -le to express the situation-type stative aspect. This calls for an interesting example quoted from Li & Thompson (1989):

- (54) Ta pang-le yi-dian [他胖了一点。]
He fat LE one bit
i 'He's gotten a little fatter'
ii 'He's a little too fat'

To explain this ambiguous interpretation in (54), this type of adjectival -le has to first express the common viewpoint-perfective aspect contained in (i) and (ii). Meanwhile, this -le can also be associated with the stative aspect as both interpretations express the same resultant state of 'being fat'. The tricky part lies on the verbal feature ('finish') expected to be present in this adjectival -le, and southern⁴⁰ Mandarin speakers can be sought to solve this problem:

- (55) a. Lisi chi -liao fan. [李四吃了飯。]
Lisi eat le (liao) rice 'Lisi finish eating his meal.'/'Lisi ate his meal.'
- b. Lisi chi liao -le fan. [李四吃了了飯。]
Lisi eat le (liao)-PFV rice 'Lisi has eaten his meal.'
- c. *Lisi chi -liao fan, ke-shi mei chi wan. *[李四吃了了飯，可是沒吃完。]
Lisi eat le(liao) rice, but not eat-finish
- d. Ta pang-liao yi-dian [他胖了一点。]
He fat le(liao) one bit
i 'He's gotten a little fatter'
ii ?? 'He's a little too fat'

Notice that for the dialectal Mandarin speakers, V-le (liao) is possible in (55a, b) with the le (liao) meaning 'finish', which is equivalent to wan. Therefore, in (55a) chi-(le) liao means 'finish eating' rather than simply perfective 'ate', and this is attested further in (55b) V-le (liao)-le, where the first -liao (le) expresses a clear completion meaning. As a result, (55c) V-le (liao)-le cannot co-occur with the incomplete meaning clause: ke-shi mei chi wan. Hence, when the same speakers use the same le (liao) with the adjective 'fat' in (55d), the adjectival le (liao) must have retained its meaning of 'finish'. Thus, this explains why in (55d) the dynamic interpretation in (i) is allowed, but not the stative interpretation in (ii). In literal translation, le (liao) in (55d-i) implies that 'he has finished being a little fatter', as in 'he' is dynamically involved in the state transition from being 'less fat' to 'fatter'. However, (55d-ii)

⁴⁰ Many southern dialect (Min, Cantonese, Shanghaiese, Hakka etc.) speakers, who learn Mandarin as their first language since young, speak a variant brand of Mandarin as compared with that spoken by the Beijing native speakers.

cannot possibly mean 'he has finished being a little too fat', as it is less logical for someone to be dynamically involved in being a same state. Therefore, with this *le* (*liao*) from the southern speakers, I propose that the adjectival *-le* in (54) also has the similar [+finish]⁴¹ V^o feature as displayed in its interpretation in (54-i), and it has a less prominent⁴¹ verbal feature for its interpretation in (54-ii). Therefore, the Mandarin adjectival *-le* in (54-i) is observed to have all three features for the Stage 2 combination -- [finish' + stative + perfective], making it eligible to represent the Stage 2 *-le* in (51b).

Lastly, the Stage 3 (52b) form of V-PFV *-le* carrying the [perfective + stative] features can only be used to express only stative and not completive situation-type aspect, as we have seen earlier in (21):

- (21) a. Hou-mian gen -le san-ge ren. [后面跟了三个人。]
 Back follow LE three CL people 'There were three men following me'
 V-PFV *-le*: [perfective + stative]
 *[perfective + completive]
- b. Zhe-liang ba-shi zuo man -le ren. [这辆巴士坐满了人。]
 This CL bus sit full LE people 'This bus is fully seated'
 V-PFV *-le*: [perfective + stative]
 *[perfective + completive]

