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The morpho-syntax of aspect in Xiāng Chinese

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Chapter 3. V+ka⁴¹

3.1 Introduction

In chapter 2, I presented an analysis of *ta*²¹ in Chángshā. I pointed out that *ta*²¹ is multifunctional. It is a perfective marker in some cases, while in other cases it is a progressive marker. The two particles are distinguished in their structural positions.

In this chapter, I turn to another aspectual particle: *ka*⁴¹. The particle *ka*⁴¹ is interesting in that it often appears in combination with the perfective *ta*²¹, though it can be used alone in some circumstances; in some cases, it even is interchangeable with the perfective *ta*²¹. To illustrate the latter, here are three sentences, from Wǔ (1999:56):

- (1) a. shan²¹ u⁴¹ ηo⁴¹ mai⁴¹ ka⁴¹ xu³³ tɕiu²¹ fɛ¹³ k^hə⁴⁵ ta²¹.
 morning 1SG buy KA book then back go PERF
 'I went back home in the morning after I bought a book.'
- b. ηo⁴¹ lau²¹ ka⁴¹ xau⁴¹ to³³ ɕiau⁴⁵ fa²¹.
 1SG make KA many mistake
 'I made a lot of foolish mistakes.'
- c. tsan³³ san³³ mai⁴¹ ka⁴¹ san³³ pən⁴¹ xy³³.
 buy KA three CL book
 'Tsansan bought three books.'

We come back to these cases (i.e., sentences in which *ka*⁴¹ operates as an independent perfective marker) only at the very end of this chapter (section 3.8). In the rest of the chapter, we concentrate on *ka*⁴¹ in sentences in which it is not a perfective marker, e.g., in sentences in which it co-occurs with perfective marker *ta*²¹.

We look at this use of *ka*⁴¹ in three different contexts. First, there are cases in which the use of *ka*⁴¹ is non-optional, in that its omission causes either ungrammaticality or a difference in interpretation. For instance in *BA*-sentences, and in sentences with achievements and change-of-state predicates, *ka*⁴¹ is obligatory. Without *ka*⁴¹, the sentences will be ungrammatical (see (2)).

- (2) a. tsan³³ san³³ si⁴¹ { *ta²¹/*ka⁴¹/ka⁴¹ ta²¹ }.
 die PERF KA KA PERF
 'Tsansan died.'
- b. tsan³³ san³³ pa⁴¹ i³³fu ɕi⁴¹ { *ta²¹/*ka⁴¹/ka⁴¹ ta²¹ }.
 BA clothes wash PERF KA KA PERF
 'Tsansan has washed his clothes (finished).'
- c. xu²¹iə²⁴tsi uaj¹³ { *ta²¹/*ka⁴¹/ka⁴¹ ta²¹ }.
 leaf yellow PERF KA KA PERF
 'Leaves have turned yellow.'

There are also cases in which ka⁴¹ is optional: whether ka⁴¹ is used (or not) does not affect the grammaticality or interpretation of a sentence; this is illustrated in (3).

- (3) tsan³³ san³³ k^han⁴⁵ (ka⁴¹) ta²¹ san³³ pən⁴¹ xy³³.
 read KA PERF three CL book
 'Tsansan read three books.'

Finally, there are also cases, such as [V+bare/definite noun object] constructions, in which case with ka⁴¹, the sentence has only one reading, while without ka⁴¹, it has two; see (4).

- (4) a. tsan³³ san³³ ɕi⁴¹ ta²¹ i³³fu .
 wash PERF clothes
 'Tsansan washed the clothes (finished).'
 'Tsansan washed clothes (not finished).'
- b. tsan³³ san³³ ɕi⁴¹ ka⁴¹ ta²¹ i³³fu.
 wash KA PERF clothes
 'Tsansan washed the clothes (finished).'
- c. tsan³³ san³³ ɕi⁴¹ ka⁴¹ i³³fu ta²¹.
 wash KA clothes PERF
 'Tsansan washed the clothes (finished).'

These observations are significant for several reasons. First, in the previous literature, ka⁴¹ is treated as a perfective marker (see Cuī 1997, Lǐ 1991 and Wǔ 1991, 1999, 2005). However, this is not right; the data in (2) - (4) show that the use of ka⁴¹ is more complex.

Secondly, ka⁴¹ does not seem to have a counterpart in most other varieties of Chinese; in any case in Mandarin we don't see it; in sentences with achievements, the BA-construction or change-of-state predicates, no such element is needed in Mandarin.

Given the above considerations, I ask two questions in this chapter:

- a) What is the function and what is structural position of ka⁴¹?
- b) How can we explain the variation between Xiāng and other varieties of Chinese?

As I just said, in previous analyses (Cuī 1997, Lǐ 1991 and Wǔ 1999, among others), ka⁴¹ and ta²¹ are both treated as perfective particles. According to these analyses, the two differ only in their semantic interpretations or the different types of predicates they combine with. It is argued that ka⁴¹ only follows verbs that indicate *deletion, disappearance, consumption* etc., while ta²¹ does not have such restriction. It can, for instance, follow eventive predicates. ka⁴¹, these analyses say, always indicates the completion of an action, as opposed to ta²¹, which can also denote termination (as we also saw in chapter 2).

However, if we look closer, we see that the distribution and function of ka⁴¹ are far more complicated than what has previously been assumed. Rather than treating ka⁴¹ as a perfective marker, I will show that ka⁴¹ is an element that doubles an endpoint that is already present in an event. As we will explain, its function is to make the endpoint definitive and as such block the predicate which expresses the activity which leads up to the endpoint from undergoing any further syntactic operations.

The structure of this chapter is as follows. In section 3.2, I introduce the contexts in which ka⁴¹ is used and the interpretation of the sentences affected by the use of ka⁴¹. I divide the contexts in which ka⁴¹ is used into three types. In type one, ka⁴¹ is obligatory. In type two, ka⁴¹ is optional, but the interpretation of the sentences varies according to whether ka⁴¹ is used or not; in type three, ka⁴¹ is

optional without leading to differences in interpretation. In section 3.3, I introduce two previous analyses of ka^{41} , one of which argues that ka^{41} is a perfective marker; while the other argues that ka^{41} is an Extended Event Boundary marker. In section 3.4, I argue against the previous analyses, pointing out some new observations that the previous analyses cannot explain. In section 3.5, I present a reexamination of the semantic interpretation of ka^{41} . I point out that ka^{41} always appears in events where there already is an endpoint (or change of state). In some cases, the endpoint may be non-overt. As we will see, by adding ka^{41} , what happens is that the endpoint can no longer be lifted or be stripped off, it has become definitive. In section 3.6, I make a new proposal to account for the uses of ka^{41} . In section 3.7, I show that the proposed analysis can be used to account for the data presented in the beginning of the chapter. In section 3.8, I discuss the data in (1) and 3.9 is a summary of the chapter.

3.2 The data

In this section, I am going to provide a description of the syntactic distribution of ka^{41} and the interpretation of the sentences with ka^{41} . I start the description with the contexts in which ka^{41} is obligatory; the omission of ka^{41} will cause ungrammaticality. These contexts include achievements, the *BA*-construction, and change of state predicates. In these contexts, the endpoint of an event is inherent, but ka^{41} is still obligatory.

Then I move on to introduce two types of contexts in which ka^{41} is optional, in one of which the insertion/omission of ka^{41} will lead to difference in interpretation of the sentences; these include resultative constructions and accomplishments with quantized objects or postverbal durative/frequentative adverbials.

In the presentation of the data, ta^{21}_{PERF} occurs regularly. I use ta^{21} instead of ta^{21}_{PERF} for convenience in this chapter.

3.2.1 ka^{41} as obligatory

With achievements, in *BA*-sentences and with change-of-state predicates, ka^{41} is obligatory. In these three types of cases, ka^{41} must be there. The deletion of

ka⁴¹ will make the sentences ungrammatical. Note that for comparison, I will also point out that in the same cases in Mandarin, no such element is needed.

3.2.1.1 ka⁴¹ in achievements

With only a few exceptions, achievement verbs always co-occur with ka⁴¹. Let us first look at ka⁴¹ in achievements in the perfective. Sentences with an achievement in the perfective expressed by the perfective marker ta²¹, always contain ka⁴¹ as well. This is shown in (5).

- (5) a. t^ha³³ mən²¹ tsau⁴¹ tɕiu²¹ tau⁴¹ {ka⁴¹ ta²¹/*ka⁴¹/*ta²¹}.
 3PL early then arrive KA PERF
 'They have arrived long time ago.'
- b. ts^hə³³ tsi fan³³ {ka⁴¹ ta²¹/*ka⁴¹/*ta²¹}.
 car turn over KA PERF
 'The car turned over.'
- c. Tsansan xy³³ {ka⁴¹ ta²¹/*ka⁴¹/*ta²¹}.
 lose KA PERF
 'Tsansan lost (the game).'

The verbs tau⁴¹ 'arrive', fan³³ 'turn over' and xy³³ 'lose' are achievement predicates, and the sentences in (5) show that when presenting these events in the perfective, ka⁴¹ is obligatory, the perfective marker ta²¹ cannot do it alone.

Only in a few cases of achievements is ka⁴¹ optional. These cases include the verbs lai¹³ 'come' and tsou⁴¹ 'leave'. The interpretation of the sentences differs whether or not ka⁴¹ is used.

- (6) a. tsan³³ san³³ lai¹³ ta²¹.
 come PERF
 'Tsansan has come (he may be here or may no longer be here).'
- b. tsan³³ san³³ lai¹³ ka⁴¹ ta²¹.
 come KA PERF
 'Tsansan has come (he is here now).'

- (7) a. *tsan*³³ *san*³³ *lai*¹³ *ta*²¹, *iou*²¹ *tsou*⁴¹ *ka*⁴¹ *ta*²¹.
 come PERF again leave KA PERF
 'Tsansan has come, (but) he has left again.'
- b. **tsan*³³ *san*³³ *lai*¹³ *ka*⁴¹ *ta*²¹, *iou*²¹ *tsou*⁴¹ *ka*⁴¹ *ta*²¹.
 come KA PERF again leave KA PERF

*ka*⁴¹ is absent in (6a) - (7a) and present in (6b) and (7b). As shown in the translation, in both cases we focus on the realization (he has come), but in the sentence with *ka*⁴¹ there is focus on the resulting state: Tsansan has come here and he is here now. The endpoint is definitive. For instance, if only *ta*²¹ is used, the sentence can be followed by a clause indicating the consecutive action of leaving, (7a). However, this is not possible if *ka*⁴¹ is used, (7b). What's more, when there is no follow-up clause indicating the consecutive action, the sentence sounds more natural if *ka*⁴¹ is used. As mentioned, of all the achievement verbs, only *lai*¹³ 'come' and *tsou*⁴¹ 'leave' can appear in the perfective with *ta*²¹ alone. In all other cases, *ka*⁴¹ must be used.

Next we observe that in a sentence in which the achievement verb is embedded under a modal verb, *ka*⁴¹ is also desirable, if not obligatory.

- (8) a. *la*⁴⁵ *tsa*²⁴ *niau*⁴¹ *kan*⁴⁵ *ian*²¹ *tsi* *xui*²¹ *ɕi*⁴¹ *ka*⁴¹.
 DEM CL bird from.the.look.of.it will die KA
 'It seems that that bird is bound to die.'
- b. ?*la*⁴⁵ *tsa*²⁴ *niau*⁴¹ *kan*⁴⁵ *ian*²¹ *tsi* *xui*²¹ *ɕi*⁴¹.
 DEM CL bird from.the.look.of.it will die
 'It seems that that bird will die.'

- (9) a. *li*⁴¹ *tsai*⁴⁵ *uan*¹³ *tixua*²¹ *xui*²¹ *xy*³³ *ka*⁴¹.
 2SG again play if will lose KA
 'If you continue to play (cards) more, you are bound to (lose the game).'
- b. ?*li*⁴¹ *tsai*⁴⁵ *uan*¹³ *tixua*²¹ *xui*²¹ *xy*³³.
 2SG again play if will lose
 'If you continue to play more, you may lose (the game).'

In (8) - (9), the modal verb *xui*²¹ 'will' is used, embedding the achievement predicate, and *ka*⁴¹ is preferred. The sentences indicate that a possible change is sure to take place. Thus, in (8a), with *ka*⁴¹, the sentence means that the bird is sure to die. Note that without *ka*⁴¹, the sentence is marginally acceptable, and sounds a bit unnatural, which is marked by the question mark. The sentences without *ka*⁴¹ only indicate a possibility (if they are good at all). For instance, in (9b), the sentence just means that the bird may die. Note that in these cases, since these are not sentences in the perfective, *ta*²¹ cannot appear, as shown in (10) - (11).

(10) * *la*⁴⁵ *tʂa*²⁴ *niau*⁴¹ *kan*⁴⁵ *ian*²¹ *tsi* *xui*²¹ *ɕi*⁴¹ *ka*⁴¹ *ta*²¹.
 DEM CL bird from.the.look.of.it will die KA PERF

(11) **li*⁴¹ *tsai*⁴⁵ *uan*¹³ *tixua*²¹ *xui*²¹ *xy*³³ *ka*⁴¹ *ta*²¹.
 2SG again play if will lose KA PERF

In short, in achievements, *ka*⁴¹ is obligatory. In what follows I show that with change-of-state predicates, *ka*⁴¹ is also obligatory.

3.2.1.2 *ka*⁴¹ in stative predicates expressing change-of-state

In Mandarin, a change of state adjective predicate can be used with the perfective marker *le* producing a change of state reading; See (12).

- (12) a. *huā hóng le.*
 flower red PERF
 'The flowers have turned red.'
 b. *Zhāngsān shòu le.*
 thin PERF
 'Zhangsan has become thin.'

Different from Mandarin, in Chángshā in the same cases, for the sentence to have a change of state reading, *ka*⁴¹ is obligatory; the perfective marker *ta*²¹

cannot stand alone in such a sentence. (13a) - (13b) are the counterparts of (12a) - (12b).

- (13) a. xua³³ xɛn¹³ {ka⁴¹ ta²¹/*ka⁴¹/*ta²¹}.
 flower red KA PERF KA PERF
 'The flowers have turned red.'
- b. Tsan³³ san³³ sou⁴⁵ {ka⁴¹ ta²¹/*ka⁴¹/*ta²¹}.
 thin KA PERF KA PERF
 'Tsansan has become thin.'

The sentences in (13) show that *ka*⁴¹ and *ta*²¹ cannot appear on their own to indicate a change of state with stative predicates; if they appear together, the sentences are fine. In comparison with Mandarin, it seems that with stative predicates, *ka*⁴¹ and *ta*²¹ together do the job that *le* does in Mandarin on its own. I will come back to this observation later.

3.2.1.3 *ka*⁴¹ in BA-sentences

In a BA-sentence, *ka*⁴¹ is also obligatory. I have mentioned the BA-construction in chapter 1, now I will show briefly the use of *ka*⁴¹ in BA-sentences, but I will come back to a more detailed treatment of the BA-construction in section 3.5.2. As we saw in chapter 1, a BA-sentence is a sentence in which the direct object is placed immediately after the particle BA and before the verb (14b). The word order is SOV while the basic order in Chinese languages is SVO. Many sentences have a BA-counterpart, which do not have much difference in meaning. The difference between the two is mostly a matter of information structure. (15) - (16) illustrate the construction.

- (14) a. [S+V+O]
 b. [S + BA +O +V]
- (15) a. Zhāngsān xǐ le yīfu.
 wash PERF clothes
 'Zhangsan washed the clothes.'

- b. Zhāngsān bǎ yīfu xǐ le.
 BA clothes wash PERF
 'Zhangsan washed the clothes.'

- (16) a. Zhāngsān hē le shuǐ.
 drink PERF water
 'Zhangsan drank the water.'

- b. Zhāngsān bǎ shuǐ hē le.
 BA water drink PERF
 'Zhangsan drank the water.'

In (15b) - (16b), the *BA*-NPs *yīfu* 'clothes' and *shuǐ* 'water' are the logical object of the verb *xǐ* 'wash' and *hē* 'drink' respectively. Different from the cases in (15a) - (16a), where they follow the verbs, instead, in *BA*-sentences they are located before the verbs (15b) - (16b).

The *BA*-sentence has been widely discussed for Mandarin. The basic meaning of the construction is 'disposal', it means that 'someone has done something to somebody' (Wáng 1947). But I delay the introduction of the relevant discussion till section 3.5.2. What I focus on now is the use of *ka*⁴¹ in the Chángshā counterpart of the *BA*-construction. As can be seen above, in Mandarin, a *BA*-sentence can be presented in the perfective using the perfective marker *le*, as is the case in a non-*BA*-sentence. However, this is not the case for Chángshā. In Chángshā, to present a *BA*-construction in the perfective, *ka*⁴¹ is always needed.

What I observe is, as with achievements and change-of-state predicates, *ka*⁴¹ is obligatory in a *BA*-sentence. It is quite different from a non-*BA*-sentence. We compare a-sentences with b-sentences in (17) - (18). (I use "*BA*" to generalize over the object marker in such sentences in the different varieties of Chinese.)

- (17) a. ŋo⁴¹ ɕi⁴¹ (ka⁴¹) ta²¹ i³³fu³³.
 1SG wash KA PERF clothes
 Without *ka*⁴¹: 'I washed (the) clothes (not necessary finished).'
 With *ka*⁴¹: 'I washed the clothes (finished).'

- b. ηo^{41} pa^{41} $\text{i}^{33}\text{fu}^{33}$ ɕi^{41} $\{\text{ka}^{41}\text{ta}^{21}/*\text{ka}^{41}/*\text{ta}^{21}\}$.
 1SG BA clothes wash KA PERF
 ‘I washed the clothes (finished).’

- (18) a. ηo^{41} $\text{k}^{\text{h}}\text{an}^{41}$ (ka^{41}) ta^{21} la^{45} pən^{41} xu^{33} .
 1SG read KA PERF DEM CL book
 Without *ka*⁴¹: ‘I read (in) that book (not necessary finished).’
 OR: ‘I read that book (finished).’
 With *ka*⁴¹: ‘I read that book (finished).’
- b. ηo^{41} pa^{41} la^{45} pən^{41} xu^{33} $\text{k}^{\text{h}}\text{an}^{41}$ $\{\text{ka}^{41}\text{ta}^{21}/*\text{ka}^{41}/*\text{ta}^{21}\}$.
 1SG BA DEM CL book read KA PERF
 ‘I read that book (finished).’

In (17a) - (18a), *ka*⁴¹ is optional in the sense that its insertion or omission does not affect the grammaticality. But with *ka*⁴¹, the sentences get a completion reading, while without *ka*⁴¹, the sentences may indicate termination or completion (we will discuss sentences with bare NP objects in more detail below). In (17b) - (18b), on the other hand, *ka*⁴¹ is obligatory, and we see that the events are presented as having reached their final endpoint. More examples can be seen in (19) - (20).

- (19) a. $\text{t}^{\text{h}}\text{a}^{33}$ kuan^{33} (ka^{41}) ta^{13} $\text{tiən}^{45}\text{shi}^{41}$.
 3SG close KA PERF TV
 Without *ka*⁴¹: ‘He turned off the TV
 (may or may not have succeeded).’
 With *ka*⁴¹: ‘He turned off the TV (succeeded).’
- b. $\text{t}^{\text{h}}\text{a}^{33}$ pa^{41} $\text{tiən}^{45}\text{shi}^{41}$ kuan^{33} $\{\text{ka}^{41}\text{ta}^{13}/*\text{ka}^{41}/*\text{ta}^{21}\}$.
 3SG BA TV close KA PERF
 ‘He turned off the TV (succeeded).’

- (20) a. t^ha³³ sha²⁴ (ka⁴¹) ta²¹ la⁴⁵ lian⁴¹ ko⁴⁵ zen¹³.
 3SG kill KA PERF that two CL people
 Without ka⁴¹: 'He killed those two persons (they may or may not have died).'
- With ka⁴¹: 'He killed those two persons (definitely died).'
- b. t^ha³³ pa⁴¹ la⁴⁵ lian⁴¹ ko⁴⁵ zen¹³ sha²⁴ { ka⁴¹ ta²¹/*ka⁴¹/*ta²¹ } .
 3SG BA that two CL persons kill KA PERF
 'He killed those two persons (definitely died).'

The above shows that in Chángshā, ka⁴¹ is obligatory in the BA-sentences, and optional in non-BA-sentences. While in the same case in Mandarin BA-construction, there is no ka⁴¹ but the meaning is the same as in the Chángshā sentence with ka⁴¹.

The above sentences are in the perfective, with perfective marker ta²¹. Note that in non-perfective BA-sentences ka⁴¹ is still obligatory; this means that the presence of ka⁴¹ has nothing to do with the perfective. See (21).

- (21) a. t^ha³³ i²⁴ tein⁴⁵ mən¹³, tɕiu²¹ pa⁴¹ xai¹³ tsi t^ho²⁴ ka⁴¹.
 3SG as soon as enter door JIU BA shoes take off KA
 'He takes off his shoes as soon as he comes into the door.'
- b. uan⁴⁵ san²¹, li⁴¹ pa⁴¹ mən¹³ kuan³³ ka⁴¹.
 evening 2SG BA door close KA
 'Close the door in the evening.'

In (21a), the BA-sentence describes a habitual situation, (21b) is an imperative. In both cases, ka⁴¹ is obligatory.

To sum up, above, I have introduced different types of contexts in which ka⁴¹ is obligatory. First, with achievements, change-of-state predicates and in the BA-constructions (accomplishments in fact), ka⁴¹ is obligatory in the sense that its omission will cause ungrammaticality. Second, in other cases (the non-BA-counterparts of BA-sentences), the interpretation of a sentence varies depending on whether ka⁴¹ is used, which means that to get a certain meaning, it is obligatory. Without ka⁴¹, such sentences have two interpretations: either the action has been terminated or completed, while with ka⁴¹, there is only one

interpretation: the action has been completed or brought to a successful end. We will look at these and similar examples in more detail below, in section 3.2.3.

These circumstances in which *ka*⁴¹ is obligatory are important for me, since they will help me in the analysis of the function of *ka*⁴¹. But before I get to the analysis, I introduce another type of context, in which *ka*⁴¹ is really optional: the use of *ka*⁴¹ does not lead to differences in acceptability or interpretation. These contexts are resultative constructions, [V+numeral+object] sentences and [V+durative/frequentative+object] sentences. For comparison, I will also mention the corresponding sentences in Mandarin.

3.2.2 Optional *ka*⁴¹

3.2.2.1 *ka*⁴¹ in resultative constructions

A resultative construction contains two predicates, with the second one indicating the result of the action denoted by the first. We have seen this construction in chapter 1. For convenience, (22) is presented for illustration of the resultative construction in Mandarin.

- (22) a. wǒ xiě wán le zuòyè
 1SG write done PERF homework
 'I finished my homework.'
- b. Zhāngsān kū hóng le yǎnjīng.
 cry red PERF eyes
 'Zhangsan cried his eyes red.'

In (22), *wán* 'done' and *hóng* 'red' indicate the result of the action denoted by *xiě* 'write' and *kū* 'cry'. *le* marks the perfective. In Chángshā, in the same cases, *ta*²¹ instead of *le* can be used, and the sentences obtain a completion reading. However, what is interesting is that *ka*⁴¹ can also be added to such sentences. This is illustrated in (23).

- (23) a. ɲo⁴¹ eiə⁴¹ oŋ¹³ (ka⁴¹) ta²¹ tso²⁴ iə²⁴.
 1SG write done KA PERF homework
 'I finished my homework.'
- b. tsan³³ san³³ k^hu²⁴ xən¹³ (ka⁴¹) ta²¹ ɲiä⁴¹ jin³³.
 cry red KA PERF eyes
 'Tsansan cried his eyes red.'

In (23a) - (23b), *ka*⁴¹ can be used but it is optional, although it must be noted that the use of *ka*⁴¹ makes the sentence sound more natural and that there is a subtle difference in the interpretation depending on whether *ka*⁴¹ is used. In sentences with *ka*⁴¹, the change of state meaning is more prominent, more definitive. More examples can be seen in (24).

- (24) a. tsuo²⁴ uan⁴¹ shan⁴¹ ɲo⁴¹ pəi²¹ lei¹³ shən³³ xə²⁴ ɸin⁴¹ (ka⁴¹) ta²¹.
 last night 1SG BEI thunder scare awake KA PERF
 'I was scared awake by the thunder last night.'
- b. tsi²⁴ lian⁴¹ ti¹³ kao³³ (ka⁴¹) ta²¹.
 quality raise high KA PERF
 'The quality has been improved.'
- c. tsan³³ san³³ pəi²¹ tən⁴⁵ tis kuan⁴¹ tao⁴¹ (ka⁴¹) ta²¹.
 BEI bench stumble fall KA PERF
 'Tsansan stumbled over the bench.'
- d. tsan³³ san³³ tɛ^hia²⁴ tsɛ⁴⁵ (ka⁴¹) ta²¹.
 drink drunk KA PERF
 'Tsansan got drunk.'

In (24), we see that we can add *ka*⁴¹ to the sentences that already have a result denoting element. As noted, *ka*⁴¹ is optional but with it, these sentences sound more natural. We can interpret this and say that *ka*⁴¹ is preferred.

3.2.2.2 *ka*⁴¹ with [V+quantized+object]

*ka*⁴¹ is also optional in sentences with [V+numeral+objects] and [V+durative/frequentative +objects].

- (25) tsan³³san³³ k^han⁴⁵ (ka⁴¹) ta²¹ san³³pən⁴¹ xy³³.
 read KA PERF three CL book
 'Tsansan has read three books (finished the books).'
- (26) tsan³³san³³ iou¹³ (ka⁴¹) ta²¹ san³³ ko⁴¹ çiao⁴¹si¹³ iun⁴¹.
 swim_v KA PERF three CL hour swim_N
 'Tsansan has swum for three hours (he has stopped now).'
- (27) tsan³³san³³ k^han⁴⁵ (ka⁴¹) ta²¹ san³³ ko⁴⁵ çiao⁴¹si¹³ xy³³.
 read KA PERF three CL hours book
 'Tsansan has read for three hours (he has stopped now).'
- (28) tsan³³san³³ k^han⁴⁵ (ka⁴¹) ta²¹ san³³ts^h1⁴⁵ ko²⁴ pu²¹ tian⁴⁵ in⁴¹.
 watch KA PERF three times DEM CL movie
 'Tsansan watched this movie three times.'

In (25), the object is quantized (we already saw such sentences in chapter 2), in (26) - (27), a durative phrase *san³³ko⁴⁵çiao⁴¹si¹³* 'three hours' is used to modify the duration of the actions and in (28), a frequentative adverb is used. In all these cases, the insertion/omission of *ka⁴¹* does not lead to any difference in interpretation.

3.2.3 Omission/insertion of *ka⁴¹* leads to different meaning

When we discussed the *BA*-sentences, we saw that the non-*BA*-counterparts of these are ambiguous and that they are disambiguated when *ka⁴¹* is inserted. We look at some more examples here.

3.2.3.1 ka⁴¹ with [V+bare noun object]

In [V+bare noun object] sentences, the use of ka⁴¹ will lead to a difference in the interpretation; we saw an example in (4), repeated as (31); and here are two more examples:

- (29) a. tsan³³ san³³ iou¹³ ka⁴¹ iun⁴¹ ta²¹.
 swim_V KA swim_N PERF

'Tsansan did a swim.'

- b. tsansan³³ iou¹³ ka⁴¹ ta²¹ iun⁴¹.
 swim_V KA PERF swim_N

'Tsansan did a swim.'

- c. tsansan³³ iou¹³ ta²¹ iun⁴¹.
 swim_V PERF swim_N

'Tsansan did a swim.'

OR: 'Tsan swam.'

- (30) a. ŋo⁴¹ p^hao⁴¹ ka⁴¹ pu²¹ ta²¹.
 1SG run KA step PERF

'I did a run.'

- b. ŋo⁴¹ p^hao⁴¹ ka⁴¹ ta²¹ pu²¹.
 1SG run KA PERF step

'I did a run.'

- c. ŋo⁴¹ p^hao⁴¹ ta²¹ pu²¹.
 1SG run PERF step

'I did a run.'

OR: 'I ran.'

- (31) a. tsan³³ san³³ ei⁴¹ ka⁴¹ ta²¹ i³³fu.
 wash KA PERF clothes

'Tsansan washed the clothes (finished).'

- b. tsan³³ san³³ ei⁴¹ ka⁴¹ i³³fu ta²¹.
 wash KA clothes PERF

'Tsansan washed the clothes (finished).'

c. tsan³³ san³³ ɕi⁴¹ ta²¹ i³³ fu .
 wash PERF clothes

'Tsansan washed the clothes (finished).'

OR: 'Tsansan washed clothes (not finished).'

As we already briefly noticed above (see (17a)), in sentences with a bare noun phrase object, sentences without *ka*⁴¹ may have two readings, completion or termination, but if *ka*⁴¹ is used, there is only one reading, completion. In these sentences, when we have the completion reading, we talk about a predetermined stretch that we would swim or run, or a definite set of clothes to wash. The point of these sentences is that with *ka*⁴¹ there is only one interpretation: the event is presented as having an endpoint, without *ka*⁴¹, the sentence may have two readings.

3.2.3.2 *ka*⁴¹ with [V+definite noun object] (i.e., with a demonstrative)

That the use of *ka*⁴¹ can affect the interpretation of a sentence can also be seen in [V+ definite noun object] accomplishments; we looked at some examples above (e.g., (18a)). Here are the details. Note that with “definite phrase” I refer to an NP which contains a demonstrative.

(32) a. tsan³³ san³³ k^han⁴⁵ ta²¹ la⁴⁵ pən⁴¹ xy³³.
 read PERF that CL book

'Tsansan read in that book (not necessary finished the book).'

OR: 'Tsansan read that book (finished it).'

b. tsan³³ san³³ k^han⁴⁵ ka⁴¹ ta²¹ la⁴⁵ pən⁴¹ xy³³.
 read KA PERF that CL book

'Tsansan read that book (finished it).'

In (32a), the object noun contains a demonstrative, *ta*²¹ is used, and the sentence gets two interpretations. However, if *ka*⁴¹ is used, there is only one interpretation left, (32b). One more example is given in (33).

- (33) a. tsan³³san³³ sha²⁴ ta²¹ la⁴⁵ ko⁴⁵ zən¹³.
 kill PERF that CL person
 'Tsansan killed that person (that person may or may not have died).'
- b. tsan³³san³³ sha²⁴ ka⁴¹ ta²¹ la⁴⁵ ko⁴⁵ zən¹³.
 kill KA PERF that CL person
 'Tsansan killed that person (the person died).'

Note further that in accomplishments embedded under a modal verb, we can make the same observation.

- (34) tsan³³san³³ ɕian⁴¹ k^han⁴⁵ (ka⁴¹) la⁴⁵ pən⁴¹ xy³³.
 want read KA that CL book
 With *ka*⁴¹: 'Tsansan wanted to read (and finish) that book.'
 Without *ka*⁴¹: 'Tsansan wanted to read (in) that book.'
- (35) tsan³³san³³ ɕian⁴¹ sa²⁴ ka⁴¹ la⁴⁵ ko⁴⁵ zən¹³.
 want kill KA that CL person
 'Tsansan wants to kill that person.'

The sentences in (34) - (35) show that in sentences with a modal verb, *ka*⁴¹ can be used in combination with accomplishments involving a definite noun phrase object. These sentences have an endpoint reading. For instance, in (34), with *ka*⁴¹, the subject wants to read the whole book, and in (35), with *ka*⁴¹, the subject wants to really kill that person. Here are some more examples, with *k^ho⁴¹i⁴¹* 'can' instead of *ɕian*⁴¹ 'want'.