As for the Stage 3 (52a) form, its [perfective + completive] features can be associated with the modern V-PFV *R-le* used only with the restrictive 28-verb group, as it cannot be possibly used to express situation-type stative aspect. For example in (19), with the *R-le* in *mai-le* 'sold' and *wang-le* 'forgotten', both can never be interpreted as stative meanings of 'was being sold' or 'was being forgotten' in Mandarin:

- (19) a. Wo zongshi wang-le ta-de-mingzi. [我总是忘了他的名字。]
 I always forget-LE his-DE-name 'I always forget his name.'
 V-PFV *-le*: [perfective + completive]
 *[perfective + stative]
- b. Wo hai mei-you mai-le nei-liang-che. [我还没有卖了那辆車。]
 I still NEG sell-LE that-CL-car 'I still did not sell off that car.'
 V-PFV *-le*: [perfective + completive]
 *[perfective + stative]

As seen above, each of the two Stage 3 forms of *-le* resulted from our split-AspP₂ proposal actually acquires its own distinct aspectual role in modern Mandarin, which is proven in (19) and (21). Before that, I have also provided sufficient evidence to support the existence of the two separate pathways in its Stage 1 and 2 grammaticalizations. Hence, the argument is clear that the Mandarin V-PFV *-le*, like

⁴¹ This is characteristic of Stage 2 grammaticalization, where three projection features (VP: finish', AspP₂₋₁: stative and AspP₁: perfective) working together among the complex licensing relations. This is likely to result in a shift towards a variant interpretation when base-generated relation with V^o weakens in anticipation of the next stage grammaticalization.

Shanghaiese and Cantonese V-PFVs, also needs a split-AspP₂ structural model to account for its complex aspectuality.

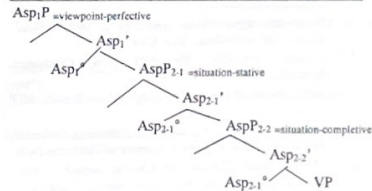
In summary, the V-PFV elements in Mandarin, SMX, Shanghaiese and Cantonese all require a split-AspP₂ in their grammaticalization structures. Henceforth, I propose that the split-AspP₂ structure is present in the grammaticalization processes of all Chinese V-PFV aspectual elements. In other words, every Chinese V-PFV in its Stage 1 grammaticalization will start to have two different licensing relations with Asp₂₋₁^o and Asp₂₋₂^o, so that they may develop the stative/completive situation-type aspects in their present forms, as we have seen in SMX *wu*, Shanghaiese *tsi*, Cantonese *tsz* and Mandarin *-le*.

5. Conclusion

In the structural analysis of grammaticalization in Mandarin V-PFV *-le*, I have adopted Wu's (2000) splitting-AspP and three-stage development proposal which argues for two types of AspP projections (AspP₁ [viewpoint] and AspP₂ [situation]) in which the aspectual features/interpretation of *-le* is licensed. Further diachronic evidence from ancient Chinese were provided to support Wu's Stage 1, 2 and 3 forms of V-PFV *-le*, as different uses of *-le* in the past and present are shown to contain various aspectual features, which suit the syntactic descriptions of its evolutionary stage forms.

However, when it comes to the Southern Xiamen dialect's V-PFV *wu*, I argued for another splitting in the lower AspP₂ to account for the ambiguous situation-type features in *wu*. The resultant structure will thus have AspP₂₋₁ and AspP₂₋₂, which can license situation-stative and situation-completive features respectively, as illustrated below:

Grammaticalization Syntactic Model for Chinese V-PFV



The above structure is significantly suggested to be "universal" among all Chinese V-PFV elements as SMX, Shanghaiese and Cantonese V-PFV markers all require the dual-licensing relations with AspP₂₋₁ and AspP₂₋₂ to account for their ambivalent completive/stative characteristics. Last but not least, the three-stage grammaticalization of Mandarin V-PFV *-le* was revised with this split-AspP₂ model, which now explains fully the occasional use of *-le* as a situation-stative aspectual marker.

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