- (36) tsan³³san³³ k^ho⁴¹i⁴¹ k^han⁴⁵ ka⁴¹ la⁴⁵ pən⁴¹ xy³³.
 can read KA that CL book
 'Tsansan can read (and finish) that book.'
- (37) tsan³³san³³ k^ho⁴¹i⁴¹ sha²⁴ ka⁴¹ la⁴⁵ ko⁴⁵ zən¹³.
 can kill KA that CL person
 'Tsansan can kill that person.'

3.2.4 Summary

To sum up, I have shown above three type of contexts in which ka^{41} is used. In type one, ka^{41} is obligatory. The deletion of ka^{41} will make the sentence ungrammatical. These contexts involve achievements, the *BA*-construction and change-of-state predicates. In type two, I pointed out that in accomplishments with a resultative and those with a quantized objects or with postverbal durative/frequentative adverbials, ka^{41} is optional without leading to a difference in the interpretation of the sentences. In type three, ka^{41} is optional, but the interpretation of the sentence will vary depending on whether ka^{41} is used or not. These contexts include VPs containing bare noun objects or noun objects with a demonstrative. As to such sentences with ka^{41} , they have only one reading, without ka^{41} , they may have two readings. For convenience, the distribution and interpretation of sentences with ka^{41} is presented in (38).

(38)

(i) ka^{41} as obligatory

With achievements, the *BA*-construction, change-of-state predicates

- a. without ka^{41} → ungrammatical
- b. with ka^{41} → completion

(ii) ka^{41} as optional without variation in interpretation

A. with a quantized noun object

- a. without ka^{41} → completion
- b. with ka^{41} → completion

B. with resultative constructions

- a. without ka^{41} → completion
- b. with ka^{41} → completion

(iii) ka^{41} as optional with variation of the interpretation of the sentences

A. with a bare noun object

- a. without ka^{41} → termination or completion
- b. with ka^{41} → completion

B. with a definite noun object (DEM-N)

- a. without ka^{41} → termination or completion
- b. with ka^{41} → completion

As can be seen in (38), sentences with *ka*⁴¹ invariably have a completion reading, and sentences without *ka*⁴¹, have either termination or completion reading.

The goal of this chapter is to answer the questions: What is the function of *ka*⁴¹ and what is its structural position? Before answering these questions, I introduce two approaches to the use of *ka*⁴¹ in the literature.

3.3 Overview of the existing literature

As mentioned before, for a long time, *ka*⁴¹ was treated as a perfective marker. Only recently, it has been noticed that further consideration is required to account for the use of *ka*⁴¹. In this section, I first introduce two previous approaches and then point out some facts that these two approaches fail to account for.

3.3.1 *ka*⁴¹ as a perfective marker

In works dealing with Xiāng grammar, it is widely assumed that *ka*⁴¹ is a perfective marker. For instance, Lǐ points out that “*ka*⁴¹ is equivalent to *le* in Mandarin, and *le* is supposed to be a perfective marker” (Lǐ, 1991:549). Zhōu (1998) makes a similar claim: “Corresponding to the perfective *le* in Mandarin, the perfective is encoded by the marker *ka*⁴¹ in Xiāng, which is used to signify the completion of the action/activity before another event or time, regardless of the deictical time frames (the past, the present, or the future)” (Zhōu 1998:11). Other authors, such as Cūī (1996) and Lú (2007), also claim that *ka*⁴¹ is a perfective marker. Wǔ (1991, 1994, and 1999) has carried out a comprehensive investigation into the aspectual system of Xiāng. When it comes to *ka*⁴¹, she holds that “... *ka*⁴¹ is a perfective marker occurring immediately after a verb indicating potential result ...or completion in the structure [V+ *ka*⁴¹ +Q⁴+ (MOD⁵)] and [V₁+ ASP+ (Q/NP) +V₂]”⁶ (Wǔ 1999:55). To be more specific,

⁴ Q indicates objects containing a numeral.

⁵ MOD refers to mood particle used to express affirmation, question or exclamative mood.

in Wǔ (1999), the structure [V+ ka⁴¹ +Q+ (MOD)] refers to those structures describing accomplishments that contain quantized objects. Wǔ does not explain what a potential result is. I take it to refer to the constructions that describe telic events including resultatives. For instance, in (39), ka⁴¹ indicates the potential result, in (40) (which we already saw in (1)), ka⁴¹ indicates the completion of the action. (39) - (40) are taken from Wǔ (1999:56).

- (39) a. kən⁴¹tin⁴⁵ xui²¹ p^hao⁴¹ ka⁴¹.
 be sure will run KA
 'I am sure (it) will run away.'
- b. tsan³³san³³ xai¹³ shə⁴¹pu⁴⁵tə tiu³³ ka⁴¹.
 still NEG want throw KA
 'Tsansan still does not want to throw it away.'
- (40) a. shan²¹u⁴¹ŋo⁴¹ mai⁴¹ ka⁴¹ xu³³ tɕiu²¹ fe¹³ k^hə⁴⁵ ta²¹.
 morning 1SG buy KA book then come back PERF
 'I went back home in the morning after I bought a book.'
- b. ŋo⁴¹ lau²¹ ka⁴¹ xau⁴¹to³³ ɕiau⁴⁵fa²¹.
 1SG make KA many mistake
 'I made a lot of foolish mistakes.'

Wǔ further points out that ka⁴¹ differs from ta²¹ in that ka⁴¹ follows a verb indicating *deletion*, *destruction*, or *consumption*, and it requires that the object contains a numeral.⁷

- (41) a. tsan³³san³³ mai⁴¹ ka⁴¹ san³³ pən⁴¹ xy³³.
 buy KA three CL book
 'Tsansan bought three books.'

⁶ Note that according to Wǔ (1999), ka⁴¹ developed from the verb ɕie⁴¹ meaning 'disappear', 'delete' etc., while ta²¹ developed from the verb te²¹ that means 'achieve'. In chapter 4 below, I will argue that this is in fact not the case.

⁷ Please note that sentences like the ones in (42) and (43) were not presented in the overview of the data above except that they were mentioned at the very beginning (example (1)). I will discuss them in section 3.8. The same holds for the examples in (46)-(47).

- b. *tsan³³ san³³ mai⁴¹ ka⁴¹ xy³³.
 buy KA book

Intended: 'tsansan bought some books.'

(41a) is grammatical, while (41b) is not. According to Wǔ, the ungrammaticality of (41b) lies in the fact that the object in it does not contain a numeral.

I will discuss Wǔ's approach shortly.

3.3.2 ka⁴¹ as an "Extended Event Boundary" marker

Shěn (1995) observes that a numeral phrase can affect the grammaticality of a sentence (see also Lù 1988). For instance, the following a-sentences are ungrammatical; however, if the object contains a numeral, the ungrammaticality disappears (see b-sentences) (from Shěn 1995:371). These sentences are in Mandarin. They are relevant to my analysis in the sense that boundedness in the sentences affects their grammaticality.

- (42) a. *ch éng wǎn lǐ yú
 put bowl in fish
 b. ch éng wǎn lǐ liǎng ti áo yú
 put bowl in two CL fish
 '(He) put two fish into the bowl.'
- (43) a. *s òng xu éxi ào yóuhu à
 send school painting
 b. s òng xu éxi ào yī fù yóuhu à
 send school one CL painting
 '(He) sent a painting to the school.'

- (44) a. *chī le píngguǒ.
 eat PERF apple
 b. chī le yī ge píngguǒ.
 eat PERF one CL apple
 '(He) ate an apple.'

To explain these facts, Shěn first claims that there is a distinction between boundedness vs unboundedness in human cognition. Objects can show distinction between boundedness and unboundedness in space. This is also the case for events, for which the boundary refers to the temporal structure. For instance, *a chair* will take a certain space with its own boundary, while other objects like *water* do not show such features. Similarly, an action takes some time. An action with both starting and endpoint is bounded, while one without an endpoint is unbounded. For instance, *I ran to school* is bounded; while *I miss my family very much* is unbounded.

This contrast between boundedness and unboundedness in human cognition reflects itself in grammatical structure (Shěn 1995:369). For instance, nouns with numeral, definite articles or proper names are bounded, while others like mass nouns and bare nouns are unbounded. Actions with an inherent endpoint are bounded, and those without are unbounded.

Still, the boundedness of objects corresponds to the boundedness of events (Shěn 1995:373). A bounded object is compatible with a bounded event, and vice versa, a bounded event can only be compatible with bounded objects. In Shěn's analysis, verbs are divided into simple action verbs and eventive verbs. For instance, *wash*, *read*, *watch* etc. are simple action verbs; *verb+resultative complement*, *verb+direction* etc. are eventive predicate.

Shěn (1995) claims that the observed influence of [numeral+classifier] on a grammatical structure in (42) - (44) is in fact the indication of the boundedness vs unboundedness distinction in human cognition in grammatical structure. According to him the ungrammaticality of the sentences in (42a) - (44a) can be accounted for: in these sentences, the boundedness of the objects is incompatible with the eventive predicates. The incompatibility between the verb and the object leads to the ungrammaticality. Note that in his analysis,

[*verb+resultative*], [*complement, verb+tendency verb*] and [*verbal +le*] are eventive predicates, which are bounded themselves (Shěn 1995:371).

Following this notion of boundedness, Lǚ (2010) suggests that ka^{41} should not be treated as a perfective marker; rather it can be seen as an Extended Event Boundary marker. The main function of ka^{41} is to indicate that an event has been made bounded. Whenever ka^{41} appears, it indicates that the event is one with a boundary (see (45)).

- (45) a. $tsan^{33}san^{33} k^h an^{45} ta^{21} xy^{33}$.
 read PERF book
 'Tsansan read in the book.'
- b. $tsan^{33}san^{33} k^h an^{45} ka^{41} ta^{21} xy^{33}$.
 read KA PERF book
 'Tsansan read the book (finished).'
- c. $tsan^{33}san^{33} k^h an^{45} ka^{41} ta^{21} san^{33} pən^{41} xy^{33}$.
 read KA PERF three CL book
 'Tsansan read three books (finished).'

In (45a), the event is unbounded and the action is interpreted as being terminated, while in (45b), ka^{41} is added, and the event is bounded and the action is interpreted as being completed. In (45c), the object contains a numeral, the event is bounded, ka^{41} can still appear. In this analysis, ka^{41} functions the same as the numeral in an object, they both make an event bounded. In this sense, ka^{41} is seen as an event boundary marker.

Yet different from Shěn, Lǚ uses the notion of boundedness in a more generalized sense by proposing that the notion Extended Event Boundary refers not only to a temporal boundary of an event, but also to elements that are used to specify the degree/measurement of an event. The main reason is that the information provided by these elements also plays the role of what Shěn calls an event boundary, an endpoint. The elements that can help provide an event with a boundary include durative expressions, verbal classifiers etc. The point is that whenever these elements appear, ka^{41} can also appear. See (46) - (47).

- (46) a. tsan³³ san³³ k^han⁴¹ ka⁴¹ Li⁴¹ si⁴¹ i²⁴ ŋan⁴¹.
 look KA one eye

'Tsansan had a look at Lisi.'

- b. *tsan³³ san³³ k^han⁴¹ ka⁴¹ Li⁴¹ si⁴¹.
 look KA

- c. tsan³³ san³³ k^han⁴¹ ta⁴¹ Li⁴¹ si⁴¹.
 look PERF

'Tsansan looked at Lisi.'

- (47) a. tsan³³ san³³ p^hao⁴¹ ka⁴¹ san³³ ko³³ çiao⁴¹ si²⁴.
 run KA three CL hour

'Tsansan has run for three hours.'

- b. *tsan³³ san³³ p^hao⁴¹ ka⁴¹ pu²¹.
 run KA step

- c. tsan³³ san³³ p^hao⁴¹ ta²¹ pu²¹.
 run PERF step

'Tsansan ran.'

In (46a), the verb *k^han⁴¹* 'look' is an activity predicate and the sentence contains a verbal classifier *i²⁴ ŋan⁴¹* 'one eye'. However if we delete the verbal classifier, the sentence is ungrammatical (47b). The verbal classifier provides a boundary for the event: the event comes to an end after Tsansan had a look at Lisi. Without the verbal classifier, *ka⁴¹* is not acceptable. Note that in the same circumstance, *ta²¹* is acceptable. Similarly, if we leave out the durative adverbial *san³³ ko³³ çiao⁴¹ si²⁴* 'three hours' in (47b), the sentence becomes ungrammatical. In Lü's analysis, the verbal classifier *i²⁴ ŋan⁴¹* 'one eye' (46a) and the durative phrase *san³³ ko³³ çiao⁴¹ si²⁴* 'three hours' (47a) are used to specify a boundary for the events. The use of *ka⁴¹* in the above can be accounted for using the notion of Extended Event Boundary in the general sense. *ka⁴¹* in these cases is only used to mark these boundaries in an abstract sense.

comparison with *ka*⁴¹, *ta*²¹ tends to be used with verbs which have an underlying meaning of *to obtain*, *to gain*. Compare (49a) and (49b), taken from Wü (1999:57).

- (49) a. tsan³³ san³³ mai⁴¹ ka⁴¹ san³³ kən³³ tɕin³³ pin¹³ ko⁴¹.
 buy PERF three kilo apple
 'Tsansan bought three kilos of apples.'
- b. tsan³³ san³³ k^han⁴¹ ta⁴¹ san³³ pən⁴¹ xu³³.
 read PERF three CL book
 'Tsansan read three books.'

According to Wü (1999), the verb in (49a) has a meaning of consumption, hence *ka*⁴¹ is acceptable in the sentence as a perfective marker. The sentence indicates that Tsansan has completed the action of buying apples. However, it is not clear in what sense buying is a case of *consumption*. In (49b), the verb is *k^han*⁴¹ 'read', and *ta*²¹ is used. However too, Wü does not explain the relation between the action of *k^han*⁴¹ 'read' and the sense of 'obtain'.

Hence it can be seen that Wü's generalization that the verbs that *ka*⁴¹ attaches to are those indicating *deletion*, *destruction* and *consumption* is not entirely correct. Furthermore, I observe that *ka*⁴¹ and *ta*²¹ are sometimes interchangeable (only when the object contains a numeral, see (49)); both *ka*⁴¹ and *ta*²¹ can be used and there is no difference in interpretation, although my informants report that *ka*⁴¹ sounds more natural than *ta*²¹ in such cases, regardless of the nature of the verb. The semantics of a verb does not play a big role in distinguishing *ka*⁴¹ from *ta*²¹. What's more, I observe that the verb in (50) can hardly be said to be related to the meaning of *deletion* or *destruction*.

- (50) t^ha³³ u²⁴li t^hɕi⁴¹ {ka⁴¹/ta²¹} i²¹ tən⁴⁵ fan²⁴tsi²¹.
 3SG family built KA PERF one CL house
 'He has built a house.'

*ka*⁴¹ in (50) follows the verb *t^hɕi*⁴¹ 'to build'. Obviously, the verb does not have the meaning of *deletion* nor *disappearance*. On the contrary, it indicates the

appearance of something new. So the claim that the use of *ka*⁴¹ is related to the semantic properties of the verbs does not seem to be correct.

Wǔ's observation is correct in the sense that *ka*⁴¹ does, in some cases, express the meaning of completion. However, this should not be seen as a reason for treating *ka*⁴¹ as a perfective marker. See (51):

- (51) a. tsan³³ san tɕ^hia²⁴ (*ka⁴¹) pin¹³ko⁴¹.
 eat KA apple
 Intended: 'Tsansan ate apple(s).'
- b. tsan³³ san tɕ^hia²⁴ {ta²¹/ *ka⁴¹} la⁴⁵ tsa³⁴ pin¹³ko⁴¹.
 eat PERF/ KA that CL apple
 'Tsansan ate that apple.'
 'Tsansan finished that apple.'
- c. tsan³³ san tɕ^hia²⁴ ka⁴¹ pin¹³ko⁴¹ ta²¹.
 eat KA apple PERF
 'Tsansan has finished eating the apple(s).'

In (51a) - (51b) the same verb is used and in (51a) the object is a bare noun, and in (51b) the object contains a demonstrative. In these two sentences, *ka*⁴¹ cannot be used. So if *ka*⁴¹ is a perfective marker, it is not clear why (51a) - (51b) with *ka*⁴¹ are ungrammatical, especially because we have a verb with the meaning of consumption, so it is the right type of verb according to Wǔ's criteria. Wǔ (1999) points out that *ka*⁴¹ is a perfective marker indicating the completion of an action, under the condition that the sentence must have a quantized object. That would, however, make *ka*⁴¹ a very special aspect marker, if it is sensitive to the nature of the object. Smith (1997) points out that generally any eventive predicates can be presented in the perfective, and (51b) shows that this sentence is not an exception: with *ta*²¹ it is grammatical. We may assume that *ka*⁴¹ is a special perfective marker. But that will be too ad hoc.

Similarly, a sentence like (52a) can be made grammatical by adding the adverb *ts^hai¹³* 'just'.

- (52) a. *tsan³³ san³³ mai⁴¹ ka⁴¹ pin¹³ ko⁴¹.
 buy KA apple
 b. tsan³³ san³³ ts^hai¹³ mai⁴¹ ka⁴¹ pin¹³ ko⁴¹.
 just buy KA apple
 'Tsansan has just bought (some) apples.'

ka⁴¹ in (52a) is unacceptable, but it is acceptable in (52b). The only difference between the two sentences is that in the latter, the adverb ts^hai¹³ 'just' has been added. The examples in (51) - (52) show that ka⁴¹ is sensitive not only to the properties of the object but also to other things, such as the presence of ta²¹ or the adverb ts^hai¹³ 'just'. So treating ka⁴¹ as a perfective marker just as ta²¹ requires further consideration. (As mentioned, I return to these sentences in section 3.8.)

In what follows I present some further observations that show that ka⁴¹ should not be treated in the same way as ta²¹, a perfective marker.

The first observation is related to one of the prominent properties of Chángshā. That is, as we have discussed at length above, in achievements (53), change-of-state predicates (54) and in BA-sentences (55) in the perfective, ka⁴¹ and ta²¹ are both required to appear. We saw many examples already; here are some more:

- (53) a. *tsan³³ san³³ tau⁴¹ ka⁴¹/ ta²¹.
 arrive KA PERF
 b. tsan³³ san³³ tau⁴¹ ka⁴¹ ta²¹.
 arrive KA PERF
 'Tsansan has arrived.'

- (54) a. *t^hian³³ tɕi⁴¹ lən⁴¹ ka⁴¹/ ta²¹.
 weather cold KA / PERF
 b. t^hian³³ tɕi⁴¹ lən⁴¹ ka⁴¹ ta²¹.
 weather cold KA PERF
 'It turned cold.'

- (55) a. *ŋo⁴¹ pa⁴¹ i³³fu ɕi⁴¹ ka⁴¹/ta²¹.
 1SG BA clothes wash KA / PERF
 b. ŋo⁴¹ pa⁴¹ i³³fu ɕi⁴¹ ka⁴¹ ta²¹.
 1SG BA clothes wash KA PERF
 'I have washed the clothes.'

In these sentences, both *ka*⁴¹ and *ta*²¹ are obligatory, which is unexpected if *ka*⁴¹ and *ta*²¹ are both perfective markers.

My second observation is related to negative sentences. As we already saw in the previous chapter, in Chángshā, the negative particle *mau*²¹ is like the negative marker *mǎ* (*yǒu*) 'not (have)' in Mandarin, in which capacity it never co-occurs with perfective marker *ta*²¹ (because it is supposed to be a perfective marker itself; see chapter 2 above for more details). *Mau*²¹ is, however, compatible with *ka*⁴¹:

- (56) tsan³³san³³ mau²¹ k^han⁴⁵ ka⁴¹/*ta²¹ san³³ pən⁴¹ xu³³.
 NEG read KA/ PERF three CL book
 'Tsansan has not finished reading three books.'

- (57) tsan³³san³³ mau²¹ ɕi⁴¹ ka⁴¹/*ta²¹ i³³fu²⁴.
 NEG wash KA / PERF clothes
 'Tsansan did not finish washing his clothes.'

If *mau*²¹ is incompatible with *ta*²¹ because *ta*²¹ is a perfective marker, it is not clear why it is compatible with *ka*⁴¹ if that is also a perfective marker. One possible explanation is that *ka*⁴¹ is not a perfective aspect marker, while *ta*²¹ is.

To sum up, the above facts show that *ta*²¹ is acceptable as a way of expressing the perfective, while *ka*⁴¹ is not. Therefore, basing myself on the above observations, I conclude that *ka*⁴¹ and *ta*²¹ should be treated differently. *ka*⁴¹ should not be treated as a perfective marker. In the following, I point out that it is also not sufficient to treat *ka*⁴¹ as an Extended Event Boundary marker.

Finally, by treating ka^{41} as an Extend Event Boundary, the relation between ka^{41} and ta^{21} is still confusing, since there are cases in which ka^{41} does seem to function as a perfective marker. For example, in (58a), ka^{41} can stand alone. Therefore, the ambiguity of the status of ka^{41} needs further clarification. The rest of this chapter will go into questions like these.

3.4.3 Summary

In section 3.4, I have reviewed the previous analyses of the use of ka^{41} . I argued that ka^{41} should not be treated as a perfective marker because the analyses cannot account for the fact that ka^{41} is only accepted in activities, achievements and accomplishments under certain conditions, while ta^{21} is acceptable without these conditions. I also mentioned that it is not explanatory to call ka^{41} an Extended Event Boundary marker. In the rest of this chapter, we will provide a new analysis of ka^{41} which does justice to all its properties.

3.5 Interpreting ka^{41} : ka^{41} doubles an endpoint

In this section, I re-examine the semantic interpretation of ka^{41} before I propose a new analysis. I point out that ka^{41} is used to double an endpoint that is already there and that its function is to mark the existing endpoint as definitive and absolute. As such it shields the process preceding the endpoint from being available for syntactic operations. I will develop this analysis in reference to the inner aspect structure introduced and discussed in chapters 1 and 2. We start out from looking at contexts in which ka^{41} is obligatory.

3.5.1 Interpreting ka^{41} in achievements

We have seen in section 3.2.1.1 that ka^{41} is obligatory in achievements. Not having ka^{41} will cause ungrammaticality. The property of an achievement is that it represents a spontaneous transition between states (Vendler 1967, Dowty 1979, Smith 1997, Rothstein 2004). Achievements are lexically

endowed with an inherent endpoint. Mandarin achievements, here in the perfective, are illustrated in (59).

- (59) a. Zhāngsān zǒu le.
 leave PERF
 'Zhansan left.'
- b. bēizi pò le.
 cup break PERF
 'The cup broke.'
- c. zhè chǎng bǐsài Zhāngsān yíng le.
 DEM CL match win PERF
 'Zhangsan won the match.'
- d. chuán fān le
 boat turnover PERF
 'The boat turned over.'

Sentences (59a) - (59d) are expressions of achievements in the perfective in Mandarin, marked by perfective marker *le*. In Chángshā, however, in the same contexts, we see that, in addition to the element which we recognized as the perfective marker in the previous chapter, *ta*²¹, we have an extra element, *ka*⁴¹; the lack of *ka*⁴¹ leads to ungrammaticality. The counterpart of (59) is in (60) in Chángshā.

- (60) a. tsan³³san³³ tsou⁴⁵ {ka⁴¹ta²¹/ *ka⁴¹/ *ta²¹}.
 leave KA PERF
- b. pei³³ tsi p^ho⁴⁵ {ka⁴¹ta²¹/ *ka⁴¹/ *ta²¹}.
 cup break KA PERF
 'The cup has broken.'
- c. tsə⁴¹ tsan¹³ pi²¹sai⁴¹ Tsan³³san³³ in¹³ {ka⁴¹ta²¹/ *ka⁴¹/ *ta²¹}
 DEM CL match win KA PERF
 'Tsansan won the match.'
- d. tɕuan¹³ fan³³ {ka⁴¹ta²¹/ *ka⁴¹/ *ta²¹}
 boat turn over KA PERF
 'The boat turned over.'

The sentences in (60) show that ka⁴¹ is obligatory when the achievement verbs are presented in the perfective; neither ka⁴¹ nor ta²¹ can stand alone in the sentence. So, with ta²¹ as the perfective marker in this language, what is the function of ka⁴¹ in achievements?

As just mentioned, an achievement is inherently endowed with an endpoint (Vendler 1957, 1967, Krifka 1998, Rothstein 2004, among others). It indicates an instant change of state. Given the observation that ka⁴¹ is always obligatory in achievements, there are two possibilities to account for the distribution of ka⁴¹. On the one hand, we might argue that the endpoint reading in achievements in Chángshā is only implied and that ka⁴¹ is used to make it explicit. On the other hand, we can also assume that Chángshā is like other languages in that achievements inherently entail an endpoint. This is a common property of achievements, and Chángshā is then assumed not to be an exception. What is different is that another element, ka⁴¹ is needed to double the inherent endpoint of an achievement in Chángshā.

We take the first case first. That is, if we assume that achievements in Chángshā are different from those in other languages in the sense that the endpoint is only implied, we predict that we should be able to cancel it, because implied endpoints normally are. We should for instance, be able to express an achievement in the progressive. However, this prediction is not borne out. For example, we cannot utter (61).

- (61) a. *pəi³³ tsi tsən⁴⁵ tsai²¹ko²⁴ p^ho⁴⁵.
 cup right now PROG break
 Intended: 'The cup is breaking right now.'
- b. *tsan³³san³³ tsən⁴⁵ tsai²¹ko²⁴ lai¹³.
 right now PROG come
 Intended: 'Tsansan is coming right now.'

The verbs p^ho⁴⁵ 'break' and lai¹³ 'come' in (61) are achievements. If we assume that their inherent endpoints can be cancelled, the ungrammaticality of (61a) and (61b) is unexpected, since an implication can be cancelled and such form should be compatible with the progressive (as we know from the behavior of accomplishments), which it is not. The ungrammaticality of (61a) and (61b)

shows that the endpoint in achievements in Chángshā cannot be cancelled. We can also test this by conjoining a sentence containing such a verb with a negative sentence. See (62).

- (62) a. *tsan³³ san³³ lai¹³ ka⁴¹ ta²¹, ko⁴¹shi xai¹³ mau²¹ tau⁴¹.
 come KA PERF but yet NEG arrive
 Intended: 'Tsangsan has come, but he did not arrive yet.'
- b. *la⁴⁵ tən⁴⁵ fan¹³ tsi k^hua⁴¹ ka⁴¹ ta²¹, ko⁴¹shi xai¹³
 DEM CL house fall KA PERF, but yet
 mau²¹ k^hua⁴¹ xia²¹ kə⁴⁵.
 NEG fall down go
 Intended: 'That house fell, but did not fall down.'

In (62a) - (62b), the conjunction with the construction negating the completion of the action is not acceptable. This shows that the endpoint in achievements is entailed, and not just implied. After all, implications are cancellable; entailments are not.

Given that the endpoint in achievements in Chángshā cannot be an implication, as we have just seen, we are forced to choose the other possibility, namely that the endpoint (here change of state) in an achievement is inherent, just as in other languages. We suggest that what differentiates Chángshā from some other languages is that in the former, apart from an inherent endpoint we still need another element: the inherent endpoint is doubled. *ka*⁴¹ is such an element. *ka*⁴¹ indicates that the endpoint is definitely there.

We conclude that *ka*⁴¹ is required by the verb, but strictly speaking, since so far we have only seen that *ka*⁴¹ in perfective sentences, co-occurring with *ta*²¹, it is thus possible that the properties of *ta*²¹ require the presence of *ka*⁴¹ to express an achievement in the perfective. However, this is not the case. First, I showed in chapter 2 that *ta*²¹ is a perfective marker, just like *le* in Mandarin, and I also showed that *ta*²¹ can be used to indicate that an event has been completed when the object in an accomplishment contains a numeral. We have seen (63), I repeat it here for convenience ((63b) is Mandarin).

- (63) a. t^ha³³ tɕia²⁴ ta²¹ san³³ tsa²⁴ pin¹³ko²⁴.
 3SG eat PERF three CL apple
 'He ate three apples up.'
- b. tā chī le sān ge píngguǒ.
 3SG eat PERF three CL apple
 'He ate three apples.'

The object in (63a) contains a numeral, and *ta*²¹ expresses completion, (63b) is the counterpart of (63a) in Mandarin. This shows that *ta*²¹ can by itself indicate the completion of an action when the endpoint is available in the event, without requiring the presence of *ka*⁴¹. So if it is not *ta*²¹ which requires *ka*⁴¹, it must be the achievement verb. One may be wondering if achievements should always co-occur with *ka*⁴¹. They do when reference is made to a specific event, like in "He arrives tomorrow". In these cases *ka*⁴¹ is obligatory. When that is not the case, like in "He always wins", see (64d), we do not have *ka*⁴¹.

- (64) a. t^ha³³ tso¹³tian³³ in¹³ *(ka⁴¹) ta²¹.
 3SG yesterday win KA PERF
 'He won yesterday.'
- b. t^ha³³ min¹³tian³³ tɕiu²¹ tau⁴⁵ *(ka⁴¹) ta²¹.
 3SG tomorrow just arrive KA PERF
 'He is just arriving tomorrow.'
- c. mɛi⁴¹thsi⁴⁵ tou³³ si²¹ tsansan in¹³ *(ka⁴¹) ta²¹.
 everytime all be win KA PERF
 'Everytime it is Zhangsan who wins.'
- d. t^ha³³ tsən⁴¹ si²¹ in¹³.
 3SG always win
 'He always wins.'

This is also confirmed by the examples we saw in section 3.2.1.1, one of which is repeated here as (65), which show that an achievement predicate needs *ka*⁴¹, even when it is not in the perfective.

- (65) la⁴⁵ tsa²⁴ niao⁴¹ kan⁴⁵ian²¹tsi i²⁴-tin²¹xui²¹ ɕi⁴¹ ka⁴¹.
 DEM CL bird from.the.look.of.it be sure die KA
 'The bird seems to be sure to die.'

What we observe is that achievements are verbs with an endpoint and that whenever we have an achievement, ka⁴¹ also appears. There seems to be a relation between telicity and the appearance of ka⁴¹. Note that in the same cases in Mandarin, no extra element is needed: (65) can be said in Mandarin as (66):

- (66) nǐ zhi niǎo kàn yàngzi / yǐng huì sǐ.
 DEM CL bird from.the.look.of.it/be sure will die
 'That bird looked as if it will die.'

I will now turn to ka⁴¹ used with statives turned into change-of-state predicates.

3.5.2 Interpreting ka⁴¹ in stative predicates

As shown in section 3.2.4, ka⁴¹ appears with a stative verb in combination with perfective marker ta²¹. As we noted, in these contexts, stative predicates get a change of state reading. This can be seen in (67) - (68).

- (67) a. *xua³³ xǒ¹³ ta²¹.
 flower red PERF
 b. xua³³ xǒ¹³ ka⁴¹ ta²¹.
 flower red KA PERF
 'The flowers have become red.'
- (68) a. *t^ha³³ sou⁴⁵ ta²¹.
 3SG thin PERF
 b. t^ha³³ sou⁴⁵ ka⁴¹ ta²¹.
 3SG thin KA PERF
 'He has become thin.'

Sentences in (67a) - (68a) show that *ta*²¹ cannot be used by itself with statives/change-of-state predicates. Just as in achievements, we need *ka*⁴¹.

Note that this pattern is only observed with stage-level predicates in the sense of Carlson (1977). Individual-level predicates do not behave this way. For example, you cannot say (69):

- (69) **tsan*³³ *san*³³ *ts*^h *ən* *min*³³ *ka*⁴¹ *ta*²¹.
 intelligent KA PERF

Intended: 'Tsansan has become intelligent.'

More generally, it must also be noted that Chinese stative verbs (change-of-state verbs) are less stative than their counterparts in many other languages (we will look into this in more detail below): rather than 'red', the Chinese counterparts of English *red* is more like to mean 'become red/redder'. This is why these verbs are compatible with a perfective marker at all (see below; for more references, see Shizhe Huang 2017). As we saw above, a stative verb in the perfective can produce a change of state reading can also be seen in Mandarin. For example, (67) - (68) are expressed in Mandarin as (70) - (71).

- (70) *huā* *hóng* *le*.
 flower red PERF
 'The flowers have become red.'

- (71) *tā* *shòu* *le*.
 3SG thin PERF
 'He has become thin.'

As indicated in (70) - (71), in Mandarin, these sentences appear with perfective marker *le*. These sentences also have a change-of-state reading. However, what is different is that in Mandarin the stative predicates in the perfective do not need any extra elements. Schematically, we have the following situation in Chángshā and Mandarin:

- (72) a. stative predicate + *ka*⁴¹ + *ta*²¹ → change of state reading
 b. stative predicate + *le* → change of state reading

If Mandarin can do it with the perfective marker alone, what is *ka*⁴¹ in Chángshā?

Before we deal with the differences between these two languages, we first see how we can explain the case of statives in the perfective with a change of state reading, in addition to the reference to Huang (2017) given above.

Change of state readings arising from the combination of the perfective aspect and a stative verbs are not unknown. Chung and Timberlake (1985:217), Comrie (1976:19), Moens and Steedman (1988), Jackendoff (1997), Pustejovsky (1995), Krifka (1998), de Swart (1998, 2000), Bonami (2007) and Flouraki (2006) among others have reported such cases. Many languages like Russian and Modern Greek are said to exhibit such phenomena. Some sentences are used in the following for illustration.

(73) Russian

Imperfective		perfective	
ponimat'	'understand'	ponjat	'come to understand'
verit'	'believe'	poverit'	'come to believe'
lubit'	'love'	polubit'	'come to love'

(74) Modern Greek

- a. O Giannis agapouse ti Maria.
 The Giannis loved. IMPERF.3sg the Maria
 'The Giannis loved/used to love Maria' (basic meaning)
- b. O Giannis agapise ti Maria.
 The Giannis loved. PERF.3sg the Maria
 'The Giannis fell in love with Maria' (inchoative meaning)

(73) - (74) show that a state gets a basic interpretation when combined with the imperfective aspect, and an inchoative meaning when combined with the perfective aspect.

To explain why a perfective aspect marker can be used to express a change of state reading in stage-level predicates, Comrie (1976:20) states that:

There may be some sense in saying that since states are less likely to be described by perfective forms than are events (including entries into states), then there is some functional value in utilising the perfective forms of stative verbs to denote the event of entry into the appropriate state, since otherwise there would be little use for the perfective forms of these verbs.

Based on Comrie (1976), we may assume that these so-called stative verbs are actually not stative at all: they are used to express a process of becoming *x*, and it is this process that has an endpoint. In other words, the statives we are mentioning here are in fact change-of-state verbs, rather than general stative verbs. That is why (70) - (71) can have a change of state reading. This is possible, since in Mandarin there is no morphological difference between adjectives and verbs. An adjective can be used as a predicate without a copular verb. The same is true in Chángshā. If that is the case, then the use of *ka*⁴¹ with such stative predicates is like its use in other cases that we have reviewed where we found, on independent grounds, that they involved an inherent endpoint, like with achievements and in *BA*- sentences, that is, it is used to double the endpoint.

Before I close this section, I would like to introduce some other analyses about the use of *le* with statives in Mandarin. I will focus on Lín (2004) and point out that Lín's analysis can help me support my interpretation of *ka*⁴¹.

That aspect marker *le* can occur with certain stative verbs in Mandarin has been analyzed in many different ways. For convenience, I repeat (70) - (71) in (75) - (76).

- (75) huā hóng le.
 flower red PERF
 'The flowers have become red.'

- (76) tā shòu le.
 3SG thin PERF
 'He has become thin.'

(75) - (76) show that two stative verbs, *hóng* 'red' and *shòu* 'thin', appearing in the perfective, and the sentences acquire a change-of-state reading. To explain the use of the perfective marker *le*, Cháo (1968:699) proposes, "It implies a change from a different previous condition". Similarly, Cháng (2003) proposes that aspect marker *le*, when occurring with a stage-level predicate, is able to evoke a boundary (i.e., the beginning of a situation). Cháng mainly bases his analysis on Talmy (1988) and Smith (1997), who claim that the adverbial *chà bù duō/jīhū* 'almost' occurs in an environment with a designated boundary (an endpoint). Cháng observes that a stative predicate with *le* can be modified by the adverbial *chà bù duō/jīhū* 'almost'. He argues that the adverb in the sentence can refer to the boundary evoked by *le*.

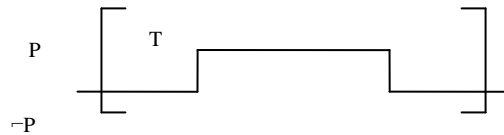
Li & Thompson (1981:188) claim that *le* suggests a bounded situation. They hold that "it links a change of state and the pre-inceptive situation into succession, converting a state verb into an achievement verb". In line with Li & Thompson (1981), Smith (1997:286) holds that *le* changes a stative verb into an activity verb, but no implementation of the process of changing has been provided by Smith (1997).

From the above, it can be seen that Cháo (1968), Li & Thompson (1981) and Smith (1997) share the idea that verb *le* is related to a change of state reading, but differ in the origin of the change of state reading. *le* implies or evokes a change of state reading as is suggested by Cháo (1968), or changes a state into an achievement verb as is suggested by Li & Thompson (1981) and Smith (1997). Yet the two approaches are not satisfactory. For example, for the "evoking" approach, it is not clear why the perfective *le* is able to evoke a boundary only in stative predicates, but not in other cases. For the "converting" approach, it is not clear how *le* as a perfective marker can change a stative into an achievement.

Different from the above, Lín (2004) makes the relation between the perfective and the "evoked boundary" in stative predicates more apparent. In dealing with "perfective statives" in Mandarin, Lín (2004:86) proposes that there is a covert inchoative verbalizing head v_0 that gives rise to the change of state

reading. With this functional element in place, the perfective aspect behaves according to the standard definition: it indicates the endpoint has been reached. Or, in Lin's terms, it indicates the temporal configuration in which situation time (the transition from $\neg P$ to P) is contained in topic time. The time-course diagram in (77) captures the interpretation of a stative verb viewed perfectly (from Lín 2004:85).

(77)



In short, Lín's analysis assumes that the change of state reading in stative predicates in the perfective in Mandarin comes from a covert inchoative verbalizing head v_{δ} .

In line with Lin's analysis, I further point out that we can in fact observe that the covert verbalizing head can sometimes be lexically realized by the verb *biàn* 'become'.

- (78) a. huā hóng le.
 flower red PERF
 'The flowers have become red.'
- b. huā biàn hóng le.
 flower become red PERF
 'The flowers have become red.'

- (79) a. tā shòu le.
 3SG thin PERF
 'He has become thin.'
- b. tā biàn shòu le.
 3SG become thin PERF
 'He has become thin.'

In (78b) - (79b), the verb *biàn* ‘become’ is added without leading to a difference in interpretation. These sentences show that it makes sense to assume a verbal element indicating the change of state reading in statives when presented in the perfective. In what follows, I show that this analysis of statives in the perfective can also find support from lexical morphology indicating a change of state reading.

To start, I would like to point out that the analyses so far center on the observation that a change of state reading arises in a stative predicate in the perfective in different languages. What these languages share is that the reading arises when the stative predicates are in the perfective. The reading of change of state is indicated by a syntactic element overt or non-overt in these languages. However, in the following we are going to see that in some other languages the change of state reading with stative predicates shows close morphological relation with the corresponding property denoting adjectives. The following examples are used for illustration.

(80) English (Koontz-Garboden 2005:188)

- a. The knot is loose. (ADJECTIVE)
- b. The knot is loosened. (NON-CAUSATIVE COS (CHANGE OF STATE))
- c. Alex loosened the knot. (CAUSATIVE COS)

(81) O’odham (Hale and Keyser 1998:92)

	ADJECTIVE	NON-CAUSATIVE COS	CAUSATIVE	COS
a.	(s-)weg	weg-i	weg-i-(ji)d	‘red’
b.	(s-)moik	moik-a	moik-a-(ji)d	‘soft’
c.	(s-)'oam	'oam-a	'oam-a-(ji)d	‘yellow’

(82) Warlpiri (Hale & Keyser 1998:93)

	ADJECTIVE	NON-CAUSATIVE COS	CAUSATIVE COS
a.	wiri	wiri-jarri-	wiri-ma ‘big’
b.	maju	maju-jarri-	maju-ma- ‘bad’

The data in (80) - (82) show that in English, O’odham and Warlpiri, words denoting property concept states and their related changes of state are not

morphologically identical, although they share the same root. Koontz-Garboden suggests that in these languages, a verb denoting a change of state is derived from the property concept denoting adjective/noun by way of some kind of morphological process (for more details, see Koontz-Garboden 2005). (79) - (81) show the change of state reading with stative predicate may be realized in the form of affixes.

To sum up, in the above I have introduced two approaches dealing with the change of state reading produced by stative predicates. In Lín (2004), a non-overt verbalized head expresses the change of state reading. In Koontz-Garboden (2005), the change of state reading in some languages is derived from the property denoting adjectives through a morphological process. The above discussion show that the ways expressing a change of state reading vary. It can be done syntactically by a syntactic head, which may be overt or non-overt. It can also be done through a morphological process. For convenience, I present the two ways indicating the change of state meaning in different languages in Table 1.

Table 1 Ways indicating a change of state reading with a stative predicate

Ways of expressing a change of state reading	Languages	Morphology
Syntactic encoding	Mandarin/ Chángshā	∅
Morphological process	English	-en

Table 1 shows that languages may use different ways to express the change of state reading with a stative predicate presented in the perfective. It may be done through a morphological process in languages like English. It may also be done by a syntactic process in which an overt/non-overt element is part of the syntactic structure in languages like Mandarin and Chángshā. For instance in Mandarin, usually a covert element is used, though in some cases, the covert form can be realized in the form of the lexical verb *biàn* 'change'; while in Chángshā, it is always realized with *ka*⁴¹.

With the above analysis, we can now rewrite (72b) in (83).

(83) stative predicate + ∅ + *le* → change of state reading

(83) shows that in Mandarin, there is a covert element in a stative presented in the perfective. Let us assume that this is the element that is responsible for the change of state reading. Moving to Chángshā we can, in view of (75a) then take it that ka⁴¹ then is an overt element that is responsible for turning states into change-of-state predicates. We rewrite (72) in (84).

- (84) a. stative predicate + ka⁴¹ + ta²¹ → change of state reading
 b. stative predicate + \emptyset + le → change of state reading

However enticing it may be to analyze ka⁴¹ as a syntactic or morphological element that changes a state into a change-of-state predicate, it turns out that, on closer consideration, it does not hold water. First, we find that ka⁴¹ and the element biàn 'become' (pian⁴⁵ in Chángshā) which we introduced as the verbalizing head in Mandarin above can appear in Chángshā. (67) - (68) are rewritten in Chángshā in (85) - (86).

- (85) a. *xua³³ xǎ¹³ ta²¹.
 flower red PERF
 b. xua³³ xǎ¹³ ka⁴¹ ta²¹.
 flower red KA PERF
 'The flowers have become red.'
 c. xua³³ pian⁴⁵ xǎ¹³ ta²¹.
 flower become red PERF
 'The flowers have become red.'

- (86) a. *t^ha³³ sou⁴⁵ ta²¹.
 3SG thin PERF
 b. t^ha³³ sou⁴⁵ ka⁴¹ ta²¹.
 3SG thin KA PERF
 'He has become thin.'
 c. t^ha³³ pian⁴⁵ ka⁴¹ sou⁴⁵ ta²¹.
 3SG become KA thin PERF
 'He has become thin.'

In (85b) *ka*⁴¹ is used, and in (85c) the verb *pian*⁴⁵ 'become' is used, the two sentences have the same interpretation. The same is true in (86). This shows that *ka*⁴¹ is not the realization of the covert verbalizing head. What's more, the fact that *ka*⁴¹ and *pian*⁴⁵ can co-occur further supports the idea that *ka*⁴¹ should not be seen as the lexical realization of the covert verbalizing head.

- (87) a. xua³³ pian⁴⁵ xǝ¹³ ka⁴¹ ta²¹.
 flower change red KA PERF
 'The flowers have turned red.'
- b. t^ha³³ pian⁴⁵ shou⁴⁵ ka⁴¹ ta²¹.
 3SG become thin KA PERF
 'He has become thin.'

In (87), both *ka*⁴¹ and *pian*⁴⁵ 'become' are used, with no consequences for the interpretation. All these cases show that *ka*⁴¹ should not be seen as the overt realization of the verbalizing head.

On the basis of this discussion, we are now ready to provide an answer to the use of *ka*⁴¹ in these change-of-state cases. As in the other cases with an inherent endpoint, such as the achievements we discussed above and the BA-sentences to be discussed below, *ka*⁴¹ is used in these change-of-state predicates just to double the endpoint. The question why exactly it does so will be answered shortly.

Note also that, just like with achievements, *ka*⁴¹ does not only show up with change-of-state predicates in the perfective. When we embed such a predicate under a modal, *ka*⁴¹ is preferably present as well.

- (88) a. li⁴¹ tsai⁴⁵ xo²⁴ tixua²¹ xui²¹ tse⁴⁵ ka⁴¹.
 2SG again drink if will drunk KA
 'If you continue to drink more, you are bound get drunk.'
- b. ??li⁴¹ tsai⁴⁵ xo²⁴ tixua²¹ xui²¹ tse⁴⁵.
 2SG again drink if will drunk
 'If you continue to drink more, you may get drunk.'

Although (88b) is not completely ungrammatical, (88a), with ka⁴¹ is clearly preferred.

If these conclusions are right, I can provide an answer to the differences between Mandarin and Chángshā. In both languages, the change of state reading with a stative predicate in the perfective comes from an inchoative verbalizing head. The difference between the two languages lies in the fact that in Chángshā there is an extra element, ka⁴¹, to double the endpoint, while in Mandarin there isn't. Given this consideration, we modify (84) and rewrite it in (89) (order of the different elements is irrelevant).

- (89) a. stative predicate + \emptyset +ka⁴¹+ta²¹ → change of state reading (Chángshā)
 b. stative predicate + \emptyset + \emptyset + le → change of state reading (Mandarin)

(89) shows in both Mandarin and Chángshā there is a covert element, an inchoative verbalizing head v_8 in terms of Lín (2004), in a stative predicate. When it is presented in the perfective, the event gets a change of state reading. What is different between these two languages is that in Chángshā, there is still another particle, ka⁴¹, which is used to double the endpoint.

In what follows, I provide an analysis of the interpretation of ka⁴¹ in the BA-construction. I will show that the function of ka⁴¹ to double an endpoint can also be identified in the BA-construction.

3.5.3 Interpreting ka⁴¹ in the BA-constructions

As we noted above (section 3.2.1.3), ka⁴¹ is obligatory in BA-sentences; the omission of ka⁴¹ makes the sentence ungrammatical.

- (90) a. *ŋo⁴¹ pa⁴¹ i³³fu ɕi⁴¹ ta²¹.
 1SG BA clothes wash PERF
 b. ŋo⁴¹ pa⁴¹ i³³fu ɕi⁴¹ ka⁴¹ ta²¹.
 1SG BA clothes wash KA PERF
 'I washed the clothes.'

- (91) a. *tsan³³san³³ pa⁴¹ la⁵⁴ pən⁴¹ xy³³ k^han⁵⁴ ta²¹.
 BA DEM CL book read PERF

- b. tsan³³ san³³ pa⁴¹ la⁵⁴ pən⁴¹ xy³³ k^han⁵⁴ ka⁴¹ ta²¹.
 BA DEM CL book read KA PERF
 'Tsansan read that book.'

In sentences (90) - (91), we see that without *ka*⁴¹ the sentence is ungrammatical, while in Mandarin no extra particle is required in such sentences. Note that in Mandarin, *wán* 'done, finish' can, but does not have to, appear: in Mandarin, the perfective marker *le* can do the job alone. We can compare the sentences in (90a) - (91a) with those in (92) from Mandarin.

- (92) a. wǒ bǎ yīfu xǐ le.
 1SG BA clothes wash PERF
 'I washed the clothes.'
 b. wǒ bǎ nà běn shū kàn le.
 1SG BA that CL book read PERF
 'I read that book.'

In (92), the two *BA*-sentences are presented in the perfective marked by *le*. In comparison with Mandarin, we see that in similar cases, Chángshā requires one more particle. So in what respects are Mandarin and Chángshā *BA*-sentences different? Do *BA*-sentences in these languages have different properties? Are the perfective markers different? Or is something else going on?

On the basis of what we discussed in the previous chapter and the preceding paragraphs of this chapter, it is unlikely that the perfective markers in these two languages are different. As we saw, just like Chángshā *ta*²¹, verbal *le* is a perfective marker in the sense that it provides a termination/completion reading. That is, in a telic event, *le* indicates the completion of the action, whereas in an atelic event it refers to the termination of the action (see Li and Thompson 1981, Ross 1995, Smith 1997 and Soh & Kuo 2007; and chapter 2 above).

To have a better overview of the problems we are now facing, I show the surface patterns of perfective non-*BA*-sentences and the corresponding *BA*-sentences in these two languages respectively in (93) - (94):

- (93) non-BA-construction and BA-construction in Chángshā
- a. [V + (ka⁴¹) + ta²¹ + definite NP]
 - b. [BA + definite NP + V + ka⁴¹ + ta²¹]
- (94) non-BA-construction and BA-construction in Mandarin
- a. [V + le + definite NP]
 - b. [BA + definite NP + V + le].

The pattern in (93a) - (94a) shows that the perfective aspect in these two languages is expressed by ta²¹ and le respectively. However, if it is the BA-construction, in Mandarin, we can make do with perfective marker le alone, while in Chángshā, next to perfective marker ta²¹, we also need ka⁴¹. So, looking at the surface orders in (93) - (94), we actually have two questions to answer. The first is why Mandarin and Chángshā are different, the second is why ka⁴¹ is obligatory in a BA-sentence while it is optional in a non-BA-sentence. As to the latter point, we will see that the difference is actually only apparent.

To answer these questions, we need to first consider what properties the BA-construction has that make the use of ka⁴¹ obligatory.

In what follows, we take as our point of departure the idea that the BA-construction contains an inherent endpoint. This idea is basic to most analyses of the BA-construction. It is most explicitly expressed in the Sybesma (1992, 1999) where the point is made that the NP following BA always originates as the subject of a resultative, that is, an endpoint denoting element. According to Sybesma (1999), every BA-sentence contains an endpoint, without an endpoint, no BA-sentence can be formed. This can be seen from the different interpretations in (95), where (95a) is a non-BA-sentence, while (95b) is a BA-sentence.

- (95) a. tā kàn le nà běn shū.
 3SG read PERF that CL book
 (i) 'He read in that book.'
 (ii) 'He read that book (finished it).'

b. tā bǎ nǎ běn shū kàn le.
 3SG BA that CL book read PERF
 'He read that book (finished).'

The sentence in (95a) is ambiguous: it has either a termination reading or a completion reading. In (95), on the other hand, the sentence can only have a completion reading. The immediate question is why (95a) is ambiguous while (95b) is not? This is because, according to Sybesma (1999), (95) corresponds to a single underlying structure and (95a) corresponds to two underlying structures, one of which is the same as that of (95b). In his analysis, the *BA*-NP and the result denoting element together form a small clause which as a whole denotes the state that is the result of the action denoted by the main verb. As a result, by definition, there is no *BA*-sentence without a result or endpoint denoting element. The schema is presented in (96); in all schemas below, we disregard the perfective markers and base order issues are irrelevant (I will discuss them below, when we relate these structures to the tree structure introduced in chapters 1 and 2).

(96) Subj BA Obj_i V [_i R]

In (96), a result denoting small clause follows the verb. It consists of a predicate (“R” from “result”) and its subject (in (96) this subject is referred to as “Obj” because it is interpreted as the object of the verbal complex as a whole). As the trace indicates, the *BA*-NP moves away from the place it is generated to a position where it can be licensed (see Sybesma 1999 for details). Importantly, the R can in some cases be empty. For instance, (97) corresponds to the structure in (98).

(97) wǒ bǎ zhè běn shū kàn le.
 1SG BA that CL book read PERF
 'I read the book.'

(98) wǒ bǎ [zhè běn shū]_i kàn [_i ∅] le.
 1SG BA this CL book read PERF

What's more, the sentence in (97) with the underlying structure in (98) has virtually the same meaning as (99a), based on (98), with an overt counterpart of *wán* 'done, finish':

- (99) a. wǒ bǎ zhè běn shū kàn wán le.
 1SG BA this CL book read done PERF
 'I finished reading this book.'
- b. wǒ bǎ [zhè běn shū]_i kàn [t_i wán]
 1SG BA this CL book read finish

In (99a), the result/end denoting element is expressed by the lexical form *wán* 'finish'. (99b) is the underlying structure of (99a).

An important aspect of Sybesma's (1992, 1999) analysis is that every *BA*-sentence has a non-*BA*-counterpart with a *VO* order with the same meaning and the same underlying structure. In reference to (96), what happens in these sentences is that *V* or *V+R* moves to the position occupied by *BA* in (95) (see Chapter 1 above for details). Thus, in our case, (95a) repeated here as (100) is the counterpart of (97) and (101 is the counterpart of (98).

- (100) wǒ kàn le nǎ běn shū.
 1SG read PERF that CL book
 'I read this book.' OR, 'I read at that book.'
- (101) wǒ kàn wán le nǎ běn shū.
 1SG read finish PERF that CL book
 'I read that (whole book).'

In the above, I have introduced Sybesma's analysis of *BA*-construction in Mandarin. The important thing for me is that, according to Sybesma, a *BA*-construction has an inherent endpoint which is expressed by a resultative element. This element may or may not be overt. Basing myself on Sybesma's analysis of *BA*-construction, we look at *ka*⁴¹.

We start with a comparison of Mandarin *BA*-sentences with the Chángshā counterparts (ignoring the perfective markers).

Mandarin:

- (102) a. wǒ bǎ zhè běn shū kàn [t_i ø]
 1SG BA this CL book read
 b. wǒ bǎ zhè běn shū kàn [t_i wán]
 1SG BA this CL book read finish

Chángshā:

- (103) a. ŋo⁴¹ pa⁴¹ ko²⁴ pən⁴¹ xy³³_i k^han⁴⁵ [t_i ø] *(ka⁴¹)
 1SG BA this CL book read
 b. ŋo⁴¹ pa⁴¹ ko²⁴ pən⁴¹ xy³³_i k^han⁴⁵ [t_i oŋ¹³] *(ka⁴¹)
 1SG BA this CL book read finish KA

What we see is that in Mandarin and Chángshā, the result denoting element can be overt or covert but that in the latter, whether it is covert or not, we always need an extra element, ka^{41} . This means that whatever it does, it is clear that ka^{41} does not mark the endpoint itself: as before, it only doubles it.

To further see that ka^{41} is used to double the endpoint in a BA -construction, and that its appearance has nothing to do with the perfective, we can look at sentences in which there is an endpoint, without it having been realized. In other words, sentences with ka^{41} but without ta^{21} . We saw examples in (26), here are some more:

- (104) a. t^ha³³ i²⁴ tɛin⁴⁵ mən¹³, tɕiu²¹ pa⁴¹ xai¹³ tsi
 3SG as soon as enter door JIU BA shoes
 t^ho²⁴ ka⁴¹.
 take off KA
 'He takes off his shoes as soon as he entered the door.'
 b. ŋo⁴¹ ɛian⁴⁵ pa⁴¹ i³³ fu ɕi⁴¹ ka⁴¹.
 1SG want BA clothes wash KA
 'I want to wash the clothes.'
 c. pa⁴¹ i³³ fu ɕi⁴¹ ka⁴¹!
 BA clothes wash KA
 'Wash the clothes!'

- d. ηo^{41} mau^{21} pa^{41} i^{33}fu ɕi^{41} ka^{41} .
 1SG NEG BA clothes wash KA
 'I have not washed the clothes.'

In the sentences in (104), we see that *ka*⁴¹ is used. (104a) has a habitual reading, (104b) describes a future situation, (104c) is an imperative construction and (104d) is a negated *BA*-sentence. All these sentences contain an endpoint. And these four sentences would be ungrammatical without *ka*⁴¹.

The data presented so far suggest that in *BA*-sentences, *ka*⁴¹ does the same as what it does in the achievement and change-of-state sentences we discussed above: it doubles an endpoint that is already there. As with the other cases, the difference between *Chángshā* and Mandarin is that the endpoint, which is always part of a *BA*-sentence, needs to be doubled in *Chángshā* while that is not the case in Mandarin.

Now we can turn to the second question, namely, why *ka*⁴¹ is obligatory in *BA*-sentences in *Chángshā*, while that is not the case for non-*BA*-sentences?

As we saw in (102), Mandarin non-*BA*-sentences with *le* have two readings, one of which corresponds to the reading of the corresponding *BA*-sentence. The assumption was that non-*BA*-sentences with *le* are syntactically ambiguous in corresponding to two different underlying structures, one of which corresponds to the underlying structure of the corresponding *BA*-sentence. If this is correct, the same is true in *Chángshā*: (105a) is ambiguous while (105b) is not; (105a) has two underlying structures, one of which contains an endpoint, (105b) only has one (the one with the endpoint).

- (105) a. ηo^{41} ɕi^{41} ta^{21} i^{33}fu .
 1SG wash PERF clothes
 'I washed clothes/did some clothes washing.'
 Or: 'I washed the clothes (finished).'
- b. ηo^{41} ɕi^{41} ka^{41} ta^{21} i^{33}fu .
 1SG wash KA PERF clothes
 'I washed the clothes (finished).'

Sentences with only *ta*²¹ can possibly have two readings, one of which (the second reading) in (105a) has an underlying structure with an endpoint. (105b) only has this structure. It is given in (106) (position of *ka*⁴¹ irrelevant for now; it will be discussed below). With *ka*⁴¹ the sentence based on it gets a completion reading, whether it is *BA*-sentence or a non-*BA*-sentence.

- (106) ηo⁴¹ [v_P v⁰ [v_P ɕi⁴¹ [s_C i³³fu ø]]] (ka⁴¹)
 1SG wash clothes KA

The problem with this analysis is that it provides no answer to the question why *ka*⁴¹ is obligatory in *BA*-sentences and not in the corresponding non-*BA*-sentence with the endpoint reading. If *ka*⁴¹ doubles an endpoint that is already there, why does it not obligatorily double it in non-*BA*-sentences with an endpoint? Why only in *BA*-sentences?

One possible answer to this question is that the endpoint reading in non-*BA*-sentences without *ka*⁴¹ is actually an implied reading, that is, not based on a structure which involves a position for the endpoint. If this suggestion is correct, then, first, (104a) does not correspond to two different underlying structures at all, and, secondly, it strengthens the claim I would like to make that whenever there is a structural endpoint in a Chángshā sentence, it is always doubled by *ka*⁴¹. We will look at similar cases in the following section and discuss this possibility.

The conclusion we can draw from the cases we reviewed so far is that *ka*⁴¹ is obligatory in cases where there already is an endpoint⁸.

Let's look now at the cases in which *ka*⁴¹ does not seem to be obligatory.

3.5.4 Interpreting *ka*⁴¹ in [V+bare/definite noun object] sentences

In section 1.2.6, I have shown that in Mandarin an accomplishment event with a bounded object is not necessarily telic in the sense that the endpoint can be lifted, can be cancelled. As we saw, according to Soh and Kuo (2005), whether

⁸ At this point we have no idea what determines the variation between Mandarin and Xiāng, that is, why in the one language the end point must be doubled while it does not need to do so in the other.

an accomplishment event with a bounded object is telic or not depends on the properties of the object. In an accomplishment with an NPO (No Partial Object, e.g. *draw a circle*), it is telic, with an ALO (Allow Partial Object, e.g. *draw a picture*), it is not necessarily telic. It all depends on whether an object can be considered an instantiation of that object even if it is only partially realized; for details, see chapter 1. In this section, I discuss the status/function of ka⁴¹. I start with the interpretation of ka⁴¹ in [V+bare noun object] sentences, then I move to [V+definite noun object] cases. Consider first the sentences in (107).

- (107) a. t^ha³³ p^hao⁴¹ ta²¹ pu⁴¹.
 3SG run PERF step
 'He ran (did some running).'
 OR: 'He did a run (he has finished (his) running,
 a preset distance).'
- b. t^ha³³ p^hao⁴¹ ka⁴¹ ta²¹ pu⁴¹.
 3SG run KA PERF step
 'He has finished (his) running.'

In (107a), ta²¹ indicates that an action has been terminated or completed (in the case of a preset/predetermined endpoint), while in (107b), where ka⁴¹ is added, only the completion reading is left: the sentence means something like 'he has done his running; he has finished running the distance he had planned to run'. What is important in understanding the sentence is that when a speaker uses ka⁴¹, there is a predetermined endpoint. For example, in (107b), the running distance may be 20 or 30 miles, but no matter what the distance is, the point is that there is such a definite distance. Without ka⁴¹, but with the completion reading, there is only such implication of a set distance.

We have two possibilities to explain the use of ka⁴¹. In one case, we can argue that ka⁴¹ is used to mark or provide an endpoint (here signaling a preset distance). This is possible, since we have seen that the sentence only has a completion reading with ka⁴¹ (106b), and an ambiguous reading without ka⁴¹ (107a). It seems that ka⁴¹ adds the endpoint for the event, and ta²¹ is used to present the event in the perfective. However, as we have pointed out in section 3.4, this is not a sensible approach. The main consideration is constituted by

the cases reviewed in the previous section, the cases in which *ka*⁴¹ is obligatory and in which it doubles an endpoint that is already there. In these cases it clearly does not itself mark the endpoint. Hence, we give up the approach of treating *ka*⁴¹ as adding an endpoint.

We take another possibility. We imagine that the reading of a predetermined or set distance is already in the event before *ka*⁴¹ appears: this is in line with what we have established above, that *ka*⁴¹ only appears in circumstances in which there is an endpoint, though in some cases the endpoint may be covert. *ka*⁴¹ only doubles the endpoint in an event.

This is possible, given the cases mentioned above, where the object contains a definite object. We have seen the sentence in (108). We present it here again:

- (108) a. tsan³³san³³ tɕia²⁴ ta²¹ la⁴⁵ tsa²⁴ pin¹³ko²¹.
 eat PERF that CL apple
 'Tsansan ate at that apple.
 OR: 'Tsansan ate that apple.'
- b. tsan³³san³³ tɕia²⁴ ka⁴¹ ta²¹ la⁴⁵ tsa²⁴ pin¹³ko²¹.
 eat KA PERF that CL apple
 'Tsansan ate that apple.'

The sentence in (108a) is ambiguous: it means that Tsansan ate some of that apple or ate away at the apple and he may or may not have finished it. In other words, a verb with a definite object can be interpreted as telic, but it can also be interpreted as atelic. That is why (108a) can have two readings. What is interesting is (108b). In (108b), where *ka*⁴¹ is added, the sentence must be interpreted such that the action has been completed: he ate the whole apple. The only difference between (108a) and (108b) is that (108b) contains *ka*⁴¹, while (108a) does not. Here *ka*⁴¹ should not be seen as that it marks an endpoint given the above consideration: a verb with a definite object can be telic, in which case there already is an endpoint. If we argue that *ka*⁴¹ is to double an endpoint, the interpretation of the action as having been completed is accounted for: since *ka*⁴¹ is used to double an endpoint, we only have the sentence which had an endpoint to begin with. Put differently, *ka*⁴¹ is used to

- (110) tsi²⁴lian⁴¹ ti¹³ kao³³ (ka⁴¹) ta²¹.
 quality raise high KA PERF
 'The quality has been improved.'

Here are more cases in which it is clear that ka⁴¹ doubles an endpoint reading in [V+definite noun object] sentences which are not in the perfective. Consider (111), with a modal verb in it.

- (111) a. ŋo⁴¹ ɕian⁴¹ k^han⁴⁵ ko²⁴ pən⁴¹ xy³³.
 1SG want read this CL book
 'I want to read in this book.'
 'I want to read this book.'
 b. ŋo⁴¹ ɕian⁴¹ k^han⁴⁵ ka⁴¹ ko²⁴ pən⁴¹ xy³³.
 1SG want read KA this CL book
 'I want to read this book.'

As is indicated, there are two readings in (111a), while there is only one in (111b). The only difference between the two sentences is that ka⁴¹ appears in (111b). Clearly, ka⁴¹ disambiguates the interpretation of the sentence in (111a) and makes the endpoint reading in the sentence the only one available (111b).

Note that in the same case in Mandarin the lexical form wán 'finish' must be added to the sentence to have a completion reading.

- (112) a. wǒ xiǎng kàn zhè běn shū.
 1SG want read this CL book
 'I want to read in this book'/'I want to read this book.'
 b. wǒ xiǎng kàn wán zhè běn shū.
 1SG want read finish this CL book
 'I want to read (and finish) this book.'

There are two readings in (112a), but when we add the element wán 'finish' as we do in (112b), we only have one reading left. This again seems to suggest that in Chángshā ka⁴¹ is the same as Mandarin wán, an impression that is strengthened when we realize that, more generally (not just in sentences with a

modal) the distribution of both elements is quite similar. More examples are presented in (113).

- (113) a. wǒ yóu wán le yǒng jiù huí qù
 1SG swim FINISH PERF swim then back go
 'I will go back after I've done my swimming.'
- b. ŋo⁴¹ iou¹³ ka⁴¹ ta²¹ iun⁴¹ tɕiu²¹ fɛ¹³ k^hə⁴¹.
 1SG swim KA PERF swim then back go
 'I will go back after I have done my swimming.'
- c. ŋo⁴¹ iou¹³ oŋ¹³ ka⁴¹ ta²¹ iun⁴¹ tɕiu²¹ fɛ¹³ k^hə⁴¹.
 1SG swim finish KA PERF swim then back go
 'I will go back after I have done my swimming.'

If we look at (113a, 113b), it appears that *ka*⁴¹ is like the lexical verb *wán* in Mandarin. However, this is not right. The main reason is that *ka*⁴¹ can co-occur with *oŋ*¹³ 'finish' in Chángshā, as is shown in (113c). In other words, in sentences like these, Mandarin *wán* 'done, finish' and its Chángshā counterpart *oŋ*¹³ are lexical result denoting elements, just like comparable to *kao*³³ 'high' in (29b). This confirms that *ka*⁴¹ is different and that it doubles the endpoint that is already there.

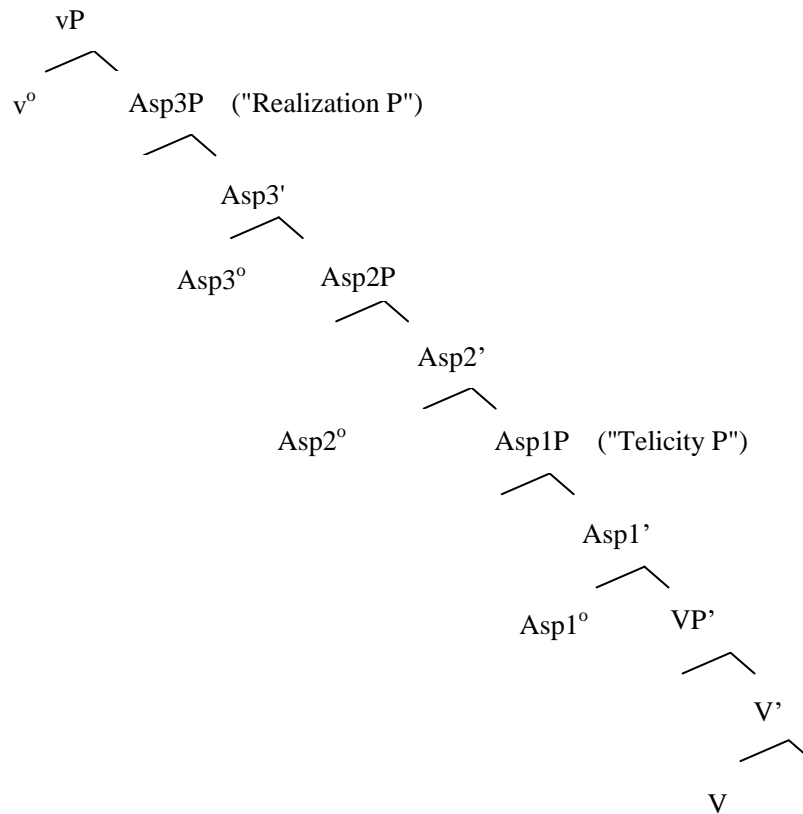
Before we go on to the next section and discuss the analysis of *ka*⁴¹, there is one more observation to make. To put it briefly, whenever *ka*⁴¹ appears the endpoint of an event is not cancelable, not deniable. Consider (114):

- (114) a. Lǐ⁴¹si ɕiə⁴¹ ta²¹ i²¹ fən³³ ɕin⁴¹, ko⁴¹shi²¹ mau²¹ ɕiə⁴¹
 write PERF one CL letter, but NEG write
 oŋ¹³
 finish.
 'Lisi wrote a letter, but he did not finish it.'
- b. *Lǐ⁴¹si ɕiə⁴¹ ka⁴¹ ta²¹ i²¹ fən³³ ɕin⁴¹, ko⁴¹shi²¹ mau²¹
 write KA PERF one CL letter, but NEG
 ɕiə⁴¹ oŋ¹³.
 write finish
 Intended: 'Lisi wrote a letter, but he did not finish it.'

3.6 A new proposal: ka⁴¹ as an Inner aspect marker

In this section, I provide a new proposal to account for the syntactic distribution of ka⁴¹. I assume the three layered inner aspect structure I introduced and discussed in the previous two chapters (see (115)), including the modification I proposed with respect to Asp2P, namely that its function depends on the nature of the head that fills it. In chapter 2, I proposed that progressive marker ta²¹ occupies this position, in which case a focus on the activity itself is established. In this chapter, I propose that ka⁴¹ can also occupy this position (returning to the function ascribed to this position by Sybesma 2017), with the opposite effect: the activity part of the event is no longer accessible for any syntactic operation.

(116)



I have shown that ka^{41} is used to double the endpoint in an event though in some cases the endpoint may be covert. The main motivation for this claim comes from the observation that in achievements, in *BA*-sentences (accomplishments) and change-of-state predicates, which invariably involve an endpoint, ka^{41} is obligatory. We also saw that ka^{41} can also appear together with lexical result denoting elements, the kind of elements that we saw (in Chapter 1) occupy the head of TelicityP, or Asp1P.

The question is what the function of ka^{41} is. I would like to follow Sybesma's (2017) suggestion that the middle layer of his three layered Inner aspect structure for Mandarin is typically occupied by elements that are traditionally called "phase complements", elements that indicate the successful attainment of the goal of the event (Chao1968, Tai 1984); we discussed this briefly in chapter 1. Sybesma proposes that this layer, which comes on top of the layer that provides the endpoint proper (TelicityP), has the function of making the endpoint definitive. Once that layer is filled, the accomplishment (activity plus cancelable endpoint) becomes an achievement (activity plus uncancelable endpoint). The consequence of having an uncancelable endpoint is that the activity expressed by the verb which leads to the endpoint is no longer accessible for syntactic operations such as putting it in the progressive. We discussed some of these issues already in Chapter 1.

I would like to propose that Chángshā ka^{41} occupies Asp2⁰. It is like *dì ào* 'off' in Mandarin as introduced in Chapter 1: see (117) - (118), where the (a) sentences is in Mandarin and the (b) sentences are in Chángshā.

- (117) a. Tā bǎ diànnǎo nòng-sǐ- dì ào - le!
 3SG BA computer do- dead- off- PERF
 'He completely destroyed the computer!'
- b. t^ha³³ ba⁴¹ tiān⁴⁵lao⁴¹ lǎn²¹ ǎi⁴¹ ka⁴¹ ta²¹.
 3SG BA computer do dead KA PERF
 'He completely destroyed the computer!'
- (118) a. wǒ zǎo jù bǎ kè tīng cā wán le.
 1SG earlythen BA living room sweep finish PERF
 'I finished cleaning the living room a long time ago.'

- b. ηo^{41} tsao^{41} $\text{t}\check{\text{c}}\text{i}\text{u}^{21}$ ba^{41} $\text{k}^{\text{h}}\text{ə}^{24}$ $\text{t}\text{i}\text{n}^{33}$ $\text{ts}^{\text{h}}\text{a}^{24}$ $\text{o}\eta^{13}$ ka^{41} ta^{21} .
 1SG early then BA living room sweep finish KA PERF
 'I finished cleaning the living room a long time ago.'

As expected, with ka^{41} , accomplishments are unable to be presented in the progressive. I have shown it in (115a), more examples are presented in (119).

- (119) a. $*\text{n}\check{\text{i}}$ $\text{z}\check{\text{a}}$ $\text{n}\text{ə}\text{ŋ}\text{-hu}$ $\check{\text{a}}\text{-di}$ $\text{ə}\text{ɔ}$ $\text{w}\check{\text{o}}\text{-de}$ $\text{di}\text{à}\text{n}\check{\text{n}}\text{ǎo}$! (Mandarin)
 2SG PROG do- broken-off 1SG-SUB computer
 b. $*\text{l}\check{\text{i}}^{41}$ tsai^{21} ko^{24} $\text{n}\text{ə}\text{n}^{21}$ xuai^{21} ka^{41} ηo^{41} ti $\text{ti}\text{ə}\text{n}^{45}$ lau^{41} .
 2SG PROG do- broken-off KA 1SG-SUB computer
 c. $\text{l}\check{\text{i}}^{41}$ tsai^{21} ko^{24} $\text{n}\text{ə}\text{n}^{21}$ xuai^{21} ηo^{41} ti $\text{ti}\text{ə}\text{n}^{45}$ lau^{41} .
 2SG PROG do- broken 1SG-SUB computer
 'You are destroying my computer!' (b,c: Chángshā)

In (119b), ka^{41} is used, the sentence presented in the progressive is unacceptable, as is the case in Mandarin (119a); however, if ka^{41} is not used, the sentence is acceptable (119c).

All these sentences seem to show that Chángshā shares the property of Mandarin in the use of Asp2P. What is different is that in Chángshā, Asp2^o is filled more often, while in Mandarin, in most cases, the Asp2^o is empty: sentences like (119a) with $di\text{ə}\text{ɔ}$ doubling the overt endpoint are quite rare. It seems that Chángshā has grammaticalized this function. The following examples show the difference between these two languages once again:

- (120) a. ηo^{41} pa^{41} i^{33} fu $\check{\text{c}}\text{i}^{41}$ $*(\text{ka}^{41})$ ta^{21} . (Chángshā)
 1SG BA clothes wash KA PERF
 'I washed the clothes.'
 b. xua^{33} $\text{x}\check{\text{ə}}^{13}$ $*(\text{ka}^{41})$ ta^{21} .
 flower red KA PERF
 'The flowers have become red.'
 c. $\text{ts}^{\text{h}}\text{ə}^{33}$ tsi fan^{33} $\{*(\text{ka}^{41}) \text{ta}^{21}/*\text{ka}^{41}/*\text{ta}^{21}\}$.
 car turn over KA PERF
 'The car turned over.'

- (121) a. wǒ bǎ yīfu xǐ le. (Mandarin)
 1SG BA clothes wash PERF
 'I washed the clothes.'
- b. huā hóng le.
 flower red PERF
 'The flowers have become red.'
- c. chēzi fān le.
 car turnover PERF
 'The car turned over.'

Comparing sentences in (120) with those of (121), we can see that in the same circumstances, *ka*⁴¹ is needed in Chángshā whereas Mandarin can do without such element. The same is true for sentences with a result denoting element: *ka*⁴¹ appears in the company of a lexical result denoting element, as we have seen several times.

We have also seen examples illustrating for Chángshā as well that the effect of adding *ka*⁴¹ is that of making the endpoint such that it can no longer be stripped off.

Note that in chapter 2, I propose that *ta*²¹_{PROG} occupies the head of Asp2P position, without explaining why it should be there. Now I think that our answer is like this. According to Sybesma (2017), the function of Asp2P, if filled, is to make sure that the process that precedes the endpoint in the head of Asp1 is not available for further syntactic operations. However, I think that the function of Asp2P in Chángshā relies not on whether it is filled (or not), but (also) what it is filled with. It can be an element that is used to block the event from being syntactically accessible, but it can also be an element which is, on the contrary, used to indicate that an action presented is ongoing. It happens that two such elements are observed in Chángshā. *ka*⁴¹ is used to block further access to the activity preceding the lexical endpoint (for example, such event cannot be present in the progressive), while *ta*²¹_{PROG} in contrast focuses on the activity in question and indicates that the action presented is ongoing.

In what follows, I am going to see that the proposed analysis can provide an account for the facts that have been observed in the beginning.

3.7 Accounting for the facts

In the preceding sections, I investigated the interpretation and distribution of *ka*⁴¹. I found that *ka*⁴¹ always appears in a telic event, though sometimes the endpoint is covert or implicit. Descriptively, *ka*⁴¹ doubles the endpoint that is already there. However, the function of *ka*⁴¹ is to make this endpoint more definitive and block the activity that precedes it from participating in further syntactic operations. I adopted Sybesma's (2017) three-layered Inner aspect system for Chángshā: Asp3P, Asp2P and Asp1P from bottom-up in the sentence structure. *ka*⁴¹ occupies the Asp2^o position. Asp3^o is the lexical aspect level which is sometimes occupied by result denoting elements. Asp1P is the focus of our analysis in chapter 2, I will not repeat it here.

In what follows I show that the proposed analysis solves the problems we encountered in the beginning of the thesis. For convenience, I first repeat the relevant contexts in which *ka*⁴¹ is used. I have presented these contexts in section 3.2, I will briefly go over them again here.

(122)

(i) *ka*⁴¹ as obligatory

In achievements, BA-constructions and stative predicates

- a. without *ka*⁴¹ → ungrammatical
- b. with *ka*⁴¹ → completion

(ii) *ka*⁴¹ as optional without variation of the interpretations

- A. With a quantized noun object
 - a. without *ka*⁴¹ → completion
 - b. with *ka*⁴¹ → completion
- B. With resultative constructions → completion
 - a. without *ka*⁴¹ → completion
 - b. with *ka*⁴¹ → completion

(iii) *ka*⁴¹ as optional with variation of the interpretation of the sentences

- A. With a bare noun object
 - a. without *ka*⁴¹ → termination or completion
 - b. with *ka*⁴¹ → completion
- B. With a definite noun object

- a. without ka⁴¹ → termination or completion
- b. with ka⁴¹ → completion

In (i) ka⁴¹ is obligatory. These three cases are especially interesting because these are all inherently telic: achievements and change of state cases are telic, by definition, and earlier on in this chapter, we saw that *BA*-sentences can only be formed if there is an endpoint. In (ii), in resultative constructions and accomplishments with quantized objects, ka⁴¹ is optional, there is no clear difference in interpretation whether ka⁴¹ is used or not. In (iii), with ka⁴¹, the event is telic, without ka⁴¹, it can be telic or it is not. We look at a few of these cases in more details here.

3.7.1 ka⁴¹ in (i) and (ii)

We start with context (i). We have seen in section 3.2.1.3 that in accomplishments in *BA*-constructions, achievements and change-of-state predicates, ka⁴¹ is obligatory. Leaving out ka⁴¹ will lead to ungrammaticality. According to my analysis in section 3.5.3, *BA*-constructions in Mandarin and Chángshā are similar in the sense that they contain an endpoint. However, Chángshā is different from Mandarin in that there is always the extra element ka⁴¹, while in Mandarin there is no such element. The same is true for stative predicates and achievements in the perfective. In these three cases, ka⁴¹ doubles the endpoint.

This analysis raises the question why ka⁴¹ is obligatory in these contexts and not in others. For instance, in accomplishments with a bounded object or resultative structures with an overt result denoting element, ka⁴¹ is optional. I repeat one sentence in (123).

- (123) a. t^ha³³ tɕia²⁴ (ka⁴¹) ta²¹ san³³ tsa²⁴ pin¹³ ko⁴¹ .
 3SG eat KA PERF three CL apple
 'He ate three apples.'
- b. t^ha³³ pa⁴¹ san³³ tsa²⁴ pin¹³ko⁴¹ tɕia²⁴ *(ka⁴¹) ta²¹ .
 3SG BA three CL apple eat KA PERF
 'He ate three apples.'

As introduced in section 3.2.2, ka⁴¹ in (123a) is optional, while in (123b) ka⁴¹ is obligatory. We have to explain the difference between (123a) and (123b) in terms of the use of ka⁴¹.

Before I provide an answer to this question, I repeat that ka⁴¹ doubles the already existing endpoint and that it does so to make the endpoint definitive as defined above. With this mind, we return to the question, why ka⁴¹ is obligatory in achievements and BA-constructions and change-of-state predicates, but not in accomplishments with a bounded object, as we saw in (123).

I think that this is related to the properties of constructions in these two cases. Note that in accomplishments with a bounded object and resultatives, the endpoint is compositional; while in achievements and change-of-state predicates it is inherent. Note that, in many languages, including Mandarin and Chángshā, it is possible to present accomplishments with bounded objects or resultative constructions in the progressive (as illustrated once more in (124)), but it is impossible to present achievements and change-of-state cases in the progressive. These endpoints cannot be stripped off. When it is impossible to have the predicate without the endpoint, ka⁴¹ is obligatory.

- (124) a. t^ha³³ tsai²¹ko²⁴ t^han⁴⁵ tɕ^hən³³ i³³fu.
 3SG PROG iron flat clothes
 'He is ironing the clothes flat.'
- b. t^hā tsai²¹ko²⁴ fā²⁴ tən²¹ t^hā ti tɕi⁴⁵tɕ^hə³³.
 3SG PROG start move 3SG SUB car
 'He is starting his car.'

The BA-construction is telling here. Although the endpoint is not inherent in the sense it is in achievements, in this case the presence is required structurally: without an endpoint, there is no BA-construction. And just like achievements, but unlike their non-BA-counterparts, BA-sentences are incompatible with the progressive. The endpoint cannot be lifted and ka⁴¹ is obligatory. In all other cases the endpoint, although it is there, can be lifted and ka⁴¹ is not obligatory.

The conclusion is that a predicate cannot exist without an endpoint, either because it is inherent like in achievements, or structurally, like in *BA*-sentences, *ka*⁴¹ is obligatorily present.

3.7.2 *ka*⁴¹ in (iii)

Now, we come to the construction [V+bare/definite noun object] ((iii) above). A relevant example is repeated in (125).

- (125) a. ηo^{41} iou^{13} ta^{21} iun^{41} .
 1SG swim_V PERF swim_N
 'I did my/a swim (preplanned stretch).'
 'I swam.'
- b. ηo^{41} iou^{13} ka^{41} ta^{21} iun^{41} .
 1SG swim_V KA PERF swim_N
 'I did my/a swim (preplanned stretch).'

We have established that in (125b), there is an endpoint present, which is doubled, and, in this case, made syntactically visible by *ka*⁴¹. The situation in (125) is similar to what we are familiar with in (126), examples we have also seen before, exemplifying the other type in (iii) in (122) above.

- (126) a. $\text{tsan}^{33}\text{san}^{33}$ $\text{k}^{\text{h}}\text{an}^{45}$ ta^{21} la^{45} $\text{p\text{ə}n}^{41}$ xy^{33} .
 read PERF DEM CL book
 'Tsansan read in that book.'
 Or, 'Tsansan read (and finished) that book.'
- b. $\text{tsan}^{33}\text{san}^{33}$ $\text{k}^{\text{h}}\text{an}^{45}$ ka^{41} ta^{21} la^{45} $\text{p\text{ə}n}^{41}$ xy^{33} .
 read KA PERF DEM CL book
 'Tsansan read (and finished) that book.'

In (126), the object is an NP with a demonstrative, which, as we have seen, may, but does not necessarily, lead to a telic reading, as we see in (126a). As (126a) shows, there is one reading in which there is an endpoint. In (126b), what *ka*⁴¹ does here, rather than providing an endpoint, is doubling the

endpoint that is already there and making it such that it can no longer be tampered with. With *ka*⁴¹ the endpoint reading is the only reading available.

The difference with (126) is that the NP in (125) is a bare noun, and a non-referential one as well, which makes it hard, or next to impossible, to get an endpoint reading without any marking at all. However, in view of the fact that bare nouns can be definite, hence bounded, making the predicate they are part of telic, it is in principle possible that there is an implicit endpoint in (125a), and that is why (125a) is ambiguous.

3.7.3 Ambiguous sentences with *ka*⁴¹

Now I would like to introduce the observation that certain sentences even with *ka*⁴¹ are ambiguous. In an accomplishment with a definite noun object and a post verbal durative phrase, the sentence will become ambiguous. See (127) - (128).

- (127) ŋo⁴¹ k^han⁴⁵ ka⁴¹ lā⁴⁵ pən⁴¹ xy³³ san³³ ko⁴⁵ ɕiau⁴¹si¹³.
 ISG read KA that CL book three CL hours
 (i) 'I read (in) that book for three hours.'
 (ii) 'I finished the book in three hours.'

- (128) lā⁴⁵ tiau²⁴ ləu²¹ ɕiu³³ ka⁴¹ pon⁴⁵ ko⁴¹ iuə²⁴.
 that CL road pave KA half CL month
 (i) 'That road has been paved in half a month (finished).'
 (ii) 'That road has been paved for half a month (not finished).'

In these sentences, the action can be interpreted as having been completed in three hours; it can also be interpreted as having come to an end after three hours. The question is how to explain this ambiguity.

Knowing that *ka*⁴¹ can double an endpoint that is already there, the question is what endpoints it doubles in e.g. (127) in such a way that that sentence is ambiguous. As we have pointed out before, predicates involving an object with a demonstrative in Chángshā, as it is in Mandarin, can be interpreted both as bounded and as unbounded, similar to the predicates with a

bare NP (e.g. (125)). When we add a durational modifier, we introduce a set period, and *ka*⁴¹ doubles the end of this set period, thus generating the reading marked as in (127a).

When the object with the demonstrative is bound and the predicate is telic, *ka*⁴¹ doubles the endpoint of the predicate, and the durational expression tells us how long it took to reach that endpoint. This leads to the interpretation marked in (127b). The same interpretation can be extended to (128).

The ambiguity confirms the claim that *ka*⁴¹ doubles an endpoint that is already there.

3.7.4 *ka*⁴¹ in negative constructions

Before I close this section, I point out that the use of *ka*⁴¹ to double an endpoint is also observable in negative sentences.

- (129) a. tsan³³san³³ mau²¹ ɕi⁴¹ i³³fu.
 NEG wash clothes
 'Tsansan did not do clothes-washing.'
 b. tsan³³san³³ mau²¹ ɕi⁴¹ ka⁴¹ i³³fu.
 NEG wash KA clothes
 'Tsansan did not wash the clothes.'

In (129a), in which *ka*⁴¹ is not used, the sentence negates the occurrence of the event, not necessary the completion of the event. In (129b), where *ka*⁴¹ is used, the sentence negates the completion of the action, including the end. What applied to (125) applies here: the bare nouns can be definite, thus making the predicate telic, with *ka*⁴¹ doubling it.

3.8 Sentences in which *ka*⁴¹ seems to be a marker of the perfective

We have come across sentences in the perfective with *ka*⁴¹ but without *ta*²¹. This was the kind of sentence that inspired earlier researchers to propose that *ka*⁴¹ is a perfective marker as well, which, as we argued is not the right analysis. Some examples are repeated here. (130) is the repetition of (1) in this chapter.

- (130) a. shan²¹u⁴¹ ηo⁴¹ mai⁴¹ ka⁴¹ xu³³ tɕiu²¹ fe¹³ k^hə⁴⁵ ta²¹.
 morning 1SG buy KA book then come back PERF
 'I went back home in the morning after I bought a book.'
- b. ηo⁴¹ lau²¹ ka⁴¹ xau⁴¹to³³ ɕiau⁴⁵fa²¹.
 1SG make KA many mistake
 'I made a lot of foolish mistakes.'
- c. tsan³³san³³ mai⁴¹ ka⁴¹ san³³ pən⁴¹xy³³.
 buy KA three CL book
 'Tsansan bought three books.'

In (130), *ta*²¹ is missing, *ka*⁴¹ is used, and these sentences are interpreted in the perfective. Based on the analysis so far we have had, which argue that *ka*⁴¹ is not a perfective marker, while *ta*²¹ is. The immediate question is, why can *ta*²¹ be missing in (129)? How can the perfective reading be produced? More examples can be seen in (131) - (132).

- (131) a. *ɕiə²⁴ in¹³ ka⁴¹.
 snow melt KA
 b. ɕiə²⁴ in¹³ ka⁴¹ ta²¹.
 snow melt KA PERF
 'Snow melted.'
- c. ɕiə²⁴ in¹³ ka⁴¹ san³³t^hian³³.
 snow melt KA three days.
 'The snow melted in three days.'
- (132) kə²⁴rən¹³ mən¹³ lai¹³ ka⁴¹ pən⁴⁵ ko⁴¹ ɕiao⁴¹si¹³.
 guest PL come KA half CL hour
 'The guests have been arriving for half an hour.'

These two sentences are presented with achievement predicates. As is in the cases in (130), *ta*²¹ can be missing in (131c) and (132). Again the question is, why *ta*²¹ can be missing in these sentences?

Careful observation shows that these sentences are different from those in which *ta*²¹ cannot be missing. For instance, sentence (129a) contains two

connective actions; in (130b) - (130c), the objects are quantized; in (131) - (132), there is a durative phrase *san*³³ *t^hian*³³ 'three days', and *pon*⁴⁵ *ko*⁴¹ *çiao*⁴¹ *si*¹³ 'half an hour' respectively. Without these elements, *ta*²¹ cannot be missing, as we have seen in previous sections. There is always something else in the sentence in which *ta*²¹ can be missing. This sounds familiar from the discussion in chapter 2 regarding *ta*_{prog}, which is argued to be located in Asp2 position, a position which is too low to help a sentence to anchor to tense. To use *ta*_{prog}, other elements are needed to help anchor the sentence to tense. It seems that the same thing happens here.

Before we can answer the story, we go back to the work by Tsai (2008). As we discussed earlier, Tsai (2008) discusses what he calls “incomplete” sentences in Mandarin. An example is given in (132) (Tsai’s (6a)):

- (133) ??AQ n á le shū.
 AQ take-PERF book
 'AQ took books.'

We saw before that Tsai (2008) explains the unacceptability by claiming that all sentences must be “tense anchored” and that one way of doing this is for the Asp to move to T. Asp-marker *le*, however, is too low to raise to T. As a result, the necessary link cannot be made and the sentence is not acceptable. Tsai presents a number of methods in which these sentences can be “repaired”. Here is an overview:

- by embedding the sentence in a bigger sentence (see (134))
- with negation (e.g., *méi ná shū*: not.have take book)
- with modals (e.g., *yīnggāi ná shū*: ought to take book)
- employing imperative/exclamative/counterfactual intonation
- using contrastive focus
- using other aspect markers (e.g., *n á-guo shū*: ‘he once took a book’; experiential aspect)
- adding a sentence final particle
- adding a temporal adverb
- with event quantification or a quantified object (see (135))

- (134) AQ n á-le shū, jiù zǒu-le.
 AQ take-PERF book then leave-PERF
 'AQ left after taking the book.'
- (135) a. AQ n á-le sān běn shū.
 AQ take-PERF three CL book
 'AQ took three books.'
 b. AQ n á-le sān c ì shū.
 AQ take-PERF three time book
 'AQ took books three times.'

As we saw above, Tsai's point of departure is the "Generalized Anchoring Principle", a general mapping mechanism of spelling out the event variable in a sentence. In English, Tsai claims, the event variable is bound by tense morphology, but Chinese "employs all sorts of eventuality construals such as event quantification, event coordination, event subordination and event modification to bring out the event variable" (Tsai 2008:681).

Turning to the methods in which the sentences with *ka*⁴¹ in Chángshā can be repaired, we see that exactly the same type of methods is used as in Mandarin.

In (130a), the two-consecutive actions are connected by the temporal adverb *tçiu*²¹ 'then'. Following Tsai we say that the first sentence is anchored to tense by the reference to the second one, that is why (129a) is grammatical (giving us the false impression that *ka*⁴¹ is a perfective marker).

In (130b), we see yet other cases with *ka*⁴¹ and without *ta*²¹, with a perfective reading. These cases happen to also be similar to sentences used by Tsai, such as (135) above, involving event quantification to bring out the event variable.

In (131) and (132), the sentences are presented with achievement predicates. There is a durative phrase in each sentence. The event variables in these sentences are hence brought out in the sense of Tsai (2008).

To be brief, since *ka*⁴¹ is not a perfective marker, it cannot be used alone as *ta*²¹_{PROG} is. This is because *ka*⁴¹ and *ta*²¹ occupy the same position and a sentence with them but without anything in Asp3 can be saved when other material helps to strengthen T to do its job. In a few cases in which *ka*⁴¹ seems to function as a

perfective marker, there are in fact elements in the sentences which are used to help anchor the sentence to tense.

3.9 Summary

In this chapter, I focused on the interpretation and distribution properties of ka^{41} . I first introduced two approaches to the use of ka^{41} . One of them is to treat ka^{41} as a perfective marker like ta^{21} , but different in several respects. In the other approach, ka^{41} is seen as an Extended Event Boundary marker in the general sense.

Yet, as I have shown, the previous analyses of ka^{41} are unsatisfactory. I pointed out that there are many facts that cannot be accounted for with either the perfective approach or the Extended Event Boundary marker approach.

To provide a new account for the use of ka^{41} , I reanalyzed the distribution and the semantic interpretation of ka^{41} . I pointed out that ka^{41} always appears with predicates that already have an endpoint, overt or implicit. It doubles the endpoint.

To account for the use of ka^{41} I propose that ka^{41} is located in the position Sybesma (2017) calls $Asp2^o$. The function of ka^{41} is to make the endpoint definitive: it can no longer be cancelled or denied. As a consequence, the activity preceding the endpoint is rendered inaccessible for syntactic operations like the progressive.

Two more things were pointed out. First, we saw that ka^{41} is obligatory in cases in which the endpoint is a necessary part of the predicate, either lexically (achievements, change-of-state cases) or structurally (BA-sentences).

Secondly, ka^{41} occupies the same position as progressive marker ta^{21} . Their effect is mutually opposite: the former blocks access to the activity preceding the endpoint, the latter focuses on it.